1 THE STATE OF OHIO. ) ) 2 COUNTY OF CUYAHOGA. ) 3 4 IN THE COURT OF COMMON PLEAS 5 \* \* \* ..... б Benjamin Schechter, et al., "7 Plaintiffs, ) 8 ) Case No. 471455 Henry H. Bohlman, M.D., 9 et al., 10 Defendants. ) 11 \_\_\_\_ \*\*\* .\_\_ ..... \_ 12 Video deposition of Henry H. Bohlman, M.D., a Defendant herein, called by the Plaintiffs, as 13 14 if upon cross-examination under the statue, and taken before Irma A. Fares, a Notary Public within 15 16 and for the State of Ohio, pursuant to the agreement of counsel and pursuant to the further 17 18 stipulations of counsel herein contained, on November 25, 2002, at 2:00 p.m., at the offices of 19 20 University Hospitals, Bolwell Building, Cleveland, 21 Ohio. 22 23 2425

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16	ALSO PRESENT:
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1 I-N-D-E-X 2 HENRY H. BOHLMAN, M.D. PAGE 3 Cross-examination (By Mr. Peskin) 4 Cross-examination 121 5 (By Mr. McDonald) 6 7 E-X-H-I-B-I-T-S Plaintiffs' 8 MARKED 9 Exhibit No. 1 (Curriculum Vitae) 10 Exhibit No. 2 8 11 (Claim History) Exhibit No. 3 12 11 (Medical Record) 13 Exhibit No. 4 17 14(Medical Record) 15 Exhibit No. 5 18 (Letter to Benjamin Schechter 16 from Henry H. Bohlman) 17 Exhibit No. 6 26 (Department of Radiology 18 Medical Record) 19 Exhibit No. 7 28 (University Hospitals 20 Medical Record) 21 Exhibit No. 8 31 (Letter to Richard Stein 22 from Julie Bunkelman) 23 Exhibit No. 9 32 (Letter to Benjamin Schechter 24 from Julie Bunkelman) 25 Exhibit No. 10 37 (Medical Record)

1	Plaintiffs'	MARKED
2	Exhibit No. 11	38
З	(Surgical Service Physical Examination)	
4	Exhibit No. 12	40
5	(Consent Form)	
6	Exhibit No. 13 (UHHS Patient Care	42
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8 9	(Nursing Notes) Exhibit No. 15	47
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12	Exhibit No. 17	71
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1 PROCEEDINGS 2 3 Thereupon, a document was marked for purposes of identification as Plaintiffs' Exhibit 4 No. 1. 5 6 7 HENRY H. BOHLMAN, M.D., being by me first duly sworn, as hereinafter 8 certified, deposes and says as follows: 9 10 CROSS-EXAMINATION 11 BY MR. PESKIN. Could you state your full name for the 12Ο. 13 record? 14 Α. Dr. Henry H. Bohlman. 15 Dr. Bohlman, my name is Larry Peskin. Ο. We met before the deposition. 16 17I assume you've had your deposition taken 18 before. 19 Α. Yes. 20 Q. If for any reason you don't understand my questions, please ask me to restate them or 21 22 rephrase them. 23 If you do answer a question, we're all 24 going to assume you understood it. 25 Is that fair?

1 Α. Sure. 2 Ο. I'm going to give you what's been marked 3 as Plaintiffs' Exhibit No. 1. If you'd take a look at that and tell me if that is a current copy 4 of your curriculum vitae or reasonably current. 5 6 Α. It's reasonably current, revised in 7 May of last year. It's been revised since that time? 8 Ο. 9 Α. NO. 10 Okay. Have there -- Are there any Ο. 11 publications or papers that are not on your CV that's in front of you that relate to the issues 12 in this case? 13 14Α. There may be. Let me just look --15 Ο. Okay. 16 Α. -- because one came out last year. 17 No, it's in there. 18 Q. What I'd like you to do --19 Do you have a pen available? since we 20 only have one copy of this that we're working off 21 of. 22 What I'd like you to do is go through 23 your publications and book chapters in the CV 24 and circle for me the ones that you feel relate to the issues in this case. 25

I think the main one is the last 1 Α. 2 publication on thoracic stenosis. Well, could you go through and identify 3 Ο. that and circle it for me? 4 5 Α. I think that's one that's specifically related. 6 7 Ο. I've lost it. 8 MR. GROEDEL: I think it was the last 9 one. 10 Q. Surgical treatment of thoracic spinal 11 stenosis. 12 Are there any other publications that 13 relate to thoracic spine surgery other than No. 95? 14 Α. Yes. 15 Ο. Could you identify those for me? 16 Α. I'll go through all 95, if you wish. 17 Q. Only those that have any bearing on the 18 issue. 19 I'll go through them all, but... Α. MR. GROEDEL: Why don't you indicate for 20 21 the record, Doctor, what --22 No. 36 is an older publication in General Α. 23 Radiology on imaging thoracic disc herniation, 24 No. 36. 25 No. 48 is an article on anterior excision

1 of herniated thoracic discs. 2 Indirectly, No. 54 is an experimental 3 model of lumbar spinal stenosis. I think those are the main articles. 4 5 Thereupon, a document was marked for 6 7 purposes of identification as Plaintiffs' Exhibit 8 No. 2. 9 BY MR. PESKIN: 10 11 Ο. Handing you what's been marked as 12 Plaintiffs' Exhibit 2, this is a list of claims 13 that you provided in response to our discovery 14 request. And I just wanted you to take a look 15 at that and tell me if that basically includes 16 all of the matters in which you've been named as a defendant in a medical malpractice. 17 18 MR. GROEDEL: Objection. 19 Larry, could I just have a continuing 20 objection to any questions dealing with prior 21 lawsuits? 22 MR. PESKIN: Absolutely. 23 Α. I believe so. 24 Ο. Okay. There's a claim -- a claimant 25 named Richard Rinehart identified in this one.

1 Your staff report indicates that it was closed and settled for two and a half million dollars in 2 3 July of 1984. 4 Can you tell me briefly --Two and a half million, no. 5 Α. I was going to say, is that \$2,500? 6 Ο. No. Well, it says 2,500. 7 Α. This was a --8 9 Sorry about that. 0. 10 Α. This was a Cleveland policeman who we 11 did a lumbar procedure on, low back operation, 12 whose drain got stuck and broke off, and we had to take the drain out. He was a very angry guy. 13 14 MR. GROEDEL: Well, that's worth two 15 and a half million. 16 (Discussion was held off of the record.) 17 Α. That's like 25 years ago, I think. 18 Any claims that you've had asserted Ο. 19 against you that relate to decompressive surgeries? 20 Α. Decompression of what? 21 Q . Lumbar or thoracic decompressions. 22 Α. No. Dr. Bohlman, have you ever served as 23 Q . 24 an expert in a medical malpractice lawsuit? 25 Sure. Α.

1 Have you testified on behalf of 0. 2 plaintiffs? 3 Yes. Α. Q. And I assume you've also testified on 4 5 behalf of defendant physicians as well. б Α. Both sides. 7 Ο. About what percentage of your medicolegal work has been on behalf of plaintiffs? 8 9 Α. About 20 percent for plaintiffs, about 10 80 percent -- I'm guessing -- not guessing; I'm 11 estimating -- 80 percent for defense. 12 Q. Have you ever testified in a spine 13 surgery case where the defendant was a 14 neurosurgeon? 15 Α. Yes. 16 Ο. Would you agree that the standard of 17 care for a spine surgeon is the same for 18 neurosurgeons as it is for orthopedic surgeons? 19 Α. Sure. 20 Have you ever testified in a case Q. 21 where the issue was the use or failure to use 22 intraoperative monitoring? 23 Α. I had a lawsuit against myself once, 24which is listed here, Murray Lilley, in which that was claimed to be a problem, but I've never --25

and that was dismissed, and I've never testified 1 2 that that was a situation. I mean, that was supposed to be the situation. 3 Ο. Have you --4 5 Let me make sure I'm clear. 6 Have you ever testified in a medical 7 malpractice case as an expert, not as a defendant, 8 where you expressed an opinion that the standard 9 of care for spinal surgery required the use of 10 interoperative monitoring? 11 Α. No. 12 13 Thereupon, a document was marked for 14 purposes of identification as Plaintiffs' Exhibit 15 No. 3. 16 17BY MR. PESKIN: 18 Ο. Doctor, I'm handing you what's been 19 marked as Plaintiffs' Exhibit 3. I believe this 20 is a complete copy of your office notes with regard to Ben Schechter. Can you verify that for me? 21 22 Α. I don't know what that is. That's not 23 mine. 24 Q. Okay. Bates No. 5 you're referring to 25 is not yours?

1 No. The rest of them are. Α. Do I have a complete set of your 2 Q. 3 transcribed notes from your office? Α. Yes. 4 5 Q. Can you tell me how it was that 6 Dr. Schechter was referred to you? I believe the referring physician was 7 Α. 8 Richard Stein, his -- one of his internists or 9 actually rheumatologist; at least that's what I have listed. 10 11 And when --0. 12 Α. Excuse me. 13 He was seen in our group by Dr. Emery, my partner, in 1995, so the group was known to 14 him -- I'm not sure whether it was a referral --15 16 self referral or by Dr. Stein, but I communicated 17 with Dr. Stein. 18 Do you have an independent recollection Ο. 19 of Dr. Schechter's presenting complaints or do you 20 need to refer to your notes? 21 Well, I'll look at my notes. Α. 22 Q . I want you to look at anything that 23 will help you recall. 24 But what can you tell me about -- about 25 the reason that you understood why Dr. Schechter

1 came to see you? 2 Α. Well, he had had previous surgery in 1998 by Dr. Columbi here for low back. He had 3 developed, subsequent to that, progressive numbress 4 5 and pain in the legs, which was affecting his function. That was the main reason. 6 7 Your notes refer to pain and numbress Ο. 8 in his right leg; is that correct? 9 Α. I'm not sure from my own note, to be 10 honest. 11 I have here, "He has continued to have numbness which has increased and now over the past 12 couple years has developed pain in the calf as 13 well as numbness and is having difficulty walking 14 15 distances." 16 I'm not -- I quess I'm not specifically 17 stating that, unless I'm referring to the original 18 right leg pain, with the original surgery. 19 Well, is it fair to say, then, that Q., 20 you -- as you sit here today don't have an 21 independent recollection and your notes don't 22 state that Dr. Schechter had complaints of pain 23 or weakness or numbness in his left leg? I don't have "left leg" mentioned here. 24 Α. 25 I'm not sure what my -- My sentence doesn't

1 specifically designate right or left. If Dr. Schechter were to testify that 2 Ο. when he came to see you, his problems were on --3 4 were in his right leg and not left leg, would you have any reason to disagree with him? 5 б Probably not. Α. 7 Ο. What can you tell me about --Α. Excuse me. 8 9 I just noticed in my note here, the 10 patient was referred by former patient of ours, 11 Mr. Belecek, that used to do billing for his 12 office. 13 Okay. What can you tell me about Ο. 14 your examination, your physical examination, of 15 Dr. Schechter when you first saw him in September 16 of 2000? 17 Α. He was in no major distress. He could 18 walk on his heels and toes without difficulty. He bent over with somewhat limited flexion. And 19 I noted a thoracolumbar or a spine scoliosis, a 20 21 curvature; and it looked like he flexed or bent mostly at his hips. I thought he probably had 22 23 only about 40 degrees of flexion, which would be 24 about that much from neutral, bending forward; 25 and bending to the side, about 20 degrees in

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1 either direction.

What about your neurologic exam? Were 2 Q. there any neurologic deficits noted on your initial 3 examination? 4 5 No. He had no weakness, no loss of Α. sensation, and his deep tendon reflexes were 6 7 intact. 8 I note that your impression says that 0. 9 residual lumbar spinal stenosis, L5-S1, with 10 continued L5 radiculopathy. What was the basis 11 for that impression of that? 12 Α. Well, on his x-ray, he had a very small hole where he'd had his previous surgery, and he 13 14 had huge arthritic facet joints, the joints out 15 on the side, which usually indicate persistent 16 narrowing of the spinal canal, and you can't 17 decompress the nerve roots through a very small 18 hole. So this is what I see a lot in my office 19 practice, are patients with recurring or persistent 20 leg pain who have had a very small procedure 21 before, and they have recurring leg pain and 22 numbness and difficulty, and we work them up for spinal stenosis, which is what this turned out to 23 24 be. 25 Ο. Your note further states in the

1	disposition heading that you suspected he will
2	need an additional decompression.
3	Why, based on your findings, did you
4	suspect that he would require decompressive
5	surgery?
6	A. Oh, because of his persistent leg pain.
7	You should have no leg pain after an adequate
8	decompression in the lumbar spine. So this is
9	Again, this is what I see a lot in my practice.
10	Q. Is it, in your view, appropriate to
11	undertake a surgical intervention where there
12	are no neurologic findings and the only complaint
13	is persistent paín?
14	A. Oh, absolutely. We do it all the time.
15	Persistent leg pain means nerve compression.
16	Q. What can you tell me, if anything else,
17	about the nature of Dr. Schechter's leg pain when
18	he presented to you? Was it constant?
19	A. I think it bothered him more when he
20	tried to walk, which is pretty classic for spinal
21	stenosis or narrowing of the spinal canal.
22	It's more when people try and walk or
23	stand. Usually goes away when people lie down.
24	And as he mentioned, if he tried to
25	walk 45 minutes a day, he started limping and his

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foot started slapping, indicating possibly some 1 functional weakness when he tried to walk 2 3 distances. 4 Thereupon, a document was marked for 5 purposes of identification as Plaintiffs' Exhibit 6 7 No. 4. 8 BY MR. PESKIN: 9 10 Ο. Plaintiffs' Exhibit No. 4, this is a 11 report from Magnatech Imaging Center of an MRI of the lumbar spine with and without contrast --12 13 without and with contrast, dated October 20, 2000. 14 Did you order this MRI? Yes, I did. 15 Α. And did you review the films or just 16 Ο. 17 the report? I always review the films and the report. 18 Α. What can you tell me that was significant 19 Q. 20 in this particular test? Well, it was -- it was what I thought 21 Α, it was going to be in the lower lumbar area, in 22 23 that he had some disc protrusion and some spinal 24 stenosis residual at the L4-5 and L5-S1 levels, which are the lower two levels. 25

1	The surprise was that he had
2	I should back up and say he has
3	Dr. Schechter was born with a narrow spinal canal,
4	which is called congenital stenosis just by the
5	configuration of his spinal canal. And then they
6	picked up on this MRI some disc protrusions and
7	narrowing at the lower thoracic levels, T10-11
8	and T11-12, the lower two levels; and a small
9	disc protrusion at T12-L1, so that was a surprise.
10	
11	Thereupon, a document was marked for
12	purposes of identification as Plaintiffs' Exhibit
13	No. 5.
14	
15	BY MR. PESKIN:
16	Q. Hand you what's been marked as
17	Plaintiffs' Exhibit No. 5. This is a letter
18	dated November 6, 2000, from you to Dr. Schechter.
19	I assume you dictated this letter.
20	A. Yes.
21	Q. Is it fair to say that this letter was
22	your communication with Dr. Schechter about your
23	impressions of the MRI?
24	A. Yeah. I always dictate a letter when I
25	review the studies that are done after the patient

1 has been in the office. I very frequently call patients, but I 2 don't have -- I thought I did, but I don't have 3 a phone call recorded in my records, but this for 4 5 sure was a letter that I wrote to him to let him know what we found on the MRI and what I just 6 7 mentioned. Would it have been your practice that 8 Q. if you made a telephone call to a patient, that 9 you would have charted it? 10 Usually I do, but not always. Sometimes 11 Α. 12 if I'm busy, I forget to do it. 13 Why is it you think that you had a Q. telephone conversation with Dr. Schechter with 14 regard to this MRI? 15 I just -- I think I did. I can't be 16 Α. 17 certain, and I can't prove it because I don't have 1.8 it recorded. 19 Well, do you have any -- other than Q. what's said in this letter, do you have a 20 21 recollection of saying something else to Dr. Schechter about the results of his MRI? 22 23 No. No. I think I told him what we Α. 24 saw here. 25 So if you had a telephone conversation, Q.

it would have essentially covered the same subject 1 2 matter as in this letter? Yeah, and that we would want to do a 3 Α. myelogram and CAT scan to further define the 4 5 situation before his surgery. 6 Ο. How was it --7 I notice that the MRI report on this 8 Exhibit 4, that came from Magnatech Imaging Center, how was it that you got the film for that MRI? 9 How did I receive the film? 10 Α. 11 Yeah. How do you go about getting films? Ο. 12 Α. They send them to me. 13 Okay. Did you -- You have a standing Q. request that when MRIs are done of your patients, 14 15 they send you the films? 16 Absolutely. Α. 17 Typically how long does for the film to Ο. 18 get from Magnatech Imaging Center to your office? 19 They're usually very fast. I mean, Α. that's why we use them. They give us very good 20 21 service. 22 And their office is on Rockside Road? Ο. 23 Α. Yes. And somehow from Rockside Road, they get 24 Ο. 25 films to your office here at University Hospitals;

1 correct? Pretty quickly. 2 Α. By the way, where is your office located? 3 Ο. On this floor in the Bolwell Building. 4 Α. Okay. And so it's attached; it's part 5 Ο. of the University Hospitals' complex? 6 7 Α. Yes. Generally speaking, how soon after you 8 Ο. receive a film such as the one that you received 9 10 from the MRI on October 20th before you review 11 them? That's totally variable, depending on 12 Α. my travels, whether I'm on vacation, and how 13 14 many studies I have to review and correspond --15 or respond to. It's variable. 16 Is it likely that you would have reviewed Ο. 17 this MRI within a day or two of the date that you communicated with Dr. Schechter? 18 19 Pretty unlikely. Α. 20 That I reviewed it within a day of 21 getting it? 22 No. No. Within a day or two of the date Q. 23 that you sent the letter. 24 The study was done on October 20th, 2000. 25 Your letter to Dr. Schechter is November 6th, 2000.

1 Yes. Α. No. Again, it depends on my travels 2 and whether I'm giving talks or on vacation or 3 whatever -- it's totally variable -- and how many 4 cases get stacked up on my credenza to respond to. 5 In this letter you wrote to 6 Ο. Dr. Schechter -- and I'm referring to your 7 November 6th, 2000, letter -- "If your legs 8 9 bother you enough, I would recommend a lumbar decompression." 10 Can you tell me more of what you meant 11 about that? Are you leaving it up to him to make 1213 the decision in terms of whether it's --It's an elective procedure, is it not? 14 It's purely an elective procedure, but I 15 Α. 16 thought he was having a fair amount of difficulty 17 or he wouldn't have come to see me in the office. But I leave it up to the patient. I think it's 18 19 their decision. He had no neurologic deficit at the time. So that's usually what I say to the 20 21 patient. The neurologic -- The absence of 22 Q. 23 neurologic deficits that you noted in your first examination of Dr. Schechter, I assume that that --24the absence of neurologic findings persisted up 25

until the time that you did surgery on him on 1 December 14th; correct? 2 Probably; although, I didn't re-examine 3 A. him, but I would have to assume so. 4 In this letter you did not mention any Ο. 5 plan to perform any surgery other than a lumbar 6 decompression; is that correct? 7 I didn't say "thoracic laminectomy" 8 Ä. specifically, but I identified the thoracic problem 9 10 for that reason, because I thought it was a problem based on the MRI. 11 What do you mean by that? What --12 Ο. I thought he would need a thoracic 13 Α. 14 decompression based on what I was seeing on the MRI, but I wanted to define it further with a 15 16 myelogram. Can you tell me why you didn't report 17 Q. in this letter to Dr. Schechter your thoughts 18 that he might need a thoracic decompression or 19 20 thoracic laminectomy? 21 I think I was waiting to see the Α. 22 myelogram and the CAT scan. I'm not sure why, 23 but I did identify the problem and specifically stated that to him, that it was a problem. 24I wouldn't have put it in my letter if I didn't 25

1 think it was a problem. Well, what you said in your letter is, 2 Q. In addition, there is some small what appeared to 3 be hard disc protrusions in the lower thoracic 4 5 area, and I would want to evaluate that preoperatively if you came in with a myelogram and 6 7 CAT scan; correct. 8 Α. Yes. You didn't say anywhere in this 9 Ο. 10 letter that you were contemplating a surgical 11 intervention; correct? 12 MR. GROEDEL: Objection. Asked and 13 answered. Go ahead. 14 Well, I was contemplating doing the 15 Α. lumbar area and probably the thoracic, yes. But 16 17 I didn't say that in the letter. I just indicated 18 that there were problems in both areas. You didn't say that to him in a telephone 19 Ο. conversation either, did you? 20 21 I don't remember. Α. Earlier when I asked you about your 22 Ο. 23 recommendation for a lumbar decompression, you 24 said words to the effect that you always leave it 25 up to the patient, an elective procedure of this

1 nature. Would that be the case also for the 2 thoracic procedure that you may be -- may have 3 4 been contemplating at this point? Sure. Without hard evidence of 5 Α. paraplegia or some neurologic deterioration, 6 it's purely elective surgery in both areas. 7 8 Q. Did Dr. Schechter have any neurologic signs or symptoms consistent with thoracic 9 stenosis? 10 Well, the only thing I can't tell was 11 Α. 12 his complaints of numbress of the leg and pain in the legs. You can have pain in the legs from 13 thoracic stenosis. That's a very common problem. 14 15 You could have trouble walking. These are 16 subjective complaints. He had no objective 17 neurologic findings to indicate spinal cord 18 compression at a higher level. 19 What are some of the neurologic signs Ο. and symptoms that one would expect to see with 20 21someone who had thoracic stenosis? The first signs are -- in the lower level 22Α. 23 of the thoracic spine, in my experience, are leg 24 pains, back and leg pains, which can be low back 25 pain; and leg pain very similar to what comes from

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the lower lumbar stenosis; numbness and tingling. 1 As it progresses further on in the --2 3 For the ladies and gentlemen of the jury, the thoracic area contains a spinal cord; and the 4 lumbar, the lower area, only contains nerve roots, 5 6 so there are different neurologic signs and symptoms in a different areas. 7 The thoracic cord compression can produce 8 marked paralysis in both legs, loss of bladder 9 control and numbness at a specific level, but also 10 pain, numbness and tingling and difficulty walking. 11 Is it fair to say, Doctor, that an 12 0. 13 individual can show significant pathology on an 14MRI or myelogram of their thoracic spine without 15 any specific neurologic deficits? 16 A. That's possible. 17 And they can persist in that condition Q. for a lifetime; is that a fair statement? 18 19I don't know about lifetime if they had Α. 20 severe spinal cord compression. That's not been 21 my experience. 22 Thereupon, a document was marked for 23 24 purposes of identification as Plaintiffs' Exhibit 25 No. 6.

1 BY MR. PESKIN: 2 This is Exhibit 6, Plaintiffs' Exhibit 6. 3 0. 4 This is a report from a lumbar myelogram and post-myelogram CT from November 28th, 2000. 5 Can you recall, Doctor, when you first 6 7 saw this report? I don't know. I think I saw it the day 8 Α. of surgery. That's when I first saw it, because 9 I didn't get it up -- I couldn't get it up to my 10 11 office until then. In fact, I saw it in the operating room. 12 I'm asking you about the report and 13 0. not the films, just so we're clear. This 14 15 particular --16 That I don't know. I don't recall that. A. 17 You have no recollection at all about Ο. 18 having ---19 Do you recall ever seeing this report 20 prior to surgery? 21 I don't recall whether I saw it prior Α. 22 to the day of surgery. Now, it's been two years. 23 I mean, I don't remember the day I saw the report. 24 It may have come up before the films. Sometimes it 25 frequently does.

This particular study was done here 1 Ο. at the Department of Radiology at University 2 Hospitals --3 Correct. 4 Α. -- which is in the same complex as your 5 Ο. office; correct? 6 Well, yeah, it's in the same hospital 7 Α. 8 complex. Do you have a terminal in your office 9 0. that would allow you to access the results of 10 radiologic studies? 11 12 Α. Not yet. Not yet? 13 Q. 14 That's coming. Α. 15 16 Thereupon, a document was marked for purposes of identification as Plaintiffs' Exhibit 17 18 No. 7. 19 BY MR. PESKIN: 20 21 Hand you what's been marked Plaintiffs' Ο. 22 Exhibit 7. This is a University Hospitals of 23 Cleveland reservation request. Is this something your office would 24 25 have completed?

1	A. Yes. My secretary does this when I
2	first see the patients, if I think they're going
3	to need surgery or they're going to get scheduled
4	for surgery.
5	Q. If you'll go back to your November 6th,
6	2000, letter to Dr. Schechter. In the last
7	sentence, it says, "It has been brought to my
8	attention that you have scheduled in on a
9	cancellation slot for December 14, 2000."
10	So on November 6th, 2000, you were
11	aware that Dr. Schechter was going to have a
12	surgery scheduled for December 14th, 2000; correct?
13	A. Yes.
14	Q. And this form, Exhibit No. 7, would have
15	been completed by your office on or about that
16	same date, November 6th?
17	A. I don't know when it was completed.
18	We don't put the dates on there when
19	the form is made out, that I'm aware of.
20	Q. You were aware on November 6th that
21	Dr. Schechter was going to have that you were
22	going to perform surgery on Dr. Schechter on
23	December 14th, 2000; correct?
24	A. Yes.
25	Q. And the surgery request the

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reservation request indicates that you were going 1 to perform a lumbar laminectomy and foraminotomies 2 at L4-5 and L5-S1; correct? 3 4 Α. Yes. It also indicates that the diagnosis 5 Ο. is lumbar spinal stenosis, L4-5 and L5-1 --S1? 6 7 Α. Yes. And that the procedure was scheduled 8 0. for seven o'clock a.m. on December 14th, 2000; 9 10 correct? 11 Α. Yes. Nowhere on this form does it indicate 12 Q. 13 that you were contemplating or intended to 14perform a thoracic laminectomy and decompression; 15 correct? Well, I was contemplating it, but I 16 Α. wasn't positive about it at that time because I 17 18 hadn't seen the definitive studies. 19 I want you to listen carefully to my Q. 20 question. Does it say anywhere on this form that 21 you intended to perform a thoracic spinal surgery 22 on Dr. Schechter? No. No. What you said -- What you asked 23 Α. 24 me was, was I contemplating it? And I said I was contemplating it, but it does not state that on 25

the form, and I was waiting for the definitive 1 2 study. Okay. And when did you --3 Ο. Well, let's strike that. 4 5 Thereupon, a document was marked for 6 purposes of identification as Plaintiffs' Exhibit 7 8 No. 8. 9 BY MR. PESKIN: 10 Plaintiffs' Exhibit No. 8, this is a 11 Q. 12 correspondence from your office dated November 8th, 2000, to Richard Stein, M.D. Have you already 13 identified Dr. Stein as Dr. Bohlman's primary 14 15 care -- excuse me -- Dr. Schechter's primary care 16 physician; correct? 17 Α. Yes. 18 Ο. And this indicates that this 19 correspondence or memorandum is from Julie 20 Bunkelman on your behalf; correct? 21 A. Yes. And it says, "To Whom it May Concern: 22 Ο. 23 Dr. Bohlman is requesting medical clearance along with the following routine labs for the above 2425 noted patient. We appreciate your help with this

matter," et cetera. 1 And on the heading of that letter, under 2 "Surgery," it says, "Lumbar Laminectomy & 3 foraminotomies, L4-5, L5-S1." Correct? 4 5 Α. Correct. That's the same surgical procedure 6 Ο. 7 indicated on the reservation request; correct? 8 Α. Yes. So in your communication with Dr. Stein, 9 0. requesting medical clearance, you did not share 10 with him that you were contemplating a thoracic 11 12 procedure, did you? I didn't. I don't think it's necessary, 13 A 14because I'm just -- I was just getting approval for a general anesthetic, not for doing a specific 15 16 operative procedure. Your form that you sent to the doctor 17 Ο. 18 does list a specific operative procedure, does it 19 not? 20 Α. Sure. 21 22 Thereupon, a document was marked for purposes of identification as Plaintiffs' Exhibit 23 24 No. 9. 25

1 BY MR. PESKIN: 2 I've just given you what's marked as 3 Ο. Plaintiffs' Exhibit No. 9. This is correspondence 4 from your office dated November 8th, 2000, to 5 6 Dr. Schechter. What is the purpose of this communication 7 to Dr. Schechter -- or what was the purpose? 8 I think just to identify the schedule 9 Α. of his procedures, the myelogram and then the 10 11 eventual surgery ---12 Q. Okay. So you're ---- and where to go. 13 Α. You were aware, then, that Dr. Schechter 14 Q. was scheduled for a myelogram and CT scan on 15 16 November 28th, 2000; correct? At some point I was aware. I'm not sure 17 Α. 18 of exactly what day. 19 Q. Well, this letter indicates that 20 on November 8th, 2000, you were aware that 21 Dr. Schechter was going to undergo a lumbar 22 myelogram and CT scan on November 28th, 2000; 23 correct? I said I'm not sure I was aware of what 24 Α. 25 day.

My secretary types this up. And I 1 intended to do a myelogram and CAT scan, but 2 I don't usually see the scheduled dates until 3 people are scheduled for surgery, and so I don't 4 know exactly when I was aware he was going to 5 have the exact myelogram. I usually don't bother 6 with that. 7 Well, let me ask you this, Doctor: 8 Ο. 9 You were interested in the results of the lumbar myelogram and CT scan, were you not? 10 Absolutely, and the thoracic. 11 Α. As you said, you were -- had wanted 12 Ο. this procedure done so that you could evaluate the 13 14 status of Dr. Schechter's thoracic spine; correct? 15 Α. Sure. And do you recall or did you ever ask 16 Ο. anyone in your office to follow up to see if 17 Dr. Schechter had, in fact, had that myelogram 18 and CT scan towards the end of November of 2000? 19 Well, I know it's going to be done 20 Ã. 21 if I ask my secretary to do it, but I don't 22 necessarily pay any attention to the exact date that it's scheduled on. 23 Well, Doctor, would you agree that 24 Ο. 25 it's important to have all the diagnostic studies

that you've ordered in contemplation for a surgical 1 2 procedure complete and in your hands in advance of 3 the surgery? Well, that's what I usually plan, sure. 4 Α. I mean, how -- how is it that you can 5 Q. 6 plan your operative approach if you haven't seen 7 the diagnostic studies that you've ordered? Well, as I mentioned, I was fairly 8 Α. 9 certain he needed a thoracic decompression as well as a lumbar just from the MRI. I just --10 Getting a myelogram or CAT scan, which, 11 12 incidentally, I do routinely on repeat back 13 surgeries because it gives me a lot more useful 14 information, it almost never changes what I do. 15 It just helps to define things better for me. 16 Ο. Well, you said --17 I think a lot of surgeons wouldn't bother Α. 18 with a myelogram and CAT scan and just probably 19 rely on the MRI, but it just gives me more useful information. 20 21 Q. You had an MRI performed on Dr. Schechter 22 back October 20th of 2000; correct? 23 Α. Yes. And you already reviewed that; correct? 24 Ο. 25 Α. Yes.

And you discussed those findings with 1 Q. Dr. Schechter; correct? 2 Yes. 3 Α. And in response to that test, you didn't 4 Q. tell him that you were intending or planning a 5 thoracic decompression, did you? 6 7 MR. GROEDEL: Objection. Asked and answered. 8 Go ahead. 9 Well, in my letter, I indicated that 10 Ã, there was a problem with the thoracic spine as 11 well as the lumbar spine, meaning this might need 12 attention also. I wouldn't have put in the letter 13 14 if I didn't think it might need surgical attention. Who is Lynette Bennett? 15 Ο. She's our nurse clinician for my spinal 16 Α. 17 patients. And what role does she play, generally 18 Q. speaking, in preparing your patients for surgery? 19 20 Α. Well, she talked to them about medication before the myelogram, about possibly what the 21 2.2 surgery is going to be like and the length of 23 stay in the hospital and to educate the patient, 24 checks on medication. 25
1 Thereupon, a document was marked for 2 purposes of identification as Plaintiffs' Exhibit 3 No. 10. 4 5 BY MR. PESKIN: 6 Handing you what's been marked 7 Ο. Plaintiffs' Exhibit 10, this is a University 8 Hospitals PreProcedural Admission History, 9 Department Anesthesiology and Nursing. 10 This was prepared by a nurse whose name 11 I can't make out, but at the bottom you'll see the 12 13 date is November 14th, 2000. 14 Α. That's the date. Okay. Under "Diagnosis," it says lumbar 15 Ο. spinal stenosis L4-5 and L5-S1; identifies a 16 17 procedure date of December 14th. That was the date you scheduled Dr. Schechter's surgery; 18 19 correct? 20 Α. Yes. 21 And it indicates that the procedure was Ο. a lumbar laminectomy and foraminotomies; correct? 22 23 Α. Yes. So is it fair to say as of December --24 Ο. excuse me -- November 14, 2000, the Departments 25

of Anesthesiology and Nursing were not aware that 1 you were contemplating a thoracic procedure with --2 3 Α. I'm sure not. 4 Thereupon, a document was marked for 5 purposes of identification as Plaintiffs' Exhibit 6 7 No. 11. 8 9 BY MR. PESKIN: This is Plaintiffs' Exhibit No. 11. 10 Ο. This is another University Hospitals of Cleveland 11 form, and it says "Surgical Service Physical 12 13 Examination." And is that your signature at the bottom 14 of that? 15 16 That's a cosignature. This most likely Α. is a -- I can't read the name. It's probably a 17 physician's assistant or some nurse clinician 18 19 in admitting that fills out the form. I don't recognize the name. Medical assistant or 20 21 something. How does this work? Who performs these 22 Ο. assessments? the physician's assistant? 23 Either physician's assistant or nurse 24Α. clinician. Usually physicians' assistants. It's 25

a variety of people, depending on what the 1 specialty is or the problem is. 2 Are they -- Would these individuals be 3 Ο. employed by your practice or by University 4 Hospitals? 5 University Hospitals. 6 Α. And what communication do you have with 7 Ο. the individual performing this assessment prior to 8 9 their assessment? I usually don't communicate with them 10Α. that much. I mean, all the decisions are made 11 and the data is there. They do this for -- I think 12 for hospital documentation, general physical exam 13 and for anesthesia. 14 And your -- So the handwriting, other 15 Ο. 16 than the signature on this form, is not yours; is that what you're saying? 17 NO. NO. 18 Α. You didn't perform this examination? 19 Ο. 20 No. Α. 21 Q. Is that your testimony? 22 But you reviewed these findings before signing them; correct? 23 24 I look at it when I sign my charts. I Α. 25 sign them.

1 Okay. And do you notice that under Ο. "Plan," it says laminoforaminotomy, lumbar 2 3 stenosis, impression and plan; correct? Yes. 4 Α. 5 Ο. Does it say anywhere there that there's going to be a thoracic surgical procedure? 6 7 Α. No. I'm sure this individual is totally 8 unaware. 9 You didn't add that on to the plan on Ο. 10 November 28th, when you counter-signed this or 11 after? 12 Α. I countersigned this after the fact. 13 I'm sure it was after the patient was discharged. 14 That was November 27th. 15 16 Thereupon, a document was marked for 17 purposes of identification as Plaintiffs' Exhibit 18 No. 12. 19 20 BY MR. PESKIN: 21 Hand you what's been marked Plaintiffs' Ο. 22 Exhibit 12. This is a University Hospitals 23 Cleveland consent form, signed by Dr. Schechter 24 and dated November 28th, 2000. 25 Are you familiar with this form?

1	A. I think this is part of the consent form.
2	This is not the whole consent form.
3	Q. Well there's, actually two different
4	forms used. I'm asking if you've ever seen this
5	one.
6	A. Well, I've seen the form. I don't think
7	my signature is on this.
8	Q. No, it's not. I'm not suggesting it is.
9	I'm just asking
10	A. Yeah, I've seen the form.
11	Q if you've seen the form in general.
12	Okay. In the first paragraph of that
13	form I believe it's the third sentence, it
14	says, I understand that, comma, except in an
15	emergency, comma, any further treatment or
16	procedures will be performed only after I've
17	been informed of the benefits, material risks
18	and complications associated with such treatment
19	or procedures, and I have given my consent.
20	Do you see that?
21	A. Yes.
22	Q. What is your understanding of what's
23	meant by that sentence in this consent form?
24	A. I suppose, talking to the patient and
25	telling them what you're going to do.

Q. And what does it mean when it says
 that you're to discuss the material risks and
 complications associated with the procedure?
 A. Just that, discuss risks of an operative
 procedure.

Now, had you had discussions with б Ο. 7 Dr. Schechter about the various risks associated 8 with the lumbar procedure you had contemplated? I always, with any patient that's 9 Ã. scheduled for surgery, discuss risks and benefits. 10 11 I always discuss that with any patient that's scheduled for surgery. And I always talk to them 12 13 specifically about paralysis, even if they don't 14 bring it up, because I know they're really concerned about it, and this applies to any level 15 of the spine that we do. And that's done in the 16 office when I see the patient if I think they're 17 18 headed for surgery, sometimes in the holding area 19 before surgery, but in general it's usually in the 20 office.

22 Thereupon, a document was marked for
23 purposes of identification as Plaintiffs' Exhibit
24 No. 24.

25

21

1 BY MR. PESKIN: 2 Plaintiffs' Exhibit 13, can you identify 3 Q. this form for me? 4 I'm not sure I know what this is. 5 Α. Well, the top of it says, "UHHS Patient 6 Ο. 7 Care and Operation Support." It's got a date on it 11-14-00. And it says, University Hospital of 8 9 Cleveland Pre-op Assessment. 10 Do you provide an admitting diagnosis to the hospital when you have scheduled patients for 11 12 surgery? 13 Sure. The office does. Α. And in this case, the diagnosis that 14 Ο. was -- ICD 9 code and diagnosis that was presented 15 16 to the hospital as an admitting diagnosis was 17 spinal stenosis, dash, lumbar 724.02; correct? 18 Α. Yes. 19 Ο. Is there an ICD 9 code for thoracic 20 stenosis? I don't think there is. I'm not aware 21 Α. 22 of one. 23 Do you know --Ο. You know, I'd have to look it up. I 24 Α. 25 don't know whether there is one specifically,

because it's so rare. I don't think there --1 I don't think there is one. It's only because --2 I'm not even sure there's one for 3 cervical stenosis. 4 5 So it's your belief at this point, as Ο. you sit here today, that there is no ICD 9 6 7 diagnostic code for thoracic stenosis? 8 I do not think there is, and I don't Α. think there is for cervical stenosis, because I 9 don't use it at present. 10 11 Q. If there were one, would it have been appropriate for you to provide that code to the 12 13 hospital as part of your admitting diagnosis? 14 Α. Well, maybe so if I was sure I was going 15 to do the procedure at that time. 16 Probably what I would have used is 17 thoracic disc protrusion, because that is a code, and he does have that -- did have that to a certain 18 19 extent also, but I don't think there's any code for 20 thoracic stenosis. 21Well, you knew on December 14th, 2000, Ο. 22 that Dr. Schechter had thoracic disc protrusion, 23 did you not? 24 Yes. Α. 25 Q. You suspected he had thoracic stenosis;

is that a fair statement? 1 2 Α. Well, it was the stenosis I was more concerned with. 3 4 Thereupon, a document was marked for 5 б purposes of identification as Plaintiffs' Exhibit 7 No. 14. 8 9 BY PESKIN: Handing you what's been marked as 10Ο. Plaintiffs' Exhibit 14, I believe we're on, this 11 12 is a University Hospitals of Cleveland Preoperative 13 Holding Area Nursing Notes. Have you seen this form before? 14 15 Α. I suppose I have, yes. It's dated December 14, 2000. The 16 Ο. 17time at top is 0615. Do you see that? 18 Α. Yes. 19 Now, as I recall from looking at the Q. 20 correspondence -- I want you to correct me if I'm wrong -- the earlier correspondence was that --21 22 suggested that Dr. Schechter was scheduled for 23 surgery on December 14th at seven o'clock a.m. Does that sound about right? 24 25 Α. Yes.

1 Ο. That was the slot that was reserved; 2 correct? 3 Α. I believe so. And I think in your instructions to the 4 Q. 5 patient, you asked them to arrive at the hospital an hour earlier; correct? 6 7 Α. I think that's what my secretary does. Generally speaking, when do you first see 8 Ο. 9 a patient on the morning of surgery? 10 Α. Usually in the holding area before they 11 go in to surgery. 12 Sometime in that hour before surgery? Ο. 13 Α. Yes. 14 At 0615 on this form, under "Plan Q. 15 Surgical Procedure, it says L4-5, S1 lumbar laminectomy and foraminotomies. Do you see that? 16 17 Α. Yes. 18 And it doesn't say anything about a Ο. 19 thoracic decompression and laminectomies, does it? 20 No. It wasn't scheduled that way. Ã. 21 And it wasn't planned that way either, Ο. 22 was it? 23 Well, it was planned that way by me. Α. 24 With whom did you share your plans to Q. 25 perform a thoracic decompression and laminectomy?

I think I did with Dr. Schechter in the 1 Α. 2 holding area. And I indicated my concern in my letter to him about thoracic disc protrusions. 3 You didn't share the plan with the nurses 4 Ο. in the holding area, do you? 5 I don't usually talk to them about what 6 A. 7 I'm going to do. Well, they are completing a form that 8 Ο. 9 indicates what the planned surgical procedure is, 10 aren't they? 11 They don't get that from me verbally. A. 12 They get that from a scheduled procedure. 13 I don't talk to the nurses in the holding area about what I plan to do surgically. 14 15 I don't think that's necessary or appropriate. 16 17 Thereupon, a document was marked for purposes of identification as Plaintiffs' Exhibit 18 No. 15. 19 20 21 BY MR. PESKIN: 22 No. 15, this is a University Hospitals Ο. 23 Health Systems, consent for procedural form; 24 correct? 25 Α. Yes.

It's from December 14th, 2000. 1 Q. And is that your signature under 2 "Physician's Attestation"? 3 4 Α. No. 5 Ο. It's not. Whose signature is that? 6 I can't read it. I'm not sure. 7 Α. It may be one of the fellow's. I 8 cannot read either signature. 9 I guess the patient's signature is there, 10 and I can't read that either, but I just know it's 11 12 not mine. Would it likely be either Dr. Choung or 13 Ο. Dr. Stanford's signature? 14 15 It may be. I don't recognize it. Α. 16 Is it your practice to have your Ο. 17 residents and/or fellows attain a consent 18 from patients for operative procedures? Oh, sure. 19 Α. So you charge them with the 20 Ο. responsibility and authority to discuss with 21 22 patients the upcoming operative procedure and 23 the material risks and complications and obtain 24 that consent? 25 They do, anesthesia does, I do. A11 Α.

of us do. 1 2 Okay. Well, does the anesthesiologist Ο. 3 typically discuss with the patient the material risks and procedures of the surgery or of the 4 5 anesthesia? Anesthesia for surgery, sure. 6 Α. 7 Ο. Anesthesia for surgery? 8 Α. Yeah. But would not be -- you would not expect 9 Ο. 10 an anesthesiologist to be discussing with a patient 11 that relative risks of a spinal surgery but the 12 anesthetic for the surgery? 13 Α. Anesthetic in relationship to the spine 14 surgery. 15 Q. You see that this consent form says 16 that Dr. Schechter was giving consent for lumbar 17 decompression and foraminotomies; correct? 18 Α. Yes. 19 Ο. He did not consent on this form to a 20 thoracic decompression or laminectomy, did he? 21 Α. It's not mentioned there, no. 22 Ο. I sent something called requests for 23 admissions to your lawyer some time ago. 24 And one of those requests for admissions 25 was, Admit that Benjamin Schechter did not consent

to a thoracic laminectomy or a thoracic 1 decompression prior to the operative procedure. 2 And the answer to that was denied. 3 I assume Mr. Groedel discussed this with 4 5 you, and you told him to answer that question that 6 way. "Denying," meaning that --7 Α. 8 Ο. I asked you to admit that he did not 9 consent --10 Α. Right. -- to a thoracic laminectomy? 11 Ο. Α. Right. Right, deny. No. 12 13 You deny that? Q. 14 Yes. Α. What is -- Tell me every basis that you 15 Ο. can think of for your denial of that request for 16 17 admission. 18 For admission to the hospital or for Α. admission to what we said? 19 20 Q. For you to admit --21 I asked you to admit that 22 Dr. Schechter --You know, Dr. Schechter has --23 24MR. MC DONALD: Can he take a look at 25 it so he's clear?

1 I didn't mean to interrupt. MR. PESKIN: That's all right. 2 3 It's No. 4 at the bottom? Q. MR. GROEDEL: No. 3. 4 No. 3. 5 Q. 6 Α. No, I deny that. Okay. Now, you are aware that 7 Ο. Dr. Schechter has filed a complaint, the lawsuit 8 9 against you, and among the allegations in that lawsuit is his assertion that he did not consent 10 11 to you performing a thoracic laminectomy and 12decompression. 13 Are you aware of that? I'm aware of that. 14 Α. So what is the basis for your denying 15 Ο. 16 his allegation that he did not consent to that 17 procedure? I think because I talked to him about it. 18 Α. 19 Now, you tell me -- tell me exactly when Ο. 20 you say you talked to Dr. Schechter about this 21 procedure. 22 I believe it was in the holding area, Α. 23 but it's been two years. I can't be 100 percent 24 certain, but I usually talk to the patients there. 25 Q. It was not before he was in the holding

1 area; correct?

1	area; correct?
2	A. No, unless it was by phone, and I can't
3	remember whether I talked to him by phone or
4	not. But I didn't see him again And this is
5	frequently the case. I see them in the office.
6	They need surgery. They get scheduled for surgery,
7	and the next time I see them is in the holding
8	area.
9	Q. You didn't You have no idea in
10	no indication in your notes that you had any
	communication with Dr. Schechter after the
12	correspondence to him dated November 6th, 2000,
13	up to the date of the surgery; correct?
14	A. That's correct. I don't have that
15	documented in my notes. I thought I had talked
16	to him by phone, but I can't be certain because
17	it's been two years, and I don't have
18	documentation.
19	Q. So you can't be certain as you sit
20	here today that you had any conversation with
21	Dr. Schechter over the telephone where you
22	discussed with him the option let's be clear
23	it was his option whether to have the thoracic
24	surgery; correct?
25	A. It's his option to have both.

1 Q . You did not discuss with him the option 2 of doing, in addition to a lumbar laminectomy 3 and decompression, a thoracic laminectomy and decompression? 4 I thought I discussed it with him over 5 Α. 6 the phone, and I believe I discussed it with him 7 in the holding area. But you're not certain as you sit here 8 Ο. 9 today that you discussed it with him over the 10 phone? 11 I don't have that documented. I usually Α. 12 do and I thought I did, but I don't always document. 13 14 I hate to be pushy about this, but it's Q. 15 sort of important. When you say you think you did, 16 you aren't certain that you did, are you? 17 Α. I will say the same thing all over again. 18 I believe I did. It's been two years. I didn't 19document a phone conversation of my record, which 20 I don't do 100 percent of the time, but I think I 21 talked to him. 22 Q. Is it your practice to document 23 conversations you have with your patients that deal with the issue of informed consent? 24 25 Not in the holding area. Α.

I didn't mean in the holding area. 1 Ο. Τ meant if you were to have a conversation with a 2 patient in your office or on the telephone where 3 you discussed the material risks and benefits of 4 a planned operative procedure, that's something 5 you would normally document, wouldn't it? 6 I frequently do. I don't go into great "7 Α. detail, but I always talk to them about risk of 8 paralysis, infection, et cetera, with every patient 9 10 in the office. That's not -- There's no documentation 11 Q. anywhere in your notes of your having discussed 12 13 the risk of paralysis or anything with Dr. Schechter with regard to either procedure 14 that you performed on him on December 14th? 15 16 Α. I have it documented in my operative 17 note. 18 I didn't ask you about that. I asked Q. 19 about your office notes. 20No. But I always, emphatically always, Α. 21 discuss paralysis with patients in the office 22 that are going through any spinal surgery because 23 they're always concerned about it, if they don't bring it up, and they frequently bring it up. 24 Now, tell me what you remember about a 25 Q.

1 conversation you had with Dr. Schechter in the holding area. 2 Ordinarily I discuss what we're going 3 Ά. 4 to do with the patient and family. 5 Ο. Okay. But I don't -- at that time I don't 6 Α. usually go into risks, because I think they're 7 8 very anxious, and at that point I don't want them to be overly concerned, but I usually discuss what 9 10 we're going to do. 11 Well, do you think it's important for Ο. 12 patients to have time to -- adequate time to 13 consider the risks of surgery before making a 14 decision about whether to undergo surgery? 15 Α. Sure. 16 Do you think Dr. Schechter would have --Q. 17 was given adequate time to consider the risks of 18 thoracic decompression or laminectomy if, as you 19 say, he was first told about it in the holding area 20 approximately 45 minutes before undergoing general 21 anesthesia? 22 MR. GROEDEL: Objection. That's not his 23 testimony. Go ahead. I informed him that he had a problem with 24 Α. 25 his thoracic spine in my letter of November 8th or

1 whenever that was, November 6. 2 Q. November 6th, you had no discussion in 3 your letter -- let's be clear about that -- about 4 the risks of thoracic decompression or laminectomy? It's not in your letter, is it? Γ., I had no discussion about risk of the 6 Α. lumbar procedure. I do that in the office. 7 Let me ask you this, Doctor: Is thoracic 8 Ο. 9 spinal surgeries less common than lumbar spinal 10 surgeries? 11 Α. Yes. 12 Q. Substantially less common; correct? 13 Α. Yes. 14 Q. They are substantially more risky, are 15 they not? 16 Probably they are if you're dealing with Ά. 17 a spinal cord, much the same as the cervical spine. 18 Q. The difference between -- Would you 19 consider the difference in risk between a thoracic 20 spinal surgery and a lumbar spinal surgery to be 21 a material difference? Do you know what I mean by 22 that? 23 I think if -- Again, we're dealing with Α. 24 the spinal cord when we're decompressing the 25 thoracic spinal as well as the cervical; so as

1 far as neurologic risk, it's probably more significant than in the lumbar. 2 3 Q. But there are much greater risks of significant complications from a thoracic spinal 4 5 surgery than from a lumbar spinal surgery; is that 6 a fair statement? 7 By "complications" meaning what? Α. The risks that you were speaking of; 8 Ο. 9 for example, the risk of paralysis. 1.0 Α. You have a risk of a different type 11 of paralysis when you're dealing with a spinal cord either in the cervical or the thoracic, as 12 13 opposed to the lumbar, where there are just nerve 14 roots, but the risk of paralysis is there, too. 15 The risk of loss of sexual function, Ο. 16 the risk of loss of bowel and bladder control, 17 those are substantial risks from thoracic spinal 18 surgeries? 19 Α. With any spinal surgery. 20 Q. Are there -- Was it your intention to 21 address Dr. Schechter's thoracic disc herniations 22 through this operative procedure? 23 Oh, not at all. That would be --Α. 24 My intention was to decompress from the 25 back, what you have to do to the lumbar area, which

1 needed complete decompression. 2 And as I mentioned in the article that we published, we try to assess how much compression 3 4 is in the back of the spinal cord versus the front 5 and the thoracic stenosis problem, because it's 6 often both ways. And if you have to do a lumbar 7 procedure, it's probably far better to -- and 8 most of the compression in the thoracic area is 9 from the back -- it's better to do both from the 10 posterior back approach. 11 If you have purely -- purely a disc 12 herniation with nothing else, as we have published, 13 it's much better to go from the front, through the 14 chest. 15 Ο. There were -- In Dr. Schechter's case 16 there were, in fact, four herniated thoracic discs, 17 were there not? 18 Α. I think there were -- Well, there are 19 three levels ---20 When you talk --21 Not frank herniations, but they're what 22 I call, as I mentioned in my letter to him, hard 23 disc protrusions, which look like degenerate hard 24discs that have been there for a long time, just 25 like the -- the degenerative arthritis in the back

1 of the spine, so there are multiple levels of disc 2 protrusions in a thoracic spine. 3 Were there alternative approaches to Ο. this surgical intervention other than a posterior 4 5 approach? You could have given him another 6 Α. 7 anesthetic and gone anteriorly from the front through the chest at three levels. That would 8 9 be a formidable procedure. And from a technical 10 standpoint, I think that's doing him a disservice 11 to put him through two different anesthetics and 12 another procedure from the front, when most of the 13 compression, by my estimation, was from the back 14 of the spinal canal. 15 Ο. Let me understand something. 16 Dr. Schechter, you learned, had two separate 17 problems, in essence. He had a problem in his 18 lumbar spine; correct? 19 Α. Yes. 20 Ο. And he also had a problem in his thoracic 21 spine; right? 22 Yes. Α. 23 He has congenital stenosis of the 24 entire spine. That's narrowing of the entire 25 spine.

1 Ο. At the time in December of 2000, is it 2 fair to say that Dr. Schechter was relatively, if not completely, asymptomatic with regard to 3 the pathological findings in his thoracic spine? 4 5 Α. I told you I could not differentiate 6 between some of the lumbar stenosis symptoms 7 versus thoracic stenosis, because you could have 8 numbness and tingling and low back and leg pain with thoracic stenosis, so I don't think you 9 could be absolutely certain one way or the another. 10 11 Doctor, is a posterior approach to Q. 12 thoracic spinal surgery generally disfavored? 13 Α. Again, it's disfavored -- and I've 14 written against that -- when you have a pure 15 front anterior disc herniation; but when you have compression from the backside of the spinal cord, 16 which is a major problem, that's the only way you 17 18 could decompress the cord. 19 Did you discuss with Dr. Schechter at Ο. 20 any time the option of deferring surgery on his 21 thoracic spine until some later date? 22 Α. I don't think I did, because I didn't 23 think it was in his best interest. 24 You didn't think it was in his best Ο. 25 interest to discuss that with him?

1 I didn't think it was in his best Α. 2 interest to do two separate procedures and two 3 different anesthetics when you could accomplish both decompressions at the same time. 4 Tell me everything you can recall about 5 Q. your conversation with Dr. Schechter. 6 7 First of all, when did you first see the myelogram? 8 9 I think it was that morning of the Α. 10 surgery. 11 What time? Q. 12 Α. I don't remember. 13 Well, would it have been before six a.m.? Ο. 14 Well, I wasn't there before six a.m. Α. 15 Were you there before six-thirty a.m.? Q. 16 Α. I don't recall what time I got in. 17 Well, Doctor, you were waiting to see Ο. the results of that myelogram before deciding 18 19 whether a thoracic procedure was necessary; is 20 that correct? 21 I told you I was pretty certain Α, No. 22 he needed a thoracic decompression from the MRI. 23 Q. But you had not decided to perform one, 24 had you? 25 I was very certain I was going to perform Α.

1 one, yes. You hadn't decided to discuss it with 2 Ο. Dr. Schechter, though, until sometime after 6:15 3 4 a.m. on December 14th; is that your testimony? 5 Α. No. What I said over and over before is 6 7 that I told him in my letter of November 6th or 8 8th that he had a problem in his thoracic spine, 9 just like he did in the lumbar spine, meaning that I thought that had to be dealt with also. 10 Q. 11 And in your letter --12 But I was only getting the myelogram and Α, 13 CAT scan to further define the situation, but I 14 saw a severe cord compression on his thoracic MRI. 15 Q. Well, can you explain, Doctor, why it 16 was that you wouldn't have included that procedure, 17 the thoracic decompression and laminectomy, on the 1.8 operative consent form or instructed Dr. Choung 19 to include it if that was your intention? 20 I think that was an error on their part, Α. 21 because they weren't aware -- they probably were 22 not -- they probably never saw the patient in the 23 office and probably were not aware that I intended 24 to do that. 25 Q. An error on Dr. --

1	A. I don't recall.
2	Q. An error on the part of whoever it was
3	that signed this consent form; is that what you're
4	saying?
5	A. No, about not including the thoracic
б	laminectomy.
7	Q. Well, it wasn't included on the admitting
8	diagnosis or admission plan, was it?
9	A. It wasn't in the paperwork, no.
10	Q. So other than you, who else knew of
11	your plans to perform a thoracic laminectomy
12	besides Dr. Schechter for now?
13	A. I don't know whether they either the
14	fellows were aware or were in the office when he
15	was there. I don't recall.
16	Q. Well, do you discuss with your fellows
17	before a surgical date what is on the agenda?
18	A. Oh, usually or they just get it from my
19	note.
20	Q. Which note?
21	A. My office note.
22	Q. So they would have seen the office notes,
23	Dr. Choung and Dr. Stanford?
24	MR. GROEDEL: Objection.
25	You may answer.

1	A. Yes.
2	Q. Okay. And in this case if Dr. Choung
3	and Dr. Stanford were to be reviewing your office
4	notes for Dr. Schechter, they'd have no indication
5	that you planned to perform a thoracic laminectomy
6	and decompression?
7	A. Well, I may not have communicated with
8	them how significant I thought the thoracic spine
9	was.
10	Q. Well, let's be clear about it. Your
11	notes Your office notes would not have indicated
12	explicitly to Dr. Choung or Dr. Stanford that part
13	of your surgical plan included a thoracic
14	laminectomy and decompression?
15	A. Would not have?
16	Q. Would not have.
17	A. No, it's not listed.
18	Q. So on the morning of December 14th at
19	six a.m. or whenever it was, between six and seven
20	a.m., I assume when Dr. Choung and Dr. Stanford
21	were getting ready for their day's activities, they
22	would have had no idea at that point of what your
23	surgical plan was; is that
24	A. I don't know what they were aware of.
25	I can't read their minds.

Yes. We used it at both levels, as a 1 Α. matter of fact. 2 3 Q. You used high-speed drill for Dr. Schechter's surgery? 4 Both levels. Α. 5 We do it for two different reasons, since 6 you brought it up. In the lumbar area, his bone 7 was so thick and hard around the nerve roots, we 8 9 couldn't get the instrumentation around it to bite 10 it off, so we thinned it out. 11 In the thoracic area, we use it for a different reason, and that's to thin out the 12 13 lamina, to very carefully pick the roof or the lamina away from the spinal cord with very fine 14 15 instructions so that there's no spinal cord manipulation. So it's a different reason for 16 17 using the power burr at each level. Sort of gotten lost. We were talking 18 Q. about your conversation with Dr. Schechter where 19 20 you explained to him what you intended to do and obtained his informed consent. 21 Who else was present during this 22 23 conversation? I don't recall. 24Α. Do you recall seeing Mrs. Schechter? 25 Q.

1 Α. I think she was there. 2 Okay. And she would have been there, Ο. 3 you believe, when you were discussing with Dr. Schechter the planned operation? 4 5 I believe so, but I don't recall. Α. б Usually the spouse is there. 7 It would have been an option, would it Ο. have not, for Dr. Schechter to have decided to 8 wait for a thoracic laminectomy until some later 9 10 date? 11 He could have waited for his lumbar Α. 12 laminectomy for a later date. I mean, it's purely 13 elective. 14Both procedures were elective? 0. 15 Yes. Α. Did you consider, since you did not have 16 Ο. 17 an opportunity to look at the myelogram until the morning of the surgery, postponing the procedure so 18 19 that you could better plan it? 20 Α. No, because, you know, we were pretty 21 experienced at doing both, and I thought it was in his best interest to proceed and take care of 22 23 both levels. 2425

We don't order that. We -- When we 1 Α. 2 expose the spine, we call for x-ray, and they're there, and they just come into the room. 3 But is that part of the preoperative 4 Ο. 5 orders to make sure that there's an order for an x-ray? 6 7 Α. No, not necessary. Plaintiffs' Exhibit 16, this is a UHHS 8 Q. 9 Patient Care and Operations Support Form, again, 10 which is a printout -- appears to be a printout 11 of orders given -- entered for you, sometimes 12entered by Dr. Choung with regard to Dr. Schechter 13 on December 14, 2000. Do you see that? 14 Yes. Α. 15 Ο. On the top line it says, "Lumbar Spine 1 16 View Tower." What is the purpose of that order? 17 It was entered at 7:05. 18 Α. I don't think I have the foggiest idea. 19 I don't know what that means, "1 view tower." 20 Don't know? Q. 21 Α. NO. 22 We wouldn't be doing x-rays prior to the 23 procedure. We would only be doing them during the 24procedure. 25 Q. Do you know what time Dr. Schechter was

under anesthetic? 1 2 Α. I can look at the operative note. I 3 think it was something like seven-thirty until eleven-something. 4 5 Q. Okay. Do you -- What medications are 6 given to patients typically prior to general anesthetic? 7 8 Α. I don't give them. I don't know. The 9 anestesiologist does that. They're usually give 10 them some sedation once they've signed the 11 operative permit, and I don't know what all they 12 give. 13 (Discussion was held off of the record.) 14 (A recess was taken.) 15 BY MR. PESKIN: 16 Aside from what you saw on the myelogram, Ο. 17 what was it about Dr. Schechter's clinical 18 presentation that made you feel that a thoracic 19 laminectomy and decompression was appropriate or 20 necessary? 21 Α. It wasn't necessarily clinical 22 presentation. It was the severity of the spinal 23 cord compression on his diagnostic studies, on the 24 MRI and the myelogram, which, in my experience, 25 puts him in great jeopardy for significant

1 paralysis if nothing is done; and because I've seen 2 in -- going back in the 70s, before we appreciated thoracic spinal stenosis, I saw at least two or 3 three patients become completely paraplegic who 4 5 never had surgery, so that was a concern to me 6 and that's why I wanted to take care of that. 7 Did you have that conversation with --Ο. 8 is it your -- is it your belief that you had that 9 conversation with Dr. Schechter? 10 Oh, I'm sure I didn't talk to him about Α. what I used to see in 1970s about complete 11 12 paraplegia. I think that just alarms people. 13 14 Thereupon, a document was marked for 15 purposes of identification as Plaintiffs' Exhibit 16 No. 17. 17 18 BY MR. PESKIN: 19 This is Plaintiffs' Exhibit No. 17. Q. 20 This is a three-page document. 21 Is this the operative report ---22 Α. Yes. 23 -- from Dr. Schechter's surgery? Q. 24Who prepared this report? 25 I dictate it. Somebody types it. Α.

1 Ο. You dictated this entire report? Yes. I dictate all of my reports. 2 Α. 3 0. And when do you dictate your reports? Immediately after the surgery. I go 4 Α. right to the dictating room and dictate it as 5 soon as I walk out of the operating room. 6 7 The first paragraph under "Clinical Q. Note," is that boiler-plate language that you 8 9 dictate in all of your operative reports? I usually dictate the procedure was 10 Α. 11 explained to the patient and risks, sure, because 12 that's what I do. 13 Ο. If I were to look at 100 -- the last 14 hundred operative reports that you've dictated, 15 would I see -- would the first paragraph on those 16 reports generally be the same? 17 Α. Possibly, because that's what I do. Ι 18 mean, that's what I talk -- that's what I talk to 19 the patient about. And that's why I dictate it that way. I always talk to patients about the 20 21 possibility of paralysis, usually spinal fluid 22 fissula, no relief of pain. Those are the usual 23 concerns of the patient for any spinal procedure. 24 Is that what you believe -- Is that Ο. 25 the conversation you believe you had with

1 Dr. Schechter?

-L	Dr. Schechter?
2	A. I'm sure I discussed paralysis in the
3	office, 'cause I always do that in any patient
4	that's headed for surgery.
5	Q. And did you discuss with Dr. Schechter
6	that by consenting to a thoracic procedure, he
7	was at somewhat higher risk than he would be
8	with just a lumbar procedure?
9	A. I don't know what that increased risk
10	may be. I mean, it's very difficult to say that
11	because the numbers you know, we've done
12	I've done over 1,500 stenosis patients, and I have
13	experienced paralysis after those on occasion; but
14	you don't do that many thoracic procedures, so you
15	can't compare risks really.
16	I mean, the paper we published has
17	one patient that developed paraplegia from the
18	procedure, following the procedure, out of 12
19	patients, so it's not 1,500 patients. So it's a
20	very different But we always talk to patients
21	about potential of paralysis because it exists.
22	I frequently talk to patients also about
23	redoing their spinal surgery, because that's about
24	40 percent of what my practice is, and, you know,
25	there's always scar there. I talk to them about

1 tearing the dura covering around the nerve roots; and if it occurs, I tell the family about it 2 3 afterwards. It's not usually a big deal. You did the thoracic laminectomy first; 4 Ο. 5 correct? 6 Α. Yes. 7 That's what you dictated in your Ο. 8 operative report? 9 Α. Yes. 10 Who was present in the operating room? Ο. 11 I don't recall, but it says assistant Α. 12 surgeons are Stanford and Choung. 13 Q. Where was Dr. Choung -- What level of 14 training was he at at that point? 15 They both were spine fellows. Α. 16 We have -- To explain our training 17 program here, we have three spine fellow --18 domestic spine fellows that come each year who are fully trained orthopedic or neurosurgeons 19 20 before they come here. They spend an additional year here to learn about spine surgery. And they 21 22 scrub-on assist, sometimes do cases at other 23 hospitals. And both of these individuals were 24 spine fellows at the time, both fully trained 25 orthopedic surgeons, but they were assisting.
Okay. What part -- Who opened 1 Ο. 2 Dr. Schechter? Who did the initial incision? I'm sure I díd. 3 Α. Okay. Well, let's carry it one --Ο. 4 5 Α. I don't always do that, but, you know, sometimes I have the fellows expose the spine, 6 7 but I think I did. You can't be certain? 8 Ο. Well, for physicians, dentists, VIPs, 9 Α. 10 I tend to do almost everything; maybe not close 11 the skin, but I do everything. You considered Dr. Schechter to be a VIP? 12 Q. 13 Α. I think he's a professional person that I respect very much, and I would -- and if he 14 said to me, Are you going to do the operation? 15 16 which I get questioned all the time, I would say 17 absolutely. 18 Q. Well, I notice that you use the term "we." You say "we" then proceeded to do the 19 thoracic laminectomy first. 20Oh, it's the way I dictate things, but 21 Α. 22 I was doing the laminectomy, but I'm saying "we" 23 meaning by assistants and I. 24Describe to me the bone cutter that Ο. 25 you used to remove the spinous processes.

1.	A. That's a large bone-cutting instrument,
2	which cuts off the spines that stick out from
3	the back of the spine in order to get down to
4	the lamina.
5	Q. Okay. And then you used a Leksell
6	rongeur. What is that instrument?
7	A. That's a smaller biting instrument
8	to nibble away the lower part of the lamina,
9	the roof of the spinal canal.
10	Q. And would you have used those
11	instruments To the best of your recollection,
12	was that you using those instruments?
13	A. Absolutely.
14	Q. And then it says you dissected the
15	ligamentum flavum off the lamina with a curette.
16	You performed that part of the procedure
17	as well?
18	A. Yes.
19	Q. And the next sentence says, "Using small
20	to medium-sized Kerrison punches, we proceeded to
21	do a laminectomy at T12, T11 and T10."
22	A. That was me doing all of that with the
23	assistance of the fellows.
24	Q. What is a Kerrison punch?
25	A. A Kerrison punch is they're different

1 sizes; but in this situation, very tiny -- one, 2 two, three-millimeter tiny biting instruments that you -- they have a little footplate on them that 3 you put under the lamina to nibble away the lamina 4 so that you don't manipulate the neuro structures; 5 you just take the roof of the spinal canal off. 6 7 0. A medium-sized Kerrison punch would be three millimeter; would that be right? 8 9 About three, but we start off with very Α. 10 small ones. 11 You used a medium-sized Kerrison punch, О. 12 which would have been a three-millimeter punch in this case; correct? 13 14 Small to medium size is what I said. Α. 15 There is a space under the lamina in 16 the middle of the spinal canal, and that's where 17 we start, where they -- the lamina comes together like a roof. So there's a little space above the 18 spinal cord where you have room to put these small 19 20 instruments and start nibbling away in the midline 21 and then we widen that out. 22 Were you --Q. 23 Strike that. 24 Where did the drills come in to use in 25 this operative procedure, the high-speed drills you

1 were talking about earlier? I don't see them 2 mentioned in your operative report. 3 I think it's in there. I'm positive Α. I used it. I may not have mentioned it in the 4 5 thoracic, but I know I used it there as well as 6 the lumbar. 7 Isn't it your -- Isn't it good practice Ο. 8 when dictating an operative report to note all the 9 instruments used in a procedure? 10 Α. Well, I did notice -- I did note the 11 high-speed drill in the lumbar procedure, but I 12 know I used -- I can tell you as I sit here today, 13 I used -- because this is the way I do these. I 14always use a power burr to thin out the lamina 15 before I start taking the lamina off. 16 Ο. You would agree that your operative note 17 does not indicate that, does it? 18 It's not mentioned in the thoracic part Ά. 19 of the procedure. It's mentioned in the lumbar, but the drill was right on the set, and I did use 20 21 it in the thoracic area. 2.2 Did you have a microscope in the Ο. 23 operating room? 24A. No. I used -- We do all of our spine 25 surgery with magnifying lenses and headlights.

1 That's the routine. I don't think a microscope 2 is necessary for this. Are there any risks in using a 3 0. 4 medium-sized Kerrison punch when you have a 5 flattened cord? I don't think there's any risk when you 6 Α. do it as I just described. 7 8 You start in the midline after the lamina 9 is thinned out with a burr. There's just a little, 10thin bone left in. In the very middle of the 11 spinal canal, we use first the small Kerrisons, 12 very tiny biting instruments, where there is a 13 space outside of the spinal cord; and then we 14 widen that with maybe smaller Kerrisons, as we 15 widen the laminectomy site. So I don't think 16 there's any significant risk in injuring the 17 cord doing it technically that way. 18 Let's talk about the part of the Q. 19 procedure that involved Dr. Schechter's lumbar 20 spine. 21 Why was it that you extended the 22 operation to the left side of Dr. Schechter's 23 lumbar spine? 24 I routinely take care of everything Α. 25 that's abnormal where I see nerve root compression.

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I don't just do the systematic side. I've done 1 2 this routinely in over 1,500 patients with stenosis 3 in the last 30 years. And our results of relief of pain and paralysis, that people that have 4 5 paralysis, is 92 percent good to excellent. б And I also remove the thick bone on both 7 sides if there's no root compensation on both 8 sides. I think it would be not be correct not 9 to decompress all the nerve roots that are being 10 compressed. And our long-term results, I think, 11 bear out that philosophical approach. 12 Q. Where did you see evidence of nerve root 13 compression on the right side of Dr. Schechter's 14 lumbar spine? 15 Α. Oh, that's on the MRI, myelogram and CAT 16 scan. 17 He was having no neurological symptoms Ο. 18 on the right-hand side, though; correct? 19 No, but I can't bring myself not Α. 20 to decompress a nerve root that's severely 21 decompressed even in a patient that is not 22 symptomatic. You're right there. I think 23 you should do the whole job. 24 Do you -- Did you administer any Ο. 25 intervenous steroids to Dr. Schechter prior to

1 surgery? 2 Α. No. 3 Q. Why not? No reason to do so. 4 Α. 5 Q. Is there any reason to give intervenous steroids prior to thoracic decompression surgeries? 6 7 Α. No. There's no evidence to state that. 8 0. Are there spine surgeons that would 9 disagree with you? 10 MR. GROEDEL: Objection. 11 You may answer. 12 Α. There are, I think, more neurosurgeons 13 that do this --14 There's absolutely zero evidence in the 15 literature to say that that makes any difference 16 in the problem with postoperative paralysis or 17 there's no evidence whatsoever; and, plus, there can be complications from administering steroids, 18 19 so we don't use it. 20 On page 3 of your operative report, the Q. 21 last sentence says, Dr. Bohlman was the primary 22 surgeon and was present throughout all the critical 23 portions of the case. 24 You're referring to yourself as a third 25 person, then?

Yes. 1 Α. Is that typical practice? 2 Ο. Yes. 3 Α. Now, looking at that last sentence, 4 Q. does that refresh your recollection that you 5 6 didn't perform the entire surgery? 7 Of course not. I did. Α. Well, then, why would you have dictated 8 Q. 9 that you were present throughout the critical 10 portions of the case as opposed to Dr. Bohlman performed the entire operative procedure? 11 12 Α. Well, maybe I didn't close the skin. 13 I mean, I don't remember that. Sometimes I don't. 14 Sometimes the fellows are better than me. But 15 I did the whole operation, and that's the way I 16 dictated it. 17 18 Thereupon, a document was marked for purposes of identification as Plaintiffs' Exhibit 19 20 No. 18. 21 22 BY MR. PESKIN: 23 Plaintiffs' Exhibit 18, it's a nursing Ο. 24record from the immediate postoperative period. 25 Would you agree with me that that's what this is?

1 Α. Yes. 2 Ο. The first note at 11:25, it says -- I 3 can't read the beginning two words, but it says, 4 "Patient is unable to move left leg." See that? 5 Α. I'm trying to decipher the first part. Something "aware" -- It looks like "Aware patient 6 7 is unable to move left leg, " that's correct. Unable to wiggle toes; correct? 8 Ο. 9 Α. Yes. 10 Ο. Or keep left leg bent; correct? A. 11 Yes. 12 Now, prior to the surgery Dr. Schechter Q. 13 had no problem with his left leg, did he? 14 No, no neurologic problems. Α. 15 And postoperatively, he had a significant Q. 16 neurologic deficit; correct? 17 He did have significant weakness, mostly Α. 18 in the left leg. 19 Ο. You were present at the bedside at 11:45, 20 according to this note. 21 Α. I was. 22 Q. Okay. And you became aware so at that 23 point that Dr. Schechter had a significant 24neurologic deficit --25 Α. Yes.

1 Ο. -- postoperatively? Yes. I came in to examine him. 2 Α. 3 Q. Why did you not order an MRI at that point? 4 Α. 5 I don't think there was any reason to. 6 This was --7 Well, couple reasons. I mean, there 8 was no --9 First of all, this was an immediate weakness on one side that was incomplete weakness 10 11 with spotty loss of sensation, which, in my humble 12 experience of 30 years in dealing with spinal cord 13 injuries, appeared to be a vascular impairment of the spinal cord, which was incomplete. So I wasn't 14 15 concerned with --16 You don't -- You don't get a hematoma 17 instantly when somebody arrives in the -- in the recovery room. So I was not concerned about 18 19 anything else compressing his spinal cord. 20 And in addition, as we were watching him, 21 he started improving. 22 Could Dr. Schechter's neurologic deficits Ο. 23 postoperatively have been caused by some sort of 24trauma to his spinal cord? 25 Α. It did not act like that from the reasons

I just mentioned. It was very -- I mean, I've 1 2 never had that happen before, but -- I mean, not a 3 direct injury to the spinal cord. It just acted 4 like a vascular-type neurologic pattern. It was 5 very incomplete. He had almost no weakness on the right side at all, and he had no bladder impairment 6 7 and just a little bit of sensory loss on the left 8 side, and he started to recover almost immediately, 9 so I saw no sense in re-studying him at that 10 moment. 11 What do you mean by a vascular injury? Ο. 12 How does that occur? 13 We don't know. It -- The blood supply Α. 14 is more sparse, we believe, in the thoracic spine, 15 the blood supply to the spinal cord. It comes in 16 through little fetter arteries along the nerve 17 roots. This can happen in the cervical cord or 18 the thoracic cord. We don't totally understand 19 the cause of this, but it can be associated with 20 an operative procedure. 21 22 Thereupon, a document was marked for 23 purposes of identification as Plaintiffs' Exhibit 24 No. 19. 25

1 BY MR. PESKIN:

T	BY MR. PESKIN:
2	A. And the pattern of this with the sparing
3	sensation acted very much like a vascular some
4	partial loss of blood supply to the spinal cord.
5	This is And it's pretty classic for that.
6	The other concern that I made a note of
7	is that we inject a long-acting local anesthetic
8	called marcaine in the muscles before we close
9	the wound up, and that's to control pain from
10	the operation so they don't have as much pain.
11	And in the past we have written a
12	paper on this, actually we had in a chest
13	procedure, doing two disc herniations from the
14	front. The thoracic colleagues injected anesthetic
15	into the muscle, and it dripped down the spinal
16	cord; and in the recovery room, the spinal the
17	patients two patients with thoracic discs on
18	the same day woke up with weakness in the recovery
19	room, which ultimately recovered. And it was from
20	the anesthetic. So I thought this was a
21	possibility in Dr. Schechter.
22	Q. Ultimate
23	I've already just handed you what's
24	Exhibit 19. And I think that's the note you were
25	just referring to. That's your own post-opt note

1 from 11:45; correct? 2 Α. Yes. 3 Ο. Is it fair to say that as you sit here today you do not attribute Dr. Schechter's 4 5 postoperative difficulties to marcaine having 6 been dripped down his spinal cord? 7 I don't think. That was just a Α. possibility because we have had that happen to 8 9 us in the thoracic area. 10 That was something that you considered Ο. 11 as a possibility, and you documented that as a 12 possibility, but later ruled it out based on 13 the fact that he didn't recover as you would 14 have expected from ---15 Α. No. I was 95 percent certain it was a 16 vascular problem. 17 Did you -- You did not include in your Ο. 18 note for possible causes of Dr. Schechter's 19 neurologic deficit trauma to his spinal cord; 20 correct? 21 I don't think there was any trauma to Α. 22 the cord. That wasn't a possibility. 23 Q. Why are you saying that it was impossible 24that there would be trauma to his spinal cord? 25 Α. There was no trauma to his cord. There

was no manipulation of his spinal cord by the 1 technique we use. 2 3 Q. And the basis for that assertion is what? Α. I've gone all through the technique. I 4 5 hope the jury can understand. 6 We use very tiny instruments. The spinal 7 cord is in the spinal canal; and where the roof of the lamina occurs, when we first enter the spinal 8 canal, there is room to put the small instruments 9 10 and nibble the bone away. We nibble the bone away 11 from the spinal cord. There's no manipulation of 12 the spinal cord whatsoever. 13 Q. When you're nibbling this bone away, you're, in essence, blind, aren't you? 14 15 No, not blind at all. We don't do Α. 16 anything blind. We're looking right at the spinal 17 cord with magnifying lenses and headlight. We 18 have absolute direct visualization of everything 19 you do. 20 So you did not see at any time during the Q. 21 operative procedure any trauma to Dr. Schechter's 22 spinal cord? 23 There was no trauma to his spinal cord, Α. 24 no manipulation. 25 Q. You would agree, though, Doctor, that

1 if one were to manipulate the spinal cord during 2 a thoracic decompression surgery, that symptoms similar to those that Dr. Schechter exhibited 3 postoperatively could occur? 4 5 Α. That's possible. And historically 6 specifically neurosurgeons did thoracic laminectomy 7 for thoracic herniated discs, which were in the front of the spinal cord always. And what they 8 9 did and I suppose some orthopedists, but I don't 10 think so, they would try and get out a disc --11 herniated disc in the front of the spinal cord from 12 the laminectomy approach, which means you have to 13 retract on the spinal cord and manipulate it and 14 that can cause complete paraplegia, incomplete 15 paraplegia in a very high percentage of patients. 16 And we -- that's why we wrote our paper on front 17 decompression of thoracic disc when that's the 18 only pathology. But in thoracic stenosis, this a 19 different animal. It's compression predominantly 20 from the back, and you go very carefully through 21that little space and nibble the bone away from 22 the spinal cord with no manipulation to the spinal 23 cord. 24

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Thereupon, a document was marked for

purposes of identification as Plaintiffs' Exhibit 1 2 No. 20. 3 BY MR. PESKIN: 4 Handing you what's been marked Exhibit 5 Q. б 20. This is a note at the top of the page from 7 you dated December 15th at eleven-thirty a.m. 8 A little more than 24 hours postop at 9 this point; correct? 10Α. Yes. 11 Q. You were leaving town is that day; 12 correct? 13 Α. Yes. 14 And you saw him just before you left Ο. 15 town? 16 Yes. Α. 17 Q. In that note you indicate, Will give 18 him decadron for 48 hours. 19 Why did you wait 24 hours to administer steroids to Dr. Schechter? 20 21 Α. I don't -- To be honest, I don't think 22 steroids do any good, even when you have -- There's 23 never been any proof to -- that says that a 24 vascular injury of the cord is benefited by 25 steroids, no proof whatsoever in the literature,

1 but I suppose we were trying to do everything we 2 thought we could do, but I -- I basically don't 3 think it improves -- the situation has never been 4 proved. Do -- Does the literature indicate that 5 Q. 6 traumatic injuries to the spinal cord are benefit from steroids? 7 In a very minimal way, and I've written 8 Α. extensively about that if you want to discuss that. 9 10 I'm just asking if --Q. 11 Very minimal, very minimal, if any. Α. 12Ο. Why would you have ordered them at all 13 if you felt they didn't do any good? 14 I was just trying to do everything we Α. 15 possibly can. Possibly even for medicolegal 16 reasons, because it's brought up in depositions 17 and trials because it was published that way, and 18 I think that's very unfortunate. 19 20 Thereupon, a document was marked for 21 purposes of identification as Plaintiffs' Exhibit 22 No. 21. 23 24BY MR. PESKIN: 25 Q. Plaintiffs' Exhibit 21, this is a

discharge summary from Dr. Schechter's admission 1 2 dated -- discharge December 19th, 2000. 3 You didn't dictate this summary, did you? No. Dr. Choung did it. Α. 4 You were out of town; correct? 5 Q. б Α. Well, this was done much later. It was 7 done like three months later. 8 Q. Right. But you were out of town on the 9 19th? 10 Of December? Α. 11 Yes. Q. 12 Α. Yes. I can't remember where I went, 13 but I may have been on vacation. I'm not sure. 14 So Dr. Schechter stayed in the hospital Ο. the 16th, 17th, 18th, four days, while you were 15 16 out and somebody was covering for you; correct? 17 Yes. Dr. Emery was covering, who's Α. 18 one of my partners, is a spine surgeon. And I 19 know I communicated with him by phone because I 20 was concerned. 21 I'm sure that's not documented either, 22 but I know I talked to him. 23 24 Thereupon, a document was marked for 25 purposes of identification as Plaintiffs' Exhibit

No. 22. 1 2 BY MR. PESKIN: 3 Handing you what's been marked as 4 Ο. Plaintiffs' Exhibit 22, this is a letter from 5 6 you to Richard Stein, M.D., and that's 7 Dr. Schechter's internist. You dictated this letter? 8 9 Α. Yes. Actually before we look closely at this 10 Q. letter, if you look back at your office notes. 11 12 I think that's Exhibit 2 or 3. 13 MR. GROEDEL: He's got his notes in front of him. That's okay. 1415 Look at your note for December 19th, 0. 16 2000. 17 Α. Okay. 18 0. At the bottom of it, it says, "cc: 19 Richard Stein." It looks as though you used a 20 portion of this note in your office note to compose the letter to Dr. Stein. Is that a fair statement? 21 22 I didn't use this specifically. I just Α. 23 re-dictated a letter. 24 I always send the discharge summary to 25 the primary care physician. And in this situation,

because of the complication, I sent a letter to him 1 2 explaining, but I always send a discharge summary routinely, but I took it off -- out of my head when 3 I dictated a letter to Dr. Stein. 4 Okay. Let's look at your note first from 5 Ο. the 19th that you put in your office notes. б 7 This is your own discharge summary --Yes. 8 Α. -- as opposed to with the one that 9 Q. 10 Dr. Choung did for the hospital? Yes. Yes. 11 Α. 12 In the third sentence or so it says, 0. 13 Indeed, on his preoperative myelogram and CT scan, which I did not see until the morning of his 14 15 surgery because it could not be brought up to the 16 office, period. That's not a complete sentence. 17 But what do you mean it couldn't be 18 brought up to the office? Did you ask that it 19 be brought up to the office? 20 Yeah. I don't think they could find it. Α. 21 Who's "they"? Ο. I don't know. Radiology. I don't know 22 Α. 23 who is "they." 24 When would you have asked to see it? Ο. 25 I don't remember. We try and look at Α.

1 it beforehand. Usually I have the studies done --2 I look at the studies a day before at least. 3 Well, how did you know that they were Ο. 4 going -- Did you know that they were going to be 5 able to locate the film prior to surgery? Probably not, but I assumed they would. 6 Α. 7 Did it make any difference to you whether Ο. 8 or not they could locate the film prior to surgery? 9 Well, I'm sure I could have done the Α. 10same surgery on the basis of the MRI, which I said 11 before. 12 Q. So you would have done the same 13 surgery --14 Oh, absolutely. Α. 15 0. -- even if you hadn't seen the film? 16 Α. Yes. 17 So seeing the film was not significant Q. 18 to your decision to extent the surgery beyond a 19 lumbar decompression and laminectomy to include a thoracic? 20 21 No. No. I knew we had to do a thoracic Α. 22 just by looking at the MRI. 23 But you didn't decide to do that until Ο. 24 the day of surgery? 25 Α. Oh, no, that's not true. I knew we were

1 going to decompress the thoracic spine. As I mentioned before, the -- even with 2 the lumbar -- the redo lumbar decompressions, I 3 always do a myelogram and a CAT scan, because it 4 gives me more useful information of how the nerve 5 roots look like and in the thoracic area, spinal 6 cord and the bony compression. It's a different 7 8 dimension, but it doesn't change what we do. Doctor, isn't it your practice to do 9 Q. 10 interoperative spinal cord monitoring when you do 11 lumbar -- excuse me -- thoracic decompressions and 12 laminectomies? 13 Usually. Α. That's your practice? 14 Ο. 15 Usually if it's available. Α. Now, if you look at your discharge 16 Ο. summary there, it says, "Because of when I saw 17 18 the studies, we could not on the spot arrange 19 for interoperative spinal cord monitoring, 20 unfortunately." Do you see that? 21 Α. Yeah. Now, Doctor, as you sit here today --22 Q. and I wonder if this refreshes your recollection 23 about when it was that you decided you were going 24 to do a thoracic decompression. 25

1	Isn't it a fact that you didn't decide
2	you were going to do it until after you saw the
3	myelogram?
4	A. No.
5	Q. Well, then why did you make that
6	statement in your discharge summary, "Because
7	of when I saw the studies, we could not on the spot
8	arrange for interoperative spinal cord monitoring,
9	unfortunately"?
10	A. No. I think that what happened was,
11	my secretary, as she put in all of the preoperative
12	schedules, it was a lumbar laminectomy, and I
13	didn't specifically tell her I wanted thoracic
14	spinal cord monitoring.
15	She's not used to seeing a lot of
16	thoracic, necessarily, so she just thought we
17	were doing lumbar at that time, so she didn't
18	arrange for the monitoring technician.
19	Q. Well, you did
20	A. It was probably my fault. I didn't
21	tell her to line up the spinal cord monitoring
22	technician.
23	Q. In that sentence, though, Doctor, you
24	are isn't it true that you are indicating that
25	it was because of when you saw the studies, that

you could not arrange for interoperative spinal 1 cord monitoring? 2 MR. GROEDEL: Objection. Asked and 3 answered. 4 No. I knew I was going to do the 5 Α. thoracic. 6 It's probably my error in communicating 7 8 with my secretary. I'm so used to her scheduling -- like 9 10 if it's a thoracic disc or a big cervical decompression, I don't have to tell her. She 11 knows automatically to schedule the spinal cord 1213 monitoring, but this is a very different situation, 14 and she was not aware, so -- neither I, because 15 I personally don't schedule the monitoring. 16 0. You don't have your secretaries or 17 anybody schedule interoperative spinal cord 18 monitoring if you plan to do a simple lumbar 19 laminectomy and decompression; is that true? 20 Α. True. 21 You only arrange for interoperative Ο. 22 spinal cord monitoring when you're doing thoracic 23 procedures; correct? Thoracic and cervical. Depending on the 24 Ά 25 cervical case and in general.

Now, when you discovered that the 1 Ο. 2 monitoring equipment that you typically use for your thoracic procedures was not available, did 3 you consider postponing the surgery? 4 5 Α. Not really, because I wasn't -- to be honest, I wasn't that overly concerned about the 6 procedure. And I don't think it would have changed 7 what we did. I think we had to do what we did. 8 9 Well, this was an elective procedure; Q. 10 correct? 11 Α. Sure. 12 Q. The entire procedure? 13 Sure. Α. Didn't Dr. Schechter deserve to have 14 Ο. 15 all of the equipment present that you typically 16 use when you perform these surgeries? 17 MR. GROEDEL: Objection. 18 You may answer. 19 I don't think it would have made any Α. 20 difference in what we did. We had to do the 21 thoracic laminectomy. I don't think it would 22 change technically what we did. And I don't use 23 it for all cervical decompressions. 24Ο. You did, however, note that it was 25 unfortunate that it was available; correct?

1	A. Yeah, I think that's exactly what I
2	said, because we usually like to have it.
3	Q. And what is the purpose of that
4	interoperative spinal cord monitoring?
5	A. Oh, to hopefully let you know if
6	there's a problem with the spinal cord during
7	the procedure, like a direct injury, which I've
8	never had.
9	The problem is
10	I mean, it's a comfort factor for
11	the surgeon, I guess, because you can have the
12	monitoring
13	Well, first of all, for the jury, spinal
14	cord monitoring is an electrical stimulation of
15	the legs the nerves in the legs and the arms,
16	and the message goes up the spinal cord, in the
17	back of the spinal cord to the brain. And this
18	machines spits out little wave forms that look
19	like a heart tracing, so we can kind of tell in
20	general the function of the spinal cord.
21	The problem is in this situation,
22	retrospectively, I don't think it would have shown
23	any abnormality anyhow, because postoperatively,
24	when he had his motor weakness in his left leg,
25	the sensation the back of the spinal cord where

the monitoring gets transmitted, it's up the -- the 1 2 sensory fibers, the sensory tracks in the back of the spinal cord, which were completely normal in Dr. Schechter, so I don't think it would have told us anything.

3

4

5

6 You can have a complete paraplegia and have sparing of position and vibration sense which 7 goes up the back of the spinal cord and have normal 8 9 spinal cord monitoring.

Do you believe it's the standard of 10 Ο. 11 care when doing thoracic spine surgeries to use 12 interoperative spinal cord monitoring?

13 I don't think you can say that that's Α. absolutely standard of care. Some people use 14 15 it, some people don't.

16 There are surgeons here who frequently do 17 not, because, as they say, it's not going to change 18 necessarily what you're going to do technically that needs to be done. 19

20 Have you ever taken the position that ---Ο. 21 that when doing thoracic surgical procedures, a 22 surgeon should use interoperative spinal cord 23 monitoring?

24 Well, we recommend that, but there's Α. 25 so many different pathologies in the thoracic area,

but we recommend that, and we do use it pretty 1 routinely, but it doesn't usually --2 3 I'm trying to think if it ever altered what I did in the thoracic spine. I don't think Δ 5 so. 6 MR. PESKIN: Do you want to go off the record now for a few minutes? 7 (A recess was taken.) 8 BY MR. PESKIN: 9 10 Dr. Bohlman, we were looking at your Ο. discharge summary from your office notes from 11 12December 19th, 2000. 13 After the last sentence, we were talking about "because of when I saw the studies," et 14 15 cetera. 16 The next sentence says, "In any case, 17 he was taken to the operating room on the day of the admission for a lumbar laminectomy of 18 L4-5 S1 was carried out with bilateral 19 20 foraminotomies and then we carried out a very meticulous laminectomy of T10-11-12, decompressing 21 the spinal cord at those levels." Correct? 22 23 Α. Yes. 24What was the order of this surgery, Ο. 25 Doctor, because the discharge summary doesn't

1 match the operative report? 2 Α, Well, I don't think that makes any difference. That's not supposed to be a 3 chronological order; just what we did. We did Δ the thoracic part first -- I definitely recall 5 that -- and then the lumbar, but it makes no 6 difference. 7 8 Ο. And the discharge summary you dictated, 9 though, you had it the other direction, correct, that you did the lumbar laminectomy and then the 10 thoracic laminectomy and decompression; right? 11 12 Α. No. I didn't mean that in chronological 13 order is what I just said. I said we did both. Ι 14 simply dictated that we did the lumbar laminectomy 15 and the thoracic laminectomy. I didn't say one was done first over the other. 16 17 Q. The next sentence says, "Although we were 18 extremely cautious not to manipulate the thoracic 19 cord in any way postoperatively, the patient 20 awakened with significant motor deficit." 21 I'm curious about your choice of words 22 there. When you say, "Although we were extremely 23 cautious not to manipulate the thoracic cord," 24are you indicating that manipulation of the 25 thoracic cord can cause a significant deficit?

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1 Α. I didn't -- I was simply stating openly 2 and honestly to Dr. Stein that we purposely did a very meticulous laminectomy without manipulation 3 of the spinal cord, but the patient woke up with 4 5 a postoperative deficit. 6 Ο. Dr. Bohlman, aren't you always meticulous 7 in your surgical technique? Sure. 8 Α. 9 Q. Don't you always -- Aren't you always 10 extremely cautious not to manipulate the thoracic 11 cord? 12 Α. Sure. 13 Do you always dictate in all of your Q. 14 operative notes about how cautious you are in 15 avoiding manipulating the thoracic cord? 16 Α. Usually, because that's what we do. 17 Same way with cervical. I do note that there was no manipulation of the spinal cord and that this 18 19 deficit was a vascular loss of blood supply 20 related. 21 Ο, What evidence do you have to confirm 22 your suspicion that Dr. Schechter's postoperative 23 deficits were the result of a vascular injury? 24I mentioned this before and maybe it Α. 25 went by you. Because of the pattern of the

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1 deficit, very incomplete, just a weakness -- a patchy weakness that did not make any neurologic 2 sense, if you had a direct injury to the spinal 3 4 cord, and classically vascular injuries to the 5 spinal cord spare the back columns of the spinal 6 cord, which carry position and vibration sense. And the classic form of a vascular insult called 7 8 the anterior spinal artery syndrome, where the 9 artery in the front of the cord loses blood supply 10 or is clotted, patients develop paralysis on 11 one or both sides, but always have sparing of 1.2 position and vibration sense. 13 Dr. Schechter only had weakness 14 predominantly on the left side, which was 15 incomplete, and had sparing of most sensation. 16 So this was pretty classic vascular injury to the cord. Plus, the other reason is, not only 17 18 the pattern of the deficit but the rapidity with 19 his recovery of neurologic function, which started 20 happening within hours. 21 Ο. In the postoperative -- In your 22 postoperative care of Dr. Schechter, did he 23 complain of significant pain? 24 Α. No. 25 Ο. Was he taking narcotic analgesics?

1 Well, he had operative pain for which Α. 2 he received narcotics, as anybody does. What about in January of 2001? What 3 Q. kinds of problems was he experiencing at that 4 5 point? 6 That was a response to a phone call. Α. 7 He was doing extremely well. He had gone to 8 physical therapy. He was actually in physical 9 therapy when I tried to call him earlier. Не 10 was walking with two canes. He had no incontinence. He never did have any incontinence 11 of bowel or bladder at any point. 12 13 He never did? Ο. 14 He never did, never. Α. 15 He only had one episode with sounds 16 like -- which we believe was leaking of stool 17 around the fecal impaction. And I know Lynette, 18 our nurse clinician, talked to him and I talked to 19 Lynette, and that's what we were sure was 20 happening. 21 So once we told him he should get his 22 bowels cleaned out and following that, there was no further episode. He had no incontinence of 23 24bladder at all. 25 And actually prior to that, I visited

him at the Euclid Rehabilitation Unit. He was 1 not complaining of any pain, and he recovered 2 very significant neurologic function. That was 3 on the 23rd of December, so he was rapidly 4 5 recovering. On the 23rd of December -- back up for б Ο. 7 a moment -- you went to see Dr. Schechter at Euclid Rehabilitation Unit. 8 Yes. 9 Α. 10 Is that unusual for you to go visit a Ο. patient at a rehabilitation facility? 11 12It is, unless they're here locally; Α. although, I've done this periodically in the 13 14past. 15 I was concerned with his neurologic recovery, somewhat concerned, but he had already 16 started recovering before he left the hospital, 17 18 and I just wanted to see how he was doing and 19 check in with him. And I think --20 No, I don't usually make house calls. Why do you say that Dr. Schechter had 21 Q. no pain? Does it say that in your 12-23-2000 22 23 note? I don't think he was complaining of 24 Α. 25 pain. I didn't make any note of pain. He was

1 in good spirits. 2 Thereupon, a document was marked for 3 purposes of identification as Plaintiffs' Exhibit 4 5 No. 23. 6 BY MR. PESKIN: 7 Take a look at Exhibit 23. It's a 8 Ο. 9 phone message from Dr. Schechter on January 3rd. He was complaining he was incontinent; correct? 10 11 That's what we later fared it out Α. 12 as leaking around a fecal impaction, bowel 13 incontinence, which we didn't think was true 14 incontinence. And the Percocet was probably 15 still for his preoperative pain. 16 He was taking narcotic analgesics? Q. 17 Α. Sure. It was only a few days after 18 his ---19Let's see. That was --20 Q. Three weeks postoperative? 21 No. No. No. December 14th was the Α. 22 surgery, so that's --23 You're right -- No. A little less than 24three weeks, but still people take narcotics for 25 six weeks.

1 Q. What else can you recall about your 2 postoperative care of Dr. Schechter in terms of his recovery of neurologic function? 3 4 Α. Well, he came back on the 24th of 5 January. At that time he had some shoulder pain, some right knee pain, and he was having 6 like arthritic joint pain, but not the leg pain 7 that he had before the surgery. 8 He was completely normal motor testing, 9 motor strength at that point, which was like five 10 11 weeks after the surgery. He had slight decrease 12 sensation of pinprick in a patchy area, but 13 otherwise was fine and that deep tendon reflexes 14 were normal. So he had recovered all of his motor strength on neurologic examination. 15 Based on your examination? 16 Ο. 17 Α. Based on my examination, which I do 18 routinely with all patients when they come back. 19 Your last appointment with Dr. Schechter Ο. 20 was when? 21 Well, I saw him again in April, on the Α. 22 4th. 23 And then July; correct? Q. 24 Α. Yes. 25 And then he canceled an appointment in Q.

1 December; correct? 2 Yes. Α. 3 I have provided your attorney with Ο, 4records from subsequent treating physicians, 5 Dr. Schechter's subsequent treating physician. 6 Have you had an opportunity to review those? 7 Α. Yes. 8 Have you reviewed the reports from Ο. Dr. Stevens, neurologist at Cleveland Clinic? 9 10 Α. Yes. 11 Did you note in those reports that Q. 12 Dr. Schechter, throughout 2001 and into 2002, 13 is continuing to complain of pain? 14 I couldn't decipher from the records Α. 15 where he was complaining of pain, and in --16 He saw a Dr. Thomas, an osteopathic pain 17 doctor for The Cleveland Clinic, who started 18 putting him on MS Contin and Percocet, which he never needed when I saw him. I mean, he never 19 20 had that level of pain. And I can't tell from 21 the records where that pain was, but neurologically 22 he was almost completely normal by Dr. Stevens' 23 examination. 24 When you say "almost completely Q. normal" --25
1	the time we don't know what it comes from, and it
2	can be from no injury whatsoever. It can occur
3	associated with burning stem abnormalities. It
4	can occur with traumatic spinal cord injuries.
5	Where they saw it, it was pretty
6	minuscule when it was like up at, I think, T8-9.
7	It was above where the surgical procedure was done.
8	Q. Dr. Schechter didn't have a syrinx cavity
9	in any of the radiologic studies that you performed
10	prior to his surgery, did he?
11	A. I don't know. This is very minuscule
12	It's above where we were. There's a very minuscule
13	little line that I could barely see I don't see
14	a frank pocket of fluid, myself. And I'm not sure
15	it's read out on any other studies.
16	Q. A syrinx can be caused by trauma;
17	correct?
18	A. Only large ones. You don't see anything
19	like this. I could hardly see it. It was
20	really I had to go back and really look at
21	all the views. There's almost nothing there.
22	Very small area up at T8-9.
23	Q. But that's a new finding postoperatively;
24	correct?
25	A. I don't know. It's so minuscule, I don't

1 know that it was there on a technically different 2 MRI or not. 3 You had an opportunity to look at all Ο. of Dr. Schechter's films. Did you see, when you 4 5 reviewed the films -- preop film on Dr. Schechter, any evidence of the syrinx cavity? 6 7 I didn't even see it on the postoperative Α. one until I read the record and went back and tried 8 9 to look at it. It's so small. It's very, very 10 minuscule. I think it's unrelated. 11 Actually, I would be interested in 12 some other neuroradiological interpretations. 13 I just -- I think it's so tiny, it's questionable. 14 Ο. Do you -- On February 25th, 2002, 15 Dr. Stevens prepared one of several reports 16 regarding his care of Dr. Schechter and said 17 that his impression was that he was status post 18 spinal cord injury with stabilization of motor 19 function and increased pain. Would you disagree with Dr. Stevens' assessment? 20 21 Α. Absolutely. It's not a spinal cord 22 injury. This is a --23 A spinal cord injury from the standpoint 24 of loss of blood supply, not from a traumatic blood 25 injury to the spinal cord.

1 No, but you can exclude a blunt spinal Α. 2 cord by doing the MRI, which has been done. 3 Q. Well, how --Well, it shows no lesion of a blunt Α. 4 traumatic injury to the spinal cord. 5 6 Ο. Do you know Dr. Dickman (phonetical)? 7 Α. I know him very well. I used to give lecture out of Barrows\* Neurologic Institute for 8 9 about six years in a row. And I reviewed some of 10 the papers he's published or was trying to publish. You're aware that Dr. Schechter went for 11 Ο. 12 a consultation with Dr. Dickman? 13 Α. I am now. I was not aware that he was 14 seeing other people in February, March and May 15 while I was still seeing him. I would have 16 welcomed it if he wanted another opinion, but 17 he never discussed it with me. When he saw Dr. Dickman in September 18 Ο. 2001, you weren't seeing him then? 19 20 Α. Oh, it seems to me it was May, but maybe 21 I'm mistaken. MR. GROEDEL: I think Dr. Bohlman last 22 23 saw him in July, and he was scheduled to see him 24 again in December of 2000. 25 He saw him in May; I believe was the Α.

1 consult, because he was talking to his primary 2 care physician, Stein, and there were notes about 3 him going out to Barrows Neurologic in May. You're right. September 10th. 4 5 And he, too, found completely normal 6 motor strength on examination, as did Bingham. 7 Q. Both noted Dr. Schechter's significant 8 complaints of pain; correct? 9 Α. Again, I can't be clear where his pain 10 is. That's a little ---11 And the problem is, he got started on MS Contin and continued on Percocet by the pain 12 physician way back -- where it was started -- by 13 14 Dr. Thomas in July. 15 Wait a minute. Hang on. 16 And here we go. No. Actually --17 Well, it was before -- sometime before 18 December -- or September. 19 And the problem is, when you get started 20 on heavy narcotics like this, you keep having pain 21 because you become used to, if not addicted to the 22 narcotics, and then people keep having pain until 23 they're taken off the narcotics. So now he's a 24chronic pain patient, which is not his fault, 25 because he's been placed on the narcotics. And

the last note that I've read, he's still on the 1 MS Contin and I suspect still on the Percocet. 2 3 So people keep having perceiving pain. I didn't get from any of the note that 4 5 he had specifically leg pain or pain in a specific 6 area. That would be a concern. 7 Did you see the notes from Dr. Potts, Ο. a neurologist that Dr. Schechter consulted with? 8 9 Α. I think I missed that. 10Who is that? 11 Dr. Potts, Cleveland Clinic Foundation. Ο. I may have missed that. 12 Α. 13 It's probably in there. I don't remember 14 the name. 15 (Discussion was held off of the record.) 16 Α. It says --17 I know I didn't see this because he 18 had a cystometrogram, which is a dynamic study of 19 the body, that we recommended for him here when he 20 was complaining of having difficulty urinating, 21 and he declined. 22 And there is one here dated 18 -- 18 23 October, which is absolutely what he needed to 24 have. And it looks like it was fine, because he had sensations and a very low volume, voided okay. 25

Look at the last page and the impression 1 Ο. It indicates he has a neurogenic bladder. 2 here. That's certainly not proved by my -- I 3 Α. mean, he -- I don't think he has a good capacity. 4 He voided all the urine. I don't know how he can 5 say that. 6 Well, look at the last page. 7 Ο. Well, I see what they're saying. 8 Α. Okay. You disagree? 9 Q. I disagree the cystometrograph doesn't 10 Α. prove the normal bladder. He has sensation, and 11 12 he has good capacity and voids on his own. You 13 can't do that with a neurogenic bladder. And he has never been incontinent. 14 You're aware from review of the records 15 Ο. that Dr. Schechter complains of difficulty with 16 17 urination? I know what he complains about. 18 Α. And he also complains of difficulties 19 Q. 20with sexual function? 21 MR. GROEDEL: Objection. 22 I know what he complaints about, but Ã. 23 there is no medical evidence that there's any impairment of his bladder or sexual function 24 because the nerves to those structures are intact. 25

They never were out. There's no medical basis for 1 2. that. All I can say in adding, I ran a spinal 3 cord injury unit at the Veterans' Administration 4 Medical Center for 27 years and dealt with 5 neurogenic bladders, cystometrograms and, closely 6 7 with the urologists, sexual dysfunction. And, again, there's no hard medical evidence that 8 there's any loss of those nerves or spinal cord 9 function. 10 Would Dr. Schechter have benefited 11 Ο. from removal of the herniated thoracic discs that 12 were -- that are still showing on his radiologic 13 studies? 14 You mean now? 15 Α. 16 Ο. At any time. Well, I wouldn't have done that in the 17 Α. beginning, and I didn't for the reasons I've 18 already described. 19 They're still there. One -- The one --20 I believe it's at T10-11 still slightly deforms 21 the spinal cord, but I would not -- as Dr. Curtis 22 Dickman stated, he's recovered completely 23 neurologically; and until he deteriorated, he 24wouldn't think about doing that. 25

I would tell you that he would be at 1 extraordinary high risk for neurologic problems 2 with the cord if he were now to have an anterior 3 procedure, because, you know, he might lose more 4 5 blood supply to the spinal cord. And I think nobody in their right mind would do another 6 operation if he's normal neurologically, if he's 7 recovered. So I don't think it would benefit him 8 9 in any way. It could only harm him. Give me a minute here. I may be done. 10 Q. MR. PESKIN: Off the record. 11 (Discussion was held off of the record.) 1213 Ο. Dr. Bohlman, in your experience, do 14traumatic syrinxes grow? 15 They're very rare, in the first place. Α. As I just mentioned, I was in the spinal cord 16 injury business for 27 years, running this unit. 17 18 And they can occur soon after a spinal cord injury, which is very rare, or 20 years after a spinal cord 19 20 injury. And, yes, they can grow. And usually the 21 reason they grow is because where the spinal cord 22 injury occurred, they're so scarred down, that 23 the fluid doesn't flow properly around the spinal 24cord and the syrinx grows upwards, you know, and 25 enlarges the spinal cord and people can then

1	develop increased neurologic deficit.
2	What's being called a syrinx in
3	Dr. Schechter is so I don't even see any pocket
4	of fluids, so it's so minuscule. As I said, it
5	could have been there before. And it's not picked
6	up on the MRI. And I would be interested to know
7	what our specific radiologist would think of that.
8	But I don't think anything what he has there can
9	grow.
10	Q. If it were to grow, would he experience
11	increasing neurologic deficits?
12	A. Some do and some don't. I mean, if
13	syrinx is enlarged, for whatever the reason I
14	mean, traumatic or nontraumatic, if they enlarge
15	they can cause deficit, but that's extraordinarily
16	rare; even in traumatic injuries, very, very rare.
17	MR. PESKIN: I have no other questions.
18	MR. MC DONALD: I have some questions.
19	
20	CROSS-EXAMINATION
21	BY MR. MC DONALD:
22	Q. Doctor, my name is Rick McDonald,
23	and I represent the hospital who is sued as a
24	co-defendant with yourself in this lawsuit.
25	My understanding is that Dr as you've

1 described at the time of the surgery, Dr. Stanford 2 as well as Dr. Choung were fellows here at the 3 hospital. Is that correct? That's correct. 4 Α. 5 Let me ask you a few questions about Ο. your conversations with Mr. -- Dr. Schechter 6 prior to the surgery. "7 8 MR. MC DONALD: And, Mark, if you have the exhibits handy somewhere here. 9 10 Let me turn your attention then --Q. 11 Before we go to the exhibits, your 12 testimony, I heard it -- and I think I 13 understood -- as far as the consent issue relative 14 to the thoracic involvement, thoracic procedure, 15 with Mr. Schechter was that it was certainly 16 contemplated and considered by you to do that 17 after your initial examination and especially after 18 the MRI that was taken in October; is that correct? Specifically after the MRI, I saw the 19 Α. 20 MRI. 21Let's cut to the chase, then, as they Q. 22 There's no doubt in your mind as you sit here say. 23 today that you had a discussion with Dr. Schechter 24 at some point in time and during that discussion it 25 was made clear to him by you that you were not only

1 going to do the lumbar laminectomies but you were also going to operate on his thoracic spine; is 2 that true? 3 I believe that's what I discussed 4 Α. with him; but the letter, as you can see, was 5 less specific. I mean, I talked about lumbar 6 stenosis as well as a thoracic disc. In the letter 7 I didn't get into specific technique of surgery. 8 9 I'm not talking about the letter. I'm Ο. talking about your conversations with him. 10 11 At some point in time prior to actually 12 doing the surgery, you did discuss the fact with 13 him that you were going to do surgery not on this 14 lumbar area but also on the thoracic area? Isn't 15 that what I understand your testimony to be? Α. 16 Yes. 17 Ο. And there's no doubt in your mind about 18 that? 19 Α. NO. 20 Ο. And that you obtained -- You're certainly 21 familiar, with all the surgeries you've done, with 22 what informed consent is, obviously; correct? 23 Α. Yes. 24 And there's no doubt in your mind that Ο. 25 you obtained from him the informed consent to

1 proceed both with lumbar surgery as well thoracic 2 surgery? I believe he was aware of it from a 3 Α. verbal conversation. 4 5 0. With you? Yes. Α. 6 7 Ο. And that it was your job and your responsibility as his attending physician and 8 as the chief surgeon who did this surgery; is 9 that correct? 1.0 11 Α. Yes. 12 And concomitantly or concurrently in that 0. conversation, you would have explained the risks 13 14 to him of both the exploration of the lumbar and 15 thoracic areas? Well, I believe so. 16 Α. 17 I don't recall going into specific risks in the holding area; but, again, I always -- and we 18 19 didn't know about the thoracic when he was in the 20 office, but I always discuss risks of neurologic 21 injury to any spine patient that's scheduled for 22 surgery, because I know they're going to worry 23 about it, if they don't bring it up. 24 Ο. As I understand it, based upon, without 25 rehashing the surgical procedure itself, which

was -- the procedure -- The dictation was done 1 by you. It's Exhibit 17. And you described that 2 you dictated this immediately after the surgery; 3 correct? 4 Yes. 5 Α. Okay. And in terms of this particular 6 0. 7 surgical procedure, any involvement with the 8 thoracic area, it is your testimony that you were the surgeon that did the work on his spine in the 9 thoracic area? No doubt about it? 10 I have no doubt whatsoever. I did the 11 Α. 12 entire operative procedure. I don't recall whether I closed the skin, which sometimes I don't, but I 13 14 did all of the laminectomy at all levels and the 15 foraminotomies and all that. I take it, then, from your answer you 16 Ο. 17 have absolutely unequivocally no criticism of 18 either Dr. Stanford or Dr. Choung in their 19 assisting you in the surgery? 20 Oh, no. They're superb. They're fully Α. 21 trained orthopedist surgeons before they came here. 2.2 But as it relates to this particular Q. surgery, you obviously -- you testified that you're 23 24 the one that actual did the hands-on, if you will, 25 surgery --

1 Α. Yes. -- of both areas. 2 0. I was the primary surgeon. 3 Α. So you have no criticism of them? 4 Q . No. I needed them. 5 Α. And as far as Exhibit 15, which was the 6 Ο. consent form, I quite frankly don't know whose 7 signature that is; although, I suspect at this 8 point it may be Dr. Choung's. 9 I don't know. 10 Α. 11 I could probably go back and find some other signatures and compare it, but I don't know. 12 But the point is about Exhibit 15, on 13 Ο. the morning that Dr. Choung obtained this consent, 14 you don't know the details of his conversation 15 necessarily with Mr. -- with Dr. Schechter? 16 17 Α. ÑΟ. Okay. And you don't know specifically 18 Ο. in terms of a time frame when he obtained that 19 20 consent? I mean, shortly before surgery, 21 presumptively. 2.2 Usually they put the time on it, but Α. 23 there is no time. 24 When I do those things, when I have to -and I usually get the fellows and residents to do 25

them -- I look up at the wall there, and I get the 1 time. So that's, unfortunately, an oversight --2 3 Ο. Okay. -- but it had to be before the surgery Α. 4 started. 5 But I think when you were asked about -б Ο. If my notes are correct, when you were asked about 7 this Exhibit 15 and the fact that it didn't have, 8 I guess, another line or word on here about a 9 thoracic decompression on here, that was not of 10 11 consequence to you? 12 Not really. I think -- I thought he Α. 13 fully understood what we were going to do. But your testimony was that he may not 14 Q. have fully understood what your contemplated --15 in your mind what your contemplated surgery was 16 17 or necessarily what your conversation was with Dr. Schechter? 18 Oh, you mean with Choung? 19 Α. 20Q. Yes. Α. 21 Oh, yes. He may not have known that? 22 Q. 23 Α. Yes. Yes. 24I misconstrued what you said. Let's make sure the record is clear, 25 Ο.

1 then. I think you testified, if my notes are 2 correct, that he may not have fully appreciated 3 or understood at that time what your contemplated 4 surgery specifically was relative to Dr. Schechter? 5 Correct. 6 Α. Okay. But as far as your relationship, 7 Q. your physician/patient relationship was concerned 8 with Dr. Schechter, and again without beating this 9 thing to death, there's no doubt in your mind, as 10 11 expressed in your testimony as well your clinical 12 note, that the entire operative procedure was 13 explained to Dr. Schechter --14Α. Correct. 15-- including the thoracic as well as the Ο. 16 lumbar surgery? 17 Α. Yes. MR. MC DONALD: That's all I have. 18 Thanks. 19 20 MR. PESKIN: I'm finished. 21 (Signature not waived.) 22 23 Thereupon, the deposition was concluded 24 at approximately 4:45 p.m. 25

1 CERTIFICATE 2 THE STATE OF OHIO: 3 SS: COUNTY OF FRANKLIN: 4 I, Irma A. Fares, a Notary Public within 5 and for the State of Ohio, duly commissioned and 6 7 qualified, do hereby certify that the within-named, HENRY H. BOHLMAN, M.D., was by me first duly sworn 8 9 to testify to the truth, the whole truth, and 10 nothing but the truth in the cause aforesaid; that 11 the testimony then given by the above-referenced 1.2 witness was by me reduced to stenotype in the presence of said witness, afterwards transcribed, 13 and that the foregoing is a true and correct 14transcription of the testimony so given by the 15 16 above referenced witness. I do further certify that this deposition 17 18 was taken at the time and place in the foregoing 19 caption specified and was completed without 20 adjournment. 21 I do further certify that I am not a 22 relative, counsel or attorney for either party, or otherwise interested in the event of this action. 23 24 25

Tackla & Associates

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Cleveland, Ohio, this 14th day of December, A.D., 2002. Fares, Notary Public Irma Ά. Within and for the State of Ohio. My Commission Expires 4/26/04 

#### CURRICULUM VITAE

**PLAINTIFF'S** 

EXHIBIT

175

M/17.2

NGAD-Bayonne,

Name: Address:

FAX No.:

**Telephone No.:** 

 ${\pmb k} \geq$ 

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Henry Hubert Bohlman

Personal Data:Married: AmandaDate of Birth:July 22, 1937 - Baltimore, MarylandChildren:Ted, Juliana

Military Status: 3535 USAF Hospital, Mather Air Force Base, California, 1970-1972, Orthopaedic Surgeon, Rank - Major

## **Education:**

Severn School, Severna Park, Maryland - 1951-1955 Washington and Lee University, 1955 - 1959, Bachelor of Science University of Maryland Medical School, 1960 - 1964, Doctor of Medicine

## **Post-Graduate Training:**

University Hospital, Baltimore, Maryland - Internship (Mixed) Medicine-Pediatrics, 1964-1965

University Hospital, Baltimore, Maryland - Assistant Resident in Surgery, 1965-1966

The Johns Hopkins Hospital, Baltimore, Maryland - Junior Assistant Resident in Orthopaedic Surgery, 1966 - 1967

The Johns Hopkins Hospital and Central Anatomic Laboratory, Baltimore, Maryland National Institutes of Health - Research Fellowship in Orthopaedic Surgery, Pathologic Study of Fatal Craniospinal Injuries, 1967 - 1968

The Johns Hopkins Hospital, Baltimore, Maryland - Senior Assistant Resident in Orthopaedic Surgery, 1968 - 1969

The Johns Hopkins Hospital, Baltimore, Maryland - Chief Resident in Orthopaedic Surgery, 1969 - 1970

#### **Hospital Appointments:**

Rainbow Hospital, Cleveland, Ohio - Assistant Orthopaedist, November, 1972; Associate Orthopaedist, July 1980; Professor of Orthopaedics, June, 1987

Highland View Hospital, Cleveland, Ohio - Assistant Orthopaedist; Consultant, Spinal Cord Injury Unit, November, 1972; Associate Orthopaedist, July, 1980; Professor of Orthopaedics, June, 1987.

# Hospital Appointments (Cont'd):

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Veterans Administration Medical Center, Cleveland, Ohio: November 1972, Assistant Orthopaedist, July 1973 - 1974 Chief of Orthopaedics - Consultant, Spinal Cord Injury Service; Acting Chief of Orthopaedics, June 1980 - March 1982; Chief, Acute Spinal Cord Injury Service, September, 1974 - 2000; Chief, Spinal Surgery 2000 - present

Metropolitan General Hospital, Cleveland, Ohio - Assistant Orthopaedist, November, 1972; Associate Orthopaedist, July, 1980; Professor of Orthopaedics, June, 1987

University Hospitals, Cleveland, Ohio - Assistant Orthopaedist, November, 1972; Associate Orthopaedist, July, 1980; Professor of Orthopaedics, June, 1987; Director, University Reconstructive and Traumatic Spine Surgery Center, August, 1985 - December, 1995

Director and Administrator of the University Hospitals Spine Institute, February, 1996 - present

# **Medical School Appointments:**

Case Western Reserve University, School of Medicine, Cleveland, Ohio:

November, 1972	Instructor, Orthopaedic Surgery
July, 1973	Senior Instructor, Orthopaedic Surgery
July, 1974	Assistant Professor, Orthopaedic Surgery
July, 1979 - 1984	Chairman, Musculoskeletal Comm, Phase II, Medical Students
June, 1980	Associate Professor, Orthopaedic Surgery, Tenure 1983
June, 1987	Professor, Orthopaedic Surgery

## **Professional Societies:**

1968 - 1980	American Association of Automotive Medicine
1971 - 1980	American Medical Association
1972	Diplomat of the American Academy of Orthopaedic Surgeons
1972	Cleveland Orthopaedic Club
1973	Cervical Spine Research Society
1973 - 1980	American Society for Testing and Materials
1973 - 1984	International Medical Society of Paraplegia
1973	National Paraplegia Foundation
1973	Fellow, American Academy of Orthopaedic Surgeons
1973 - 1997	American Spinal Injury Association
1976 - 1998	Little Orthopaedic Club
1976 - 1980	Ohio Orthopaedic Society
1976 - 1980	Ohio State Medical Society
1977	SICOT - The International Society of Orthopaedic Surgery and
	Traumatology
1977 - 1982	Clinical Orthopaedic Society
1978	International Lumbar Spine Society
1978	Canadian Orthopaedic Association
1979 - 1999	Fellow-American College of Surgeons
1979 - 1992	Orthopaedic Research Society
1983	American Orthopaedic Association

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### **Professional Societies (Cont'd):**

Tastavin Society of Cleveland
American Medical Association
The Society of Medical Consultants to the Armed Forces
Commanderie De Bordeaux
Society of Medical Consultants to the Armed Forces
Orthopaedic Rehabilitation Association
Academic Orthopaedic Society
North American Spine Society
National Spine Network

#### Awards:

President, Phi Kappa Psi Fraternity, Washington and Lee University, 1959

President of Class, University of Maryland Medical School, 1962-63; Student Council, 1960-64

National Institutes of Health, Research Fellow in Orthopaedic Surgery, The Johns Hopkins Hospital, 1967 - 1968: "Pathologic Analysis of Fatal Head and Neck Injuries"

Certificate of Merit: American Medical Association Meeting - Exhibit on "Avoidable Errors and Pitfalls in the Diagnosis of Acute Cervical Spine Injuries", Chicago, Illinois, June, 1974 Performance Award for Outstanding Service: Veterans Administration Medical Center, Cleveland, Ohio, December, 1974

Civilian National Consultant to United States Air Force, Surgeon General's Office for Orthopaedics, Spine Surgery, 1987 - present

President, Cervical Spine Research Society, 1988-1989

The Russell-Hibbs Award for Outstanding Research, Scoliosis Research Society: "Urologic Function After Experimental Cauda Equina Compression: Cystometrograms vs. Cortical Evoked Potentials", Delamarter R.B., Bohlman H.H. and Biro C., Amsterdam, Holland, September 20, 1989

Robert I. Harris Memorial Lecturer in recognition of distinction and leadership in orthopaedic surgery, Canadian Orthopaedic Association Annual Meeting, Calgary Canada, June 3, 1991

President, Federation of Spine Associations, 1994

#### Exhibits:

"Avoidable Errors and Pitfalls in the Diagnosis and Treatment of Acute Cervical Spine Injuries", American Academy of Orthopaedic Surgeons Meeting, Chicago, Illinois, June, 1974 (Certificate of Merit).

"Anterior and Anterolateral Surgical Approaches to the Spine for Decompression of the Spinal Cord and Fusion: Techniques and Analysis of 80 Cases", American Academy of Orthopaedic Surgeons Meeting, New Orleans, Louisiana, January, 1974 (rating by AAOS Committee 5/5, 5/5, 4.6/5) and American Medical Association Meeting, Dallas, Texas, June, 1976.

## Exhibits (Cont'd.):

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> "Primary Tumors of the Thoracolumbar Spine", American Academy of Orthopaedic Surgeons Annual Meeting, Atlanta, Georgia, February, 1984.

> Wilson, W.L., McAfee, P.C., Bohlman, H.H., Yaffe, M.B., Balourdes, G. and Bahniuk, E.: "A New Method for Determining the Load Deformation Properties of the Intact Cervical Spine", Orthopaedic Research Society, Poster Exhibit, Las Vegas, Nevada, January 21-24, 1985.

> McAfee, P.C., Bohlman, H.H., Wilson, W.L., Yaffe, M.B., Balourdas, G. and Bahniuk, E.: "The Triple Wire Fixation Technique for Stabilization of Acute Cervical Fracture-Dislocations: A Biomechanical Analysis", Orthopaedic Research Society, Poster Exhibit, Las Vegas, Nevada, January 21-24, 1985.

> "Magnetic Resonance Enhancement of Epidural Fibrosis by Gadolinium - DPTA: Mechanism of Enhancement and Biodistribution", Delamarter, R., Ross, J., Modic, M. and Bohlman, H.H., American Academy of Orthopaedic Surgeons Annual Meeting, Atlanta, Georgia, February 4-9, 1988.

"Anterior Retropharyngeal Approach to the Upper Cervical Spine", McAfee, P.C., Bohlman, H.H., Reilly, L.H., Robinson, R.A., Southwick, W.O. and Nachlas, N.E., American Academy of Orthopaedic Surgeons Annual Meeting, Atlanta, Georgia, February 4-9, 1988.

"Achieving Solid Arthrodesis following Anterior Cervical Decompression: Corpectomy vs. Discectomy", Hilibrand, A.S., Palumbo, M.A., Bohlman, H.H. Annual Meeting Spine Research Society, Palm Beach, FL, December 5-7, 1996.

#### **Editing:**

Consulting Editor, <u>The Journal of Bone and Joint Surgery</u>, April, 1977 - 1984 Consulting Editor, Journal <u>Spine</u>, February, 1981 - 1982 Member Editorial Board; Journal <u>Spine</u>, 1982 - present Editor, Musculoskeletal Syllabus, Phase II, Case Western Reserve Univ., School of Medicine,

## 1979 - 1984.

Senior Grant Reviewer, National Institute for Handicapped Research, Washington, D.C., 1982 Associate Editor, <u>Central Nervous System Trauma</u>, 1983 - 1988 Associate Editor, <u>The Journal of Bone and Joint Surgery</u>, 1984 - 1988 Consulting Editor, <u>Neurosurgery</u>, 1987 Consulting Editor, <u>The Journal of Bone and Joint Surgery</u>, 1989 -Consulting Editor, <u>Clinical Orthopedics and Related Research</u>, 1995 Grant Reviewer, University of Hong Kong, 1995 -

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#### **Committees:**

Veterans Administration Medical Center:

Personnel Management, 1977 - 1978 Administrative Executive Board, 1979 - 1981

Chairman, Subcommittee on Animal Research, 1977 - 1980

Clinical Executive Board, 1974 - present

Case Western Reserve University School of Medicine:

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> Chairman, Musculoskeletal Committee, Phase II Medical Students, July, 1979 - 1984 Committee on Medical Education, Orthopaedic Dept. Representative, 1980 - 1981 Phase II Committee on Medical Education, 1979 - 1984 Committee on Medical Education, Dean's Appointment, 1981 - 1983 Comprehensive Examination Committee, 1979 - 1984 Member, Task Force on Patient Based Programs, 1984 Member, Committee on Departmental Status of Rehabilitation Medicine, 1984 Member, Working Group on the Continuing Education Continuum, Chairman, Subcommittee on Fourth Year Options, 1983 - 1984

American Academy of Orthopaedic Surgeons:

Committee on Rehabilitation, 1980 - 1983

Committee on Nursing and Allied Health Education, 1977 - 1981

Membership Committee Region #8, 1988 - 1992

Member, Committee on Summer Institute, 1990-1993

Member, Officers of the Academy, Nominating Committee, 1997 -

American Society for Testing and Materials: Member, 1973-1980 Chairman, F8.53 Committee on Head and Neck Protective Equipment in Sports, 1973 - 1976

Cervical Spine Research Society:

Chairman, Program Committee, 1980 - 1981

Education Committee, 1980 - 1983

Chairman, Education Committee, 1981 - 1982

Morbidity, Mortality Committee, 1983 - 1984

2nd Vice President, 1986 - 1987

1st Vice President, 1987 - 1988

President, 1988 - 1989

Committee on Health Policy and Practice, 1991 -

Cleveland Orthopaedic Club: Secretary-Treasurer, 1981 - 1982

American College of Surgeons: Regional Committee on Trauma, 1980 - 1988

University Orthopaedic Associates:

Member, Board of Directors, 1982 - 1984; 1994 Vice Chairman, Department of Orthopaedics, 1989 Chairman, Committee on Promotions, 1989 Chairman, Committee on Credentialling, 1989 Member, Finance Committee

University Suburban Health Center: Member, Board of Directors, 1982 - 1983 đ.:

# Committees (Cont'd.):

University Hospitals:

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Professional Standards Board, 1989 - 1995 Performance Improvement Council, 1995 - 1998

National Spine Network:

Member of Board of Directors, 1996 -Member, Membership Committee

## Publications:

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- Davis, D.D., Bohlman, H.H., Walker, A.E., Robinson, R.A. and Fisher, R.: The Pathological Findings in Fatal Craniospinal Injuries. Presented at the Harvey Cushing Neurological Surgery Society, 1968. J. Neurosurg., 34:603-613, May, 1971, (lead article).
- Bohlman, H.H.: The Pathology and Current Treatment Concepts of Cervical Spine Injuries. Instr. Course Lect., American Academy of Orthopaedic Surgeons, C.V. Mosby Co., XXI:108-115, 1972.
- Bohlman, H.H.: Cervical Spondylosis With Moderate to Severe Myelopathy: A Report of 17 Cases Treated by Robinson Anterior Cervical Discectomy and Fusion. Spine, 2:151-162, June, 1977.
- 4. Eismont, F.J. and Bohlman, H.H.: Atlanto-Occipital Dislocation With Fractures of the Atlas and Odontoid Process, A Case Report and Review of the Literature. J. Bone Joint Surg., 60A(3):397-399, April, 1978.
- Bohlman, H.H., Bahniuk, E., Raskulinecz, G. and Field, G.: Mechanical Factors Affecting Recovery of Incomplete Cervical Spinal Cord Injury: A Preliminary Report. Johns Hopkins Med. J., 145:115-125, September, 1979.
- Bohlman, H.H.: Acute Fractures and Dislocations of the Cervical Spine. An Analysis of Three Hundred Hospitalized Patients and Review of the Literature. J. Bone Joint Surg., 61A:1119-1142, December, 1979 (Lead Article).
- 7. Stauffer, E.S., Bohlman, H.H, Kaufer, H. and Whitesides, T.E.: Fractures and Dislocations of the Dorsolumbar Spine, A Symposium. **Contemp. Orthop**., 2:61-105, February, 1980.
- Laborde, M.J., Bohlman, H.H., Bahniuk, E. and Samson, B.: Comparison of Fixation of Spinal
  Fractures (Experimental). Clin. Orthop., 152:303-310, October, 1980.
- 9. Bohlman, H.H. and Eismont, F.J.: Surgical Techniques of Anterior Decompression and Fusion for Spinal Cord Injuries. Clin. Orthop., 154:57-67, January-February, 1981.
- Bohlman, H.H., Bahniuk, E. and Raskulinecz, G.: Electrical Assessment of Incomplete Spinal Cord Injury and Recovery. Bulletin of Prosthetics Research, 18(1):99-101, Veteran's Administration Departments of Medicine and Surgery, Spring, 1981.
- 11. Eismont, F.J. and Bohlman, H.H.: Posterior Methylmethacrylate Fixation for Cervical Trauma: A Review of Six Cases with Emphasis on Complications. **Spine**, 6:21-27, July - August, 1981.

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- Bohlman, H.H., Bahniuk, E., Field, G. and Raskulinecz, G.: Spinal Cord Monitoring of Experimental Incomplete Cervical Spinal Cord Injury. Spine, 6:428-436, September-October, 1981.
- 13. Bohlman, H.H. and Cook, S.S.: One Stage Decompression, Posterolateral and Interbody Fusion for Lumbosacral Spondyloptosis. Description of a New Technique Using the Posterior Approach. J. Bone Joint Surg., 64A:415-518, March, 1982.
- 14. Eismont, F.J., Bohlman, H.H., Soni, P.L., Freehafer, A.A. and Goldberg, V.M.: Pyogenic Vertebral Osteomyelitis in Infants. J. Bone Joint Surg., 64B:32-35, 1982.
- 15. Eismont, F.J. and Bohlman, H.H.: Traumatic Fracture Dislocation of the Cervical Spine. Orthopaedic Consultation, 3:1-7, February, 1982.
- 16. Nunez, C., Bennett, T. and Bohlman, H.: Chondromyxoid Fibroma of the Spine, Case Report and Review of the Literature. **Spine**, 7:436-439, 1982.
- Eismont, F.J., Bohlman, H.H., Soni, P.L., Freehafer, A.A. and Goldberg, V.M.: Pyogenic and Fungal Osteomyelitis of the Spine with Paralysis. J. Bone Joint Surg., 65A:19-29, January, 1983.
- Rechtine, G., Bohlman, H.H. and Fraser, J.: Reduction of Post Laminectomy Pain with Epidural Morphine and Infiltration of Marcaine. J. Bone Joint Surg., 66A:113-116, January, 1984.
- 19. Eismont, F.J., Borja, F. and Bohlman, H.H.: Complete Dislocations at Two Adjacent Levels of the Cervical Spine. A Case Report. **Spine**, 9(3):319-322, 1984.
- 20. Bundens, D.A., Rechtine, G.R. and Bohlman, H.H. Upper Cervical Spine Injuries. J. Orthop. Rev., 13:23-32, October, 1984.
- Rechtine, G.R., Hassan, N.O. and Bohlman, H.H.: Malignant Fibrous Histiocytoma of the Cervical Spine: Report of an Unusual Case and Description of Light and Electron Microscopy. Spine, 9:824-830, November-December, 1984.
- 22. McAfee, P.C., Bohlman, H.H. and Yuan, H.A.: Anterior Decompression of Traumatica Thoracolumbar Fractures with Incomplete Neurologic Deficit Using a Retroperitoneal Approach. J. Bone Joint Surg., 67A:89-104, January, 1985.
- 23. Bohlman, H.H.: Treatment of Thoracic and Lumbar Fractures and Dislocations. Current Concepts Review. J. Bone Joint Surg., 67A:192-200, January, 1985.
- 24. Bohlman, H.H., Freehafer, A. and Dejak, J.: The Results of Treatment of Acute Injuries of the Upper Thoracic Spine With Paralysis. J. Bone Joint Surg., 67A:360-369, March, 1985.

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- 25. Han, J.S., Benson, J.E., Kaufman, Benjamin, Rekate, H.L., Alfidi, R.J., Bohlman, H.H. and Kaufman, Bruce: Demonstration of Diastematomyelia and Associated Abnormalities With MR Imaging. **Am. J. Neuroradiol.**, 6:215-219, March-April, 1985.
- 26. McAfee, P.C. and Bohlman, H.H.: Complications of Harrington Instrumentation for Fractures of the Thoracolumbar Spine. J. Bone Joint Surg., 67A:672-686, June, 1985 (lead article).
- 27. Sobel, J.W., Bohlman, H.H. and Freehafer, A.A.: Charcot's Arthropathy of the Spine Following Spinal Cord Injury: A Report of Five Cases. J. Bone Joint Surg., 67A:771-776, June, 1985.
- 28. McAfee, P.C., Han, J.S., Kaufman, B., Bohlman, H.H. and Salvagno, R.: Comparison of Magnetic Resonance Imaging and Computed Tomography in the Diagnosis of Upper Spinal Cord Compression. **Spine**, 11(4):295-304, May, 1986 (lead article).
- 29. Pattee, G.A., Bohlman, H.H. and McAfee, P.C.: Sacral Nerve Root Compression As A Complication of Internal Fixation of the Sacroiliac Joint. A Case Report. J. Bone Joint Surg., 68:764-771, June, 1986.
- Bohlman, H.H., Sachs, B.L., Carter, J.R., Riley, L. and Robinson, R.A.: Primary Neoplasms of the Cervical Spine: Diagnosis and Treatment of 23 Patients. J. Bone Joint Surg., 68:483-494, April, 1986, (lead article).
- 31. McAfee, P.C., Bohlman, H.H., Ducker, T. and Eismont, F.J.: Failure of Stabilization of the Spine with Methylmethacrylate. A Retrospective Analysis of 24 Cases. J. Bone Joint Surg., 68A:1145-1157, October, 1986.
- 32. Modic, M.T., Masaryk, T., Mulopulous G.P., Bundschuh, C., Han, J.S. and Bohlman, H.H.: Cervical Radiculopathy: Perspective Evaluation by Surface Coil M.R. Imaging, CT with Metrizamide and Metrizamide Myelography. **Radiology**, 161(3):753-759, December, 1986.
- Zigler, J., Bahniuk, E., VanDyke, C. and Bohlman, H.H.: Localization of Foreign Bodies in the Spinal Canal by the Computer - Assisted Biplaner Digitizer. Spine, 11(9):892-894, November, 1986.
- 34. Wertheim, S.B. and Bohlman, H.H.: Occipitocervical Fusion, Indications, Technique and Results in Thirteen Patients. J. Bone Joint Surg., 69A:833-836, July, 1987.
- Zigler, J., Bohlman, H.H., Riley, L., Robinson, R.A. and Dodge, L: Pyogenic Osteomyelitis of the Occiput, Atlas and Axis, A Report of Five Cases. J. Bone Joint Surg., 69A:1069-1073, September, 1987.
  - Ross, J.S., Perez-Reyes, N., Masaryk, T.J., Bohlman, H.H. and Modic, M.T. Thoracic Disc Herniation and Magnetic Resonance Imaging. **Radiology**, 165:511-515, 1987.

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- McAfee, P.C., Regan, J.J. and Bohlman, H.H.: Cervical Spinal Cord Compression from Ossification of the Posterior Longitudinal Ligament (OPLL) in Non-Orientals. J. Bone Joint Surg., 69B:569-575, August, 1987.
- 38. Modic, M.T., Masaryk, T.J., Ross, J.S., Mulopulos, G.P., Bundschuh, C.V. and Bohlman, H.H.: Cervical Radiculopathy: Value of Oblique MR Imaging. **Radiology**, 163:227-251, 1987.
- Ross, J.S., Masaryk, T.J., Modic, M.T., Delamarter, R., Bohlman, H., Wilber, G. and Kaufman,
  B.: MR Imaging of Lumbar Arachnoiditis. A.J.N.R., 8:885-892, September-October, 1987
  and AJR, November, 1987.
- 40. Ross, J.S., Masaryk, T.J., Modic, M.T., Bohlman, H., Delamarter, R. and Wilber, G.: Lumbar Spine: Postoperative Assessment with Surface-Coil MR Imaging. Radiology, 164:851-860, 1987.
- 41. McAfee, P.C., Bohlman, H.H., Riley, L., Robinson, R.A., Southwick, W.O. and Nachlas, N.E.: Anterior Extraoral Approach to the Atlas and the Axis. J. Bone Joint Surg., 69A:1371-1383, December, 1987.
- Bundschuh, C.V. Modic, M.T., Ross, J.S., Masaryk, T.J. and Bohlman, H.H.: Epidural Fibrosis and Recurrent Disc Herniation in the Lumbar Spine: Assessment with Magnetic Resonance.
   A.J.N.R., 9:169-178 and A.J.R., April, 1988.
- 43. Masaryk, T.J., Ross, J.S., Modic, M.T., Boumphrey, F., Bohlman, H.H. and Wilber, G.: High Resolution MR Imaging of Sequestered Lumbar Intervertebral Disks. A.J.N.R., 9:351-358, Mar/April, 1988 and AJR, May, 1988.
- 44. Dodge, L., Bohlman, H.H. and Rhodes, R.: Concurrent Lumbar Spinal Stenosis and Peripheral Vascular Disease. Clin. Orthop., 230:141-148, May, 1988.
- 45. Hueftle, M.G., Modic, M.T., Ross, J.S., Masaryk, T.J., Carter, J.R., Wilber, R.G., Bohlman, H.H., Steinberg, P.M. and Delamarter, R.B.: Lumbar Spine: Postoperative MR Imaging with GD-DPTA. Radiology, 167:817-824, June, 1988.
- 46. Bohlman, H.H. and Emery, S.E.: The Pathophysiology of Cervical Spondylosis and Myelopathy. **Spine**, 13(7):843-846, July, 1988.
- 47. Bohlman, H.H., Stauffer, E.S., Ferguson, R. and Apple, D.F.: Paraplegia Secondary to Thoracolumbar Spinal Trauma. **Contemp. Orthop.**, 16:57-86, June, 1988.
  - Bohlman, H.H. and Zdeblick, T.A.: Anterior Excision of Herniated Thoracic Disks. J. Bone Joint Surg., 70A:1038-1047, August, 1988.

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- McAfee, P.C. and Bohlman, H.H.: One-stage Anterior Cervical Decompression and Posterior Stabilization with Circumferential Arthrodesis. An Analysis of Twenty-four Cases. J. Bone Joint Surg., 71A:78-88, January, 1989.
- 50. Emery, S.E., Pathria, M.N., Wilber, R.G., Masaryk, T. and Bohlman, H.H.: Magnetic Resonance Imaging of Post-traumatic Spinal Ligament Injury. J. Spinal Disord., ii(4):229-233, 1989.
- 51. Zdeblick, T.A. and Bohlman, H.H.: Cervical Kyphosis and Myelopathy. Treatment by Anterior Corpectomy and Strut Grafting. J. Bone Joint Surg., 71A:170-182, February, 1989.
- 52. Ross, J.S., Modic, M.T., Masaryk, T.J., Carter, J., Marcus, R.E. and Bohlman H.: Unoperated Spine: Preliminary Assessment of Extradural Degenerative Disease with GD-DTPA. Part I. Clinical Results. AJNR, 1989.

53. Delamarter, R.B., Heller, J. and Bohlman, H.H.: Cervical Pneumomyelogram Secondary to a Closed Fracture-Dislocation of the Thoracic Spine. A Case Report. Spine, 14(12):1421-1422, December, 1989.

- 54. Delamarter, R.B., Bohlman, H.H., Dodge, L.D. and Biro, C.: Experimental Lumbar Stenosis, Analysis of the Vasculature, Histology, and Cortical Evoked Potentials Following Chronic Compression of the Dog Cauda Equina. J. Bone Joint Surg., 72A:111-120, 1990.
- Bodner, D.R., Delamarter, R.B., Bohlman, H.H., Witcher, M., Biro, C. and Resnick, M.I.: Urologic Changes After Cauda Equina Compression in Dogs, J. Urol., 143:186-190, January, 1990.
- Delamarter, R.B., Sachs, B.L., Thompson, G.H., Bohlman, H.H., Makley, J.T. and Carter, J.R.: Primary Neoplasms of the Thoracic and Lumbar Spine. Clin. Orthop., No. 256, pp 87-100, July, 1990.
- 57. Delamarter, R.B., Ross, J.S., Masaryk, T.J., Modic, M.T. and Bohlman, H.H.: Diagnosis of Lumbar Arachnoiditis by Magnetic Resonance Imaging. Spine, 15(4):304-310, 1990.
- 58. Smith, M.D. and Bohlman, H.H.: Spondylolisthesis Treated by a Single-stage Operation Combining Decompression with In Situ Posterolateral and Anterior Fusion: Analysis of 11 Patients Who Had Long Term Follow Up. J. Bone Joint Surg., 72A:415-421, March, 1990.
- 59. Smith, M.D., Bohlman, H.H. and Gideonse, N.: Fibrous Dysplasia of the Cervical Spine: A Fatal Complication of Treatment. A Case Report. J. Bone Joint Surg., 12A:1254-1258, September, 1990.

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- Delamarter R.B., Bohlman H.H., Bodner D. and Biro C.: Urologic Function After Experimental Cauda Equina Compression: Cystometrograms vs. Cortical Evoked Potentials. Spine, 15(9):864-870, 1990. Russell-Hibbs Research' Award, Scoliosis Research Society, Amsterdam, Holland, September, 1989.
- 61. Emery, S.E., Smith, M.D., Bolesta, M.J., Wilber, R.G. and Bohlman, H.H.: Upper Airway Obstruction Following Multiple Level Cervical Corpectomies for Severe Myelopathy. J. Bone Joint Surg., 73A:544-551, April, 1991.
- 62. Bolesta, M.J. and Bohlman, H.H.: Mediastinal Widening Associated with Fractures of the Upper Thoracic Spine. J. Bone Joint Surg., 73A:447-450, March, 1991.
- 63. Bohlman H.H. and Anderson P.A.: Anterior Decompression and Arthrodesis in the Cervical Spine: Long-term Motor Improvement, Part I. J. Bone Joint Surg., 74A(5):671-682, June, 1992.
- 64. Anderson P.A. and Bohlman H.H.: Anterior Decompression and Arthrodesis of the Cervical Spine: Long Term Motor Improvement. Part II. Improvement in Complete Traumatic Quadriplegia. J. Bone Joint Surg., 74A(5):683-692, June, 1992.
- 65. Abdu W.A. and Bohlman H.H.: Techniques of Subaxial Posterior Cervical Spine Fusions: An overview. Orthopedics, 15(3):287-295, March, 1992.
- 66. Smith M.D., Bolesta M.J., Leventhal M. and Bohlman H.H.: Postoperative Cerebral Spinal Fluid Fistula Associated with Erosion of the Dura: Findings after Anterior Resection of Ossification of the Posterior Longitudinal Ligament in the Cervical Spine. J. Bone Joint Surg., 74A:270-77, February, 1992.
- 67. Smith M.D., Kotzar G., Yoo J. and Bohlman H.H.: A Biomechanical Analysis of Atlantoaxial Stabilization Methods Using a Bovine Model. **Clin. Orthop.**, 290:285-95, May, 1993.
- Bohlman H.H., Emery S.E., Goodfellow D.B. and Jones P.K.: Robinson Anterior Cervical Discectomy and Fusion for Cervical Radiculopathy: Long Term Follow-up of 122 Patients. J. Bone Joint Surg., 75A(9):1298-1307, September, 1993.
- Boden S.D., Dodge L.D., Bohlman H.H. and Rechtine G.R.: Rheumatoid Arthritis of the Cervical Spine: A Long Term Analysis with Predictors of Paralysis and Recovery. J. Bones Joint Surg., 75A(9):1282-1287, September, 1993.
- 70. Kang J.D., Figgie M.P. and Bohlman H.H.: Sagittal Parameters of the Cervical Spine in Subaxial Fractures and Dislocations: An Analysis of 288 Patients with and Without Neurologic Deficits. J. Bone Joint Surg., Vol. 76A:1617-1628, November, 1994.

- 71. Kirkpatrick J.S., Bolesta M.J., Bohlman H.H., Biro C. and Giambetti P.: Axon Regeneration after Decompression of the Conus Medullaris. **Spine**, December, 1994.
- 72. Hu R.W. and Bohlman H.H.: Fracture at the Iliac Bone Graft Harvest Site after Fusion of the Spine. Clin. Orthop., 309:1-6, 1994.
- 73. Kang J.D. and Bohlman H.H.: Current Concepts Review: Evaluation and Treatment of Cervical Spondylotic Myelopathy. **The Pittsburgh Orthop. Journal**, 5:14-25, 1994.
- 74. Delamarter R.B. and Bohlman H.H.: Postmortem Osseus and Neuropathologic Analysis of the Rheumatoid cervical Spine. Spine, 19(20):2267-2274, 1994.
- 75. Bohlman H.H., Kirkpatrick J.S., Delamarter R.B., and Leventhal M.: Anterior Decompression for Late Pain and Paralysis After Fractures of the Thoracolumbar Spine, Clin. Orthop., Vol 300, pg 24-29, March, 1994.
- 76. Bouchard J.A. and Bohlman H.H.: Posterior Decompression and in situ Fusion for the Treatment of Degenerative Scoliosis. **Orthopaedics & Traumatology**, Vol.4, pp 55-59, 1995.
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- Bohlman, H.H., Riley, L., Jr. and Robinson, R.A.: Anterolateral Approaches to the Cervical Spine. Spinal Disorders: Diagnosis and Treatment. L.L. Wiltse and D. Ruge, Editors; Lea & Febiger, Publishers; pp. 125-131, July, 1977.
- 3. Bohlman, H.H.: The Neck. Musculoskeletal Disorders, Regional Examination and Differential Diagnosis, Chapter 6. R.D. D'Ambrosia, Editor; J.B. Lippincott, Publisher; pp. 178-224, 1977.
- 4. Bohlman, H.H.: Complications of Treatment of Fractures and Dislocations of the Cervical Spine. In Complications in Orthopaedic Surgery, Vol. 2, Chapter 21. C.H. Epps, Editor; J.B. Lippincott, Publisher; pp. 611-641, 1978.
- 5. Bohlman, H.H.: Neck Pain. In Orthopaedic Rehabilitation, Chapter 31. V. Nickel, Editor; Churchill Livingston, Inc., NY, Publisher; pp. 467-480, 1982.
- Bohlman, H.H.: Indications for Late Anterior Decompression and Fusion for Cervical Spinal Cord Injuries. Early Management of Acute Cervical Spinal Cord Injury, Seminars in Neurological Surgery, Chapter 27. C.H. Tator, Editor; Raven Press, NY, Publisher; pp. 315-333, 1982.
- Bohlman, H.H.: Complications and Pitfalls in the Treatment of Acute Cervical Spinal Cord Injuries. Early Management of Acute Cervical Spinal Cord Injuries, Seminars in Neurological Surgery, Chapter 32. C.H. Tator, Editor; Raven Press, NY, Publisher; pp. 373-391, 1982.
- 8. Bohlman, H.H., Ducker, T.B. and Lucas, J.B.: Spine and Spinal Cord Injury. **Spine**, 2nd Edition. R.H. Rothman and F. Simeone, Editors; Saunders, Philadelphia, Publisher; pp. 661-756, 1982.
- Bohlman, H.H. and Boada, E.: Fractures and Dislocations of the Lower Cervical Spine. The Cervical Spine, Cervical Spine Research Society, Editor; J.B. Lippincott Co., Philadelphia, Publisher; pp. 232-267, 1983.
- Bohlman, H.H.: Degenerative Arthritis of the Lower Cervical Spine. Surgery of the Musculoskeletal System, Vol. II, Chapter 4. C.M. Evarts, Editor; Churchill Livingston, Inc., NY, Publisher; pp. 25-55, 1983.
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- Bohlman H.H. and Emery S.E.: Complications of Treatment of Fractures and Dislocations of the Cervical Spine. Complications in Orthopaedic Surgery, 3rd Edition, Chapter 25. Charles H. Epps, Jr., Editor; JB Lippincott, Philadelphia, PA; pp 1-33, 1994.
## **Research as Principal Investigator:**

- 1. "Mechanical Factors Affecting Recovery of Incomplete Spinal Cord Injuries", supported by Orthopaedic Research and Education Foundation (\$5,000) and the Veterans Administration (1974-75),(\$5,000); funded January, 1976, \$162,000 for three years by the Veterans' Administration; Bahniuk, E. and Raskulinecz, G.
- "Experimental Comparison of Internal Fixation Devices for Unstable Fracture-Dislocations of the Dorsolumbar Spine", Orthopaedic Research and Education Foundation (\$12,000), funded June, 1978-1979; Co-Principal Investigator, Laborde, M., Bahniuk, E.
- "Electrical Assessment of Incomplete Spinal Cord Injury and Recovery", the Veterans' Administration, October, 1979-1982 (\$243,000 for three years); with Bahniuk, E., Raskulinecz, G. and Field, G.
- 4. "Biomechanical Analysis of Posterior Cervical Fusions", Orthopaedic Education and Research Fund, Case Western Reserve University (\$8,000) funded 1981-1982; with Rechtine, G. and Zigler, J.
- 5. "Experimental Lumbar Spinal Stenosis", Department of Health and Human Services; with Delamarter, R., Dodge, L. and Bahniuk, E.; funded \$62,700, 1984-1986.
- "Low Back Pain and Sciatica: Factors for Success of Therapy", Principal Investigator: Donlin M. Long, M.D., Ph.D., The Johns Hopkins School of Medicine, National Multi-center Low Back Pain Study; Russell Hardy, M.D., Co-Principal Investigator; Henry H. Bohlman, M.D., Co-Principal Investigator; Department of Health and Human Services, \$45,953 per year (Cleveland), April 1986 - March, 1991.
- "Biomechanical Analysis of Various Forms of Surgical Fixation of the Atlantoaxial Joint", M. Smith and H.H. Bohlman, and J. Kotzar, supported by the Spine Research Fund, Department of Orthopaedics, July 1988 - June 1989.
- 8. "Experimental Cauda Equina and Conus Compression: Analysis of Neurophysiology, Histopathology and Vascularity", M. Bolesta, H. Bohlman, and P. Gambetti. Supported by The Spine Research Fund, Department of Orthopaedics, July 1988 - July 1990.
- "Analysis of Hydroxyapatite as a Bone Graft Substitute for Spinal Fusion", R. Viere, N. Taisuke, H. Bohlman. Supported by The Spine Research Fund, Department of Orthopaedics, July, 1989 June, 1990.
- "The Use of Ne-Osteo, (Bone Morphogenic Protein) LS-1 for Posterior Lumbar Intertransverse Process Fusions is Patients having Degenerative Spondylolisthesis" (08-97-01), A Multi-Center National Clinical Research Project. Approved by University Hospitals Institutional Review Board and the FDA for Clinical Trials; with Emery, S.E.

### Honorariums:

1

- 1. Cleveland Clinic Foundation: "The Pathology and Current Treatment Concepts of Cervical Spine Injuries", "Fatal Craniospinal Injuries", Cleveland, OH, March, 1973.
- 2. University of Toronto, Spinal Injury Symposium: "Dysplasia of the Odontoid in Various Forms of Dwarfism", "Fatal Craniospinal Injuries", "Pathology of Cervical Spine Injuries", "Current Treatment Concepts of Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", Toronto, Ontario, April, 1973.
- 3. University of Vienna, Austria: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", July, 1973.
- 4. University of California at Davis: "Treatment of Cervical Spine Injuries", Sacramento, CA, January, 1974.
- 5. Arizona Orthopaedic Society: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", Phoenix, AZ, November, 1974.
- 6. Henry Ford Hospital: "The Pathology of Fatal Craniospinal Injuries", "Cervical Spine Injuries", Detroit, MI, December 14, 1974.
- 7. Bethesda Naval Hospital: "Treatment of Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", Washington, DC, January, 1975.
- 8. Portsmouth Naval Hospital: "Cervical Spine Injuries", "Upper Thoracic Spine Injuries with Paralysis", "Cervical Spondylosis", March, 1976.
- 9. University of Louisville Health Science Center: "Cervical-Neurovertebral Trauma", "The Avoidable Errors and Pitfalls in Diagnosis of Acute Cervical Spine Injuries", "Current Diagnosis and Treatment Concepts of Cervical Injuries", May 15, 1976.
- 10. Medical College of Ohio at Toledo: "Cervical Spondylosis", "Emergency Treatment of Cervical Spine Injuries", May 28-29, 1976.
- 11. Portsmouth Naval Hospital: "Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", "Cervical Spondylosis", Portsmouth, VA, March, 1977.
- 12. Cleveland Clinic Foundation, Continuing Education: "Pathology and Current Treatment Concepts of Cervical Spine Fractures", "Upper Thoracic Spine Fractures with Paralysis", Cleveland, OH, April, 1977.
- 13. University of Maryland School of Medicine, Program of Continuing Education in Neurosurgery, Course on Acute Spinal Cord Injury: "Anterior Decompression with Stabilization of Thoracic and Thoracolumbar Fractures with Paralysis", Baltimore, MD, May 14-15, 1977.

- Visiting Professor, University of Maryland Medical School, Department of Orthopaedic Surgery: "Late Anterior Decompression of Spinal Cord Injuries: A Review of 65 Cases", "Cervical Spondylosis", Baltimore, MD, May 17, 1977.
- 15. Visiting Professor, Alfred I. DuPont Institute: "Late Anterior Decompression of Spinal Cord Injuries", Wilmington, DE, May, 1977.
- 16. University of Miami, School of Medicine, Department of Orthopaedics and Rehabilitation Course on the Spine: "Management of Cervical Spine Trauma", Miami, FL, March, 1978.
- 17. Visiting Professor, Portsmouth Naval Hospital: "Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", "Cervical Spondylosis", Portsmouth, VA, March, 1978.
- Visiting Professor, University of Toronto and McMaster University (Hamilton), Department of Orthopaedic Surgery: "The Pathology of Cervical Spine Injuries", "Late Anterior Decompression and Fusion for Spinal Cord Injuries", "Pyogenic Osteomyelitis of the Spine", "Cervical Spondylosis", Toronto, Ontario, November, 1978.
- 19. Visiting Professor, Portsmouth Naval Hospital: "Pathology of Cervical Spinal Injuries", "Upper Thoracic Spine Injuries with Paralysis", "Late Anterior Decompression and Fusion for Spinal Cord Injuries", March, 1980.
- 20. Visiting Professor, University of Texas Medical School: "Lumbar Spinal Stenosis", "Neck Pain", San Antonio, TX, May, 1980.
- 21. University of Toronto, Acute Cervical Spinal Cord Injury Symposium: "Complications and Pitfalls in the Treatment of Acute Cervical Spine and Cord Injuries", "Late Anterior Decompression and Fusion for Cervical Spinal Cord Injuries", Toronto, Ontario, November, 1980.
- 22. Paralysis Cure Research Foundation: "Late Anterior Decompression and Fusion for Spinal Cord Injuries", Airlie House, VA, September, 1981.
- 23. Henry Ford Hospital: "Cervical Spine Trauma", "Thoracolumbar Spine Trauma", Detroit, MI, January, 1981.
- 24. Visiting Professor, The Mayo Clinic: "The Pathology of Cervical Spine Injuries", "Treatment of Fractures and Dislocations of the Cervical Spine", "Treatment of Thoracic and Lumbar Fractures with Paralysis", Rochester, MN, March, 1982.
- 25. Hospital for Joint Diseases, Symposium on Back Pain: "Infections of the Lumbar Spine", "Lumbar Spinal Instability", New York, NY, April 3, 1982.

- 50. Guest Speaker, Department of Orthopaedic Surgery, University of Hong Kong, Centennial Anniversary: "Late Anterior Decompression for Spinal Cord Injuries: Long-Term Results of Neurologic Recovery in 167 Patients", Hong Kong, September 14-15, 1987.
- 51. Guest Speaker, Brazilian Society of Orthopaedics and Traumatology: "Anterior Decompression and Fusion for Spinal Cord Injuries: Long-Term Results of Neurologic Recovery", "The Etiology of Paralysis of Rheumatoid Arthritis of the Cervical Spine", "Lumbar Spinal Stenosis", "Cervical Spondylosis", Sao Paulo, Brazil, November 14-16, 1987.
- 52. Visiting Professor, University of Southern California, Department of Orthopaedics: "Anterior Decompression and Fusion for Spinal Cord Injuries: Long-Term Results of Neurologic Recovery", Los Angeles, CA, January 8, 1988.
- 53. Guest Speaker, Philadelphia Orthopaedic Society: "The Evolution of Anterior Surgery for Spine and Spinal Cord Injuries", Philadelphia, PA, May 9, 1988.
- 54. Visiting Professor, Department of Orthopaedic Surgery, University of Minnesota: "The Treatment of Cervical Spondylosis", "The Etiology of Paralysis and Rheumatoid Arthritis", "Lumbar Spinal Stenosis", Minneapolis, MN, October 19-21, 1989.
- 55. Guest Speaker, The Southern Medical Association Annual Meeting: "Lumbar Spinal Stenosis", Washington DC, November 4-5, 1989.
- 56. Visiting Professor, Department of Orthopaedic Surgery, Ohio State University Hospitals, "Fractures of the Upper Thoracic and Lumbar Spine", "Lumbar Spinal Stenosis", Columbus, OH, January 5, 1990.
- 57. Guest Speaker, Spine Society of Australia, Department of Orthopaedic Surgery, University of Melbourne: "Treatment of Thoracolumbar Fractures", "Cervical Spine Surgery and Rheumatoid Arthritis", Melbourne, Australia. July 9, 1990.
- 58. Department of Orthopaedic Surgery, University of Adelaide: "Lumbar Spinal Stenosis: Diagnosis and Treatment", "Spinal Infection", Adelaide, Australia. July 11, 1990.
- 59. Guest Speaker, Spine Society of Australia: "Cervical Spine Fractures: Diagnosis and Treatment", "Upper Thoracic Spine Fractures with Paralysis", "Etiology of Paralysis in Rheumatoid Arthritis of the Cervical Spine", "Cervical Spondylosis with Radiculopathy and Myelopathy", "Thoracic Disc Disease: Treatment by Anterior Decompression", Sydney, Australia, July 14-15, 1990.
- 60. Robert I. Harris Memorial Lecturer in recognition of distinction and leadership in orthopaedic surgery, Canadian Orthopaedic Association Annual Meeting, Calgary Canada, June 3, 1991.

- 61. International Foundation for Spinal Studies: "Cervical Spine Fractures", "Etiology and Treatment of Paralysis in Rheumatoid Arthritis of the Cervical Spine", "Treatment of Thoracic Discs by Anterior Excision", "Pyogenic Infections of the Spine", London, England, September 3-5, 1991.
- 62. Guest Lecturer, AO/ASIF Spine Course: "Anterior Decompression for Cervical Spinal Cord Injuries", "Operative Treatment of Spondylolisthesis", "Etiology and Treatment of Paralysis Secondary to Rheumatoid Arthritis of the Cervical Spine", "Lumbar Spinal Stenosis, Experimental and Clinical", Marco Island, FL, October 13-18, 1991.
- 63. Visiting Professor, Department of Orthopaedic Surgery, Michigan State University: "The Etiology and Treatment of Paralysis of Rheumatoid Arthritis of the Cervical Spine", "Cervical Spondylosis", "Thoracic Disc Disease", "Anterior Decompression for Cervical Spinal Cord Injuries", "Lumbar Spinal Stenosis, Experimental and Clinical", Kalamazoo, MI, November 1-2, 1991.
- 64. Visiting Professor, Department of Orthopaedics, University of Alabama: "The Etiology of Paralysis in Rheumatoid Arthritis of the Cervical Spine", "Lumbar Spinal Stenosis, Clinical and Experimental", Birmingham, AL, April 10-11, 1992.
- 65. J.C. Kennedy Lecturer, Department of Orthopaedics, University of Western Ontario: "Lumbar Spinal Stenosis, Experimental and Clinical" and Visiting Professor: "The Etiology of Paralysis Secondary to Rheumatoid Arthritis of the Cervical Spine", London, Ontario, May 6, 1992.
- 66. Barrow Neurologic Institute, Fifth Annual Spine Workshop: "Anterior Decompression and Stabilization for Upper Thoracic Spine Fractures with Paralysis", "Complications of Spine Fusion", Phoenix, AZ, November 15-17, 1992.
- 67. Department of Orthopaedics, Northwestern University: "Cervical Spondylosis with Radiculopathy and Myelopathy", "Lumbar Spinal Stenosis: Experimental and Clinical", Chicago, IL, January 22-23, 1993.
- 68. Guest Speaker, Japanese Orthopaedic Association: "Lumbar Spinal Stenosis, Experimental and Clinical", "Mechanisms of Spinal Cord Injury", Kobi, Japan, April 8-11, 1993.
- Presidential Guest Speaker, Southern Medical Association: "Lumbar Spinal Stenosis: Recent Advances", "Evolution of Anterior Cervical Spine Surgery", Vienna, Austria, August 12-14, 1993.
- 70. Guest Speaker, Maryland Orthopaedic Society: "Rheumatoid Arthritis of the Cervical Spine: Etiology of Paralysis", Baltimore, MD, September 30, 1993.
- Visiting Professor, University of Maryland School of Medicine, Department of Orthopaedic Surgery: "Lumbar Spinal Stenosis: Experimental and Clinical", Baltimore, MD, October 1, 1993.

- 72. Guest Speaker, Israeli Orthopaedic Association: "Lumbar Spinal Stenosis: Experimental and Clinical", "Cervical Spondylosis with Radiculopathy adn Myelopathy: Treatment by Anterior Decompression and Fusion", Haifa, Israel, December 7-9, 1993.
- 73. J. William Hillman Visiting Professor, Department of Orthopaedics and Rehabilitation, Vanderbilt University: "The Etiology of Paralysis Secondary to Rheumatoid Arthritis of the Cervical Spine", "Thoracic Disc Herniations: Treatment by Anterior Decompression", "Lumbar Spinal Stenosis: Experimental and Clinical", "Treatment of Cervical Spine Fractures", Nashville, TN, May 18-20, 1994.
- 74. Charles Gregory Visiting Professor, Department of Orthopaedic Surgery, University of Texas SW Medical Center at Dallas: "Cervical Spondylosis with Radiculopathy and Myelopathy: Treatment by Anterior Decompression and Fusion", "Lumbar Spinal Stenosis: Experimental and Clinical", Dallas, TX, June 2-3, 1994.
- 75. Visiting Professor, Department of Orthopaedic Surgery, University of South Carolina: "Lumbar Spinal Stenosis: Experimental and Clinical", Charleston, SC, June 17-1, 1994.
- 76. Visiting Professor, Washington Hospital Center, Department of Orthopaedic Surgery, "Lumbar Spinal Stenosis: Experimental and Clinical", "Spinal Kyphosis: Diagnosis and Treatment", December 7-8, 1995.
- 77. Guest Speaker, Eastern Japanese Orthopaedic Society, "Spinal Kyphosis Diagnosis and Treatment", October 10-11, 1996. Hirosaki, Japan.
- 78. Guest Speaker, Korean Orthopaedic Association, 1) "Lumbar Spinal Stenosis: Experimental and Clinical", 2) "Spinal Kyphosis: Diagnosis and Treatment", October 16-19, 1996, Seoul, Korea.
- 79. Visiting Professor, Department of Orthopaedic Surgery, Chonbuk University College of Medicine and Chonbuk National University Hospital, October 22, 1996. "Head and Neck Injuries and Cervical Myelopathy Diagnosis and Treatment".
- 80. Guest Speaker, Combined Meeting of Washington Orthopaedic Society and Rheumatism Society of the District of Columbia, "Ediology of Paralysis in Rheumatoid Arthritis of the Cervical Spine, April 9, 1997, Washington, D.C.
- 81. Guest Speaker, Mid-American Orthopaedic Association, "Spinal Kyphosis Diagnosis and Treatment", April 23-27, 1997, Hilton Head, S.C.

- 92. Presidential Guest Speaker, Eastern Orthopaedics Association, "Spinal Kyphosis: Diagnosis and Treatment", Vienna, Austria, October 10-17, 1999.
- 93. University of California at Irvine, Department of Orthopaedic Surgery, 1) "Pathophysiology and Treatment of Cervical Spondylosis and Myelopathy", 2) "Spinal Kyphosis: Diagnosis and Surgical Correction", Irvine, California, January 18-21, 2000.
- 94. New York University School of Medicine, Department of Neurosurgery and Orthopaedic Surgery, 1) "Cervical Spondylosis and Myelopathy: Treatment by Anterior Decompression and Fusion", 2) "Spinal Kyphosis: Diagnosis and Surgical Treatment," New York, NY, February 17-21, 2000.
- 95. University of Pennsylvania, Department of Orthopaedic Surgery, 1) "Spinal Kyphosis: Diagnosis and Treatment", 2) "Cervical Myelopathy: Treatment by Anterior Decompression and Fusion", Philadelphia, Pennsylvania, May 18, 2000.
- 96. University of Oregon, Department of Orthopaedic Surgery, 1) "Cervical Spondylosis and Myelopathy: Treatment by Anterior Decompression and Fusion", and "Spinal Kyphosis: Diagnosis and Surgical Treatment", Portland, Oregon, June 23-25, 2000.
- 97. Georgia Orthopaedics Society, Presidential Guest Speaker, 1) "The Joys of Wine" 2) "Spinal Kyphosis: Diagnosis and Surgical Treatment", Sea Island, Georgia, October 5-8, 2000.
- 98. Philadelphia Orthopaedic Society, Presidential Guest Lecturer, "Spinal Kyphosis: Diagnosis and Surgical Treatment", Philadelphia, Pennsylvania, January 15, 2001.
- 99. University of Maryland Department of Orthopaedic Surgery, Spinal Kyphosis: Diagnosis and Surgical Treatment, Baltimore, Maryland, February 7, 2001.
- 100. Allegheny Hospital, Department of Orthopaedic Surgery, "Spinal Kyphosis: Diagnosis and Treatment", Pittsburgh, Pennsylvania, January 29, 2001.

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### Instructional Course Lectures:

- 1. American Academy of Orthopaedic Surgeons: "Cervical Spine Injuries", 1971, 1972, 1974, 1975, 1976, 1984; "Thoracic Spine Fractures", 1977, 1978, 1981, 1982, 1983.
- 2. Chairman, American Academy of Orthopaedic Surgeons Courses on Orthopaedic Nursing, Cleveland, OH, May, 1975; May, 1976; June, 1977; May, 1978.
- Summer Institute, American Academy of Orthopaedic Surgeons: "Thoracolumbar Fractures", Chicago, IL, July, 1975, 1976; Denver, CO, July, 1977; Boston, MA, 1978; Snow Bird, UT, 1981; Monterey, CA, 1982; Boston, MA, 1983.
- 4. American Academy of Orthopaedic Surgeons, Chairman, Instructional Course: "Techniques of Anterior and Anterolateral Decompression and Fusions of the Spine", Las Vegas, NV, February, 1977.
- 5. American College of Surgeons Course on Trauma: "Spinal Cord Injuries", November, 1977, University Hospitals, Cleveland, OH.
- 6. American Academy of Orthopaedic Surgeons Course on Musculoskeletal Trauma: "Lower Cervical Spine Fractures", San Francisco, CA, April, 1978.
- 7. University of Miami, School of Medicine, Department of Orthopaedics and Rehabilitation, Course on the Spine: "Management of Cervical Spine Trauma", Miami, FL, March, 1978.
- 8. SICOT The International Society of Orthopaedic Surgery and Traumatology Course: "Cervical Spine Injuries", Kyoto, Japan, October 1978.
- Visiting Professor, Siriraj Hospital, Mahidol University: "Pathology and Treatment Concepts, Cervical Spine Injuries", "Late Anterior Decompression and Fusion for Spinal Cord Injuries", "Pyogenic Osteomyelitis of the Spine", Bangkok, Thailand, October, 1978.
- 10. Visiting Professor, University of Toronto, McMaster University at Hamilton Department of Orthopaedics: "Pathology of Cervical Spine Injuries", "Pyogenic Osteomyelitis of the Spine and Cervical Spondylosis", November, 1978.
- American Academy of Orthopaedic Surgeons Course on the Neck and Shoulder: "Mechanism of Pain in Cervical Spine Trauma", "Closed Treatment of Cervical Cord and Cervical Spine Trauma", "Surgical Approaches to Cervical Spine Injuries", Philadelphia, PA, November, 1978.
- 12. American Academy of Orthopaedic Surgeons Course on the Neck: "Pathology of Atlantoaxial Injuries", "Diagnosis of Lower Cervical Spine Injuries", "Surgical Treatment of Cervical Spine Fractures", New Orleans, LA, May, 1979.
- 13. American Academy of Orthopaedic Surgeons Annual Meeting Instructional Course: "Surgical Management of Cervical Spine Trauma", Las Vegas, NV, January 25, 1985.

- 14. American Academy of Orthopaedic Surgeons Course on the Adult Spine: "Diagnosis and Treatment of Neck Pain", Philadelphia, PA, December, 1979.
- 15. Chairman, American Spinal Injury Society Instructional Course on Thoracic and Lumbar Fractures, Anaheim, CA, May, 1980.
- 16. American Academy of Orthopaedic Surgeons Course on the Adult Spine: "Tumors of the Cervical Spine", Orlando, FL, December, 1980.
- 17. American Academy of Orthopaedic Surgeons Course on Spinal Cord Injuries: "Anterior Decompression and Fusion of Spinal Cord Injuries", Miami, FL, December, 1980.
- 18. American Society of Neurologic Surgeons Workshop on Spine and Spinal Cord Injuries: "Indications for Stabilization of Cervical Spine Injuries", Chicago, IL, September, 1980.
- 19. American Academy of Orthopaedic Surgeons, Annual Meeting: "Radiology of the Spine in Trauma", "Fracture-Dislocations of the Thoracolumbar Spine", Las Vegas, NV, February, 1981.
- 20. American Academy of Orthopaedic Surgeons Course on the Adult Spine: "Management of the Patient with Neck Pain", Aspen, CO, March, 1981.
- 21. Chairman, American Academy of Orthopaedic Surgeons Course on Treatment of Adult Spinal Disorders, Cleveland, OH, May, 1981.
- 22. American Academy of Orthopaedic Surgeons Summer Institute: "Anterior Decompression and Fusion of the Spine", "Complications and Failures of Thoracolumbar Fractures", Snowbird, UT, July, 1981.
- 23. American Academy of Orthopaedic Surgeons Course on Current Concepts in Management of Spinal Cord Injury: "Neurophysiology of Spinal Cord Monitoring", "Indications for Anterior Decompression in the Cervical Spine", "Indications for Anterior Decompression of Thoracolumbar Spine Fractures", Houston, TX, December, 1981.
- 24. American Academy of Orthopaedic Surgeons Annual Meeting: "Radiology of the Spine in Trauma", "Fracture-Dislocations of the Thoracolumbar Spine", New Orleans, LA, January, 1982.
- 25. American Academy of Orthopaedic Surgeons: "Orthopaedic Traumatology: Management of Cervical Spine Injuries," and "Late Management of Cord Syndromes Principles of Cord and Canal Decompression", Seattle, WA, August 9-11, 1982.

- 26. American Academy of Orthopaedic Surgeons Summer Institute: "Indications and Surgical Techniques for Surgical Treatment of Spinal Fractures", Monterey, CA, September 20-21, 1982.
- American Academy of Orthopaedic Surgeons, Resources for Basic Science Educators V: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", Monterey, CA, April 20, 1983.
- American Academy of Orthopaedic Surgeons, Course on Current Orthopaedic Trends: "Cervical Spine Trauma", "Surgical Role After Failed Back Surgery", New York, NY, May 24, 1983.
- 29. Harvard Medical School Course, The Spine: "Evaluation and Treatment of Lower Cervical Spine Fractures", "Anterior Surgery for Thoracic and Lumbar Fractures", Boston, MA, June 16, 1983.

 American Academy of Orthopaedic Surgeons Summer Institute Instructional Course Lecture: "Anterior Approaches to Fractures of the Thoracic and Lumbar Spine", Boston, MA, September 19-20, 1983.

- 31. American College of Surgeons: Neurologic Surgery Interdisciplinary Panel Discussion on Fractures and Dislocations of the Upper Cervical Spine, Atlanta, GA, October 18, 1983.
- Spine Study Group Course on the Spine: "The Pathology of Cervical Spine and Cord Injuries", "Atlantoaxial Dislocations in the Arthritic Patient", "Anterior Decompression of Cervical Spine and Cord Injuries", Snowmass, CO, March 11-17, 1984.
- 33. Department of Orthopaedic Surgery, University of Pennsylvania Course on Fractures: "Assessment and Management of Thoracolumbar Fractures", Snowmass, CO, March 14, 1984.
- 34. Division of Orthopaedic Surgery, University of Washington, Seattle, Course on the Spine: "Spinal Cord Monitoring", "Cord Syndromes and the Physiology of Spinal Cord Injuries", "Management of Cervical Spine Fractures", "Late Cord Compression, Evaluation and Treatment", "Techniques for Anterior Cervical Discectomy and Fusion", Maui, HI, March 18-25, 1984.
- 35. Twentieth Annual St. Luke's Hospital Orthopaedic Symposium on the Cervical Spine, Update 1984: "Treatment Concepts of Lower Cervical Spine Injuries", "Late Anterior Decompression of Cervical Spine and Cord Injuries", "Cervical Spondylosis and Myelopathy," "Atlantoaxial Dislocations in the Arthritic Patient", "Pyogenic Infections of the Cervical Spine", Houston, TX, April 6-8, 1984.

- 36. American Academy of Orthopaedic Surgeons Course on the Spine Fundamental Problems: "The Recognition, Assessment and Management of Lumbar Spinal Stenosis", "The Management of Fracture-Dislocations of the Cervical Spine", Toronto, Ontario, Canada, May 9-11, 1984.
- 37. American Academy of Orthopaedic Surgeons Course on Trauma of the Spine: "Management of Upper Cervical Spine Trauma", "Pathologic Basis for Treatment of Cervical Spine Fractures", "Anterior Decompression and Fusion of Cervical Spine Fractures", "Upper Thoracic Spine Fractures with Paralysis", "Spinal Cord Monitoring", "Deciding When To Go Anteriorly", "Techniques of Anterior Decompression and Fusion for Thoracolumbar Fractures", "Delayed Anterior Decompression and Fusion for Thoracolumbar Fractures", Houston, TX, October 25-27, 1984.
- 38. American Academy of Orthopaedic Surgeons Comprehensive Review Course: "Degenerative Diseases of the Spine, Cervical and Lumbar", "Nonoperative and Operative Management of Discogenic and Arthritic Diseases of the Spine"; Breakout Sessions: "Non-operative Management of Spinal disorders", Chicago, IL, April 12, 1985.
- 39. American Academy of Orthopaedic Surgeons Summer Institute: "Spine Trauma", New York, NY, September 11, 1985.
- 40. The Spine Advanced Concepts and Techniques: "Spinal Cord Injury, Late Anterior Decompression: Indications and Results", "Surgical Techniques of Spine Fusion, Cervical", San Diego, CA, October 25, 1985.
- 41. Pennsylvania Hospital, Surgery of the Adult Spine and Hip: "Spinal Cord Monitoring", "Pathology of Spinal Injuries Osseous and Neural", "Surgical Correction of Arthritic Deformities", Philadelphia, PA, December 2 through 4, 1985.
- 42. American Academy of Orthopaedic Surgeons Summer Institute: "Spine Trauma", New York, NY, September 11, 1985.
- 43. American Academy of Orthopaedic Surgeons Annual Meeting: "Degenerative Spondylolisthesis of the Lumbar Spine", "Surgical Management of Lower Cervical Spine Injuries", New Orleans, LA, February 20-25, 1986.
- 44. American Spinal Injury Association Annual Meeting: "Indications for Posterior Cervical Fusion in Cervical Trauma", San Francisco, CA, March 13-15, 1986.
- 45. The Spine Current Concepts: "Treatment of Cervical Spondylosis by Anterior Discectomy and Fusion", "Cord Syndromes and Physiology of Spinal Cord Injuries", "Management of Cervical Spine Fractures", "Etiology and Treatment of Paralysis Associated with Rheumatoid Arthritis of the Spine", "Spinal Cord Monitoring", Maui, HI, March 16-22, 1986.

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- 46. American Academy of Orthopaedic Surgeons Comprehensive Review Course: "Degenerative Disease of the Spine. Pathogenesis and Treatment", Chicago, IL, April 5, 1986.
- 47. Orthopaedic Review Course: "Arthritis of the Cervical Spine", "Management of Cervical Spine and Cord Injuries", "Treatment of Fractures and Dislocations of the Thoracic and Lumbar Spine", Cleveland, OH, May 23, 1986.
- 48. Italy-U.S.A. Joint Meeting on Advances in Orthopaedic Surgery and Traumatology: "Treatment of Fractures of the Thoracolumbar Spine", Pavia, Italy, May 26-31, 1986.
- American Orthopaedic Association International Symposium on Low Back Pain: "Lumbar Disk Prolapse", "Lumbar Spinal Stenosis", "Long-Term Followup of Lumbar Spinal Stenosis Surgical Patients", "Failed Back Surgery: Indications for Intervention", Chicago, IL, August 18-21, 1986.

50. American College of Surgeons Annual Meeting: "Complications of the Treatment of Cervical Spine and Cord Injuries", "Cervical Fractures in Children", New Orleans, LA, October 20-22, 1986.

- 51. Cervical Spine Research Society Course, The Cervical Spine: "Fractures and Dislocations of the Lower Cervical Spine", Palm Beach, FL, December 11-15, 1986.
- 52. American Academy of Orthopaedic Surgeons Annual Meeting: "The Treatment of Lower Cervical Spine Fractures and Spinal Cord Injuries", Degenerative Spondylolisthesis Symposium", "Treatment of Cervical Disk Disease by Anterior Discectomy and Fusion", San Francisco, CA, January 22-27, 1987.
- 53. American Academy of Orthopaedic Surgeons Comprehensive Review Course for Orthopaedic Surgeons: "Degenerative Disk Disease of the Spine", Chicago, IL, March 26, 1987.
- 54. Current Trends in Orthopaedic Surgery: "Neck Pain", "Back Pain", Clearwater, FL, April 15-17, 1987.
- 55. American Orthopaedic Association, Combined Meeting of the English Speaking World: "Fractures of the Thoracolumbar Spine", Washington, DC, May 3-7, 1987.
- 56. The Spine Advanced Concepts of Diagnosis and Treatment: "Osteotomy of the Spine, Indications and Techniques", "The Rheumatoid Spine: Actual History and Surgical Treatment", "Cervical Kyphosis: Etiology and Surgical Techniques", Kiawah Island, SC, May 15-18, 1987.
- 57. Orthopaedic Review Course, University Hospitals of Cleveland: "Arthritis of the Cervical Spine", "Cervical Spine and Cord Injuries", "Treatment of Fracture-Dislocations of the Thoracic and Lumbar Spine", Cleveland, OH, June 5, 1987.

- University of Massachusetts Medical Center, Acute Spinal Cord Injuries: Diagnosis and Management: "Anterior Decompression for Spinal Cord Injuries", Worcester, MA, October 1-3, 1987.
- 59. Vanderbilt University, Department of Orthopaedic Surgery, The Spine: Current Concepts and Techniques: "Late Management of Cervical Spine Injuries", "Surgical Indications for the Management of Cervical Radicular Syndromes", "Surgical Management of Cervical Spine in the Patient with Rheumatoid Arthritis", "Disk Herniation of the Thoracic Spine: Recognition and Treatment", Nashville, TN, October 26-28, 1987.
- 60. AO/ASIF Spine Course: "Late Consequences of Non-Operative Treatment of Thoracolumbar Injuries", Clearwater Beach, FL, October 20, 1987.
- 61. American Academy of Orthopaedic Surgeons Annual Meeting: "Surgical Management of Lower Cervical Spine Injuries", Atlanta, GA, February 6, 1988.
- 62. American Academy of Orthopaedic Surgeons Annual Meeting: "Degenerative Spondylolisthesis", Atlanta, GA, February 8, 1988.
- 63. American Academy of Orthopaedic Surgeons Annual Meeting, Moderator of Symposium: "Fractures of the Thoracolumbar Spine", Bohlman, H.H., with Stauffer, E.S., McAfee, P. and Eismont, F., Atlanta, GA, February 7, 1988.
- 64. The Spine: "Spinal Cord Monitoring", "Evolution and Treatment of Patients with Rheumatoid Arthritis of the Spine", "Spinal Cord Syndromes and Physiology of Spinal Cord Injury", Management of Cervical Spine Fractures", "Results of Late Anterior Decompression Following Spinal Trauma", Maui, HI, March 13-19, 1988.
- 65. American Academy of Orthopaedic Surgeons Review Course: "Degenerative Disease of the Cervical and Lumbar Spine", Chicago, IL, March 28, 1988.
- 66. Orthopaedic Review Course, University Hospitals of Cleveland: "Degenerative Disease of the Cervical Spine", "Management of Cervical Spine Injuries", "Management of Thoracolumbar Fractures", "Lumbar Spinal Stenosis", Cleveland, OH, June 10, 1988.
- 67. Spinal Disorders: "Lumbar Spinal Stenosis", "Rheumatoid Arthritis of the Cervical Spine", Goteborg, Sweden, June 26 - July 1, 1988.
- 68. The Spine Current Concepts: "The Rheumatoid Cervical Spine", "Anterior Surgery for Cervical Disk Disease", "Late Anterior Decompression for Thoracolumbar Fractures", Palm Desert, CA, November 11-14, 1988.
- 69. Annual Spine Workshop, Barrow Neurological Institute: "Management of Thoracic Fractures", "Management of Thoracolumbar Fractures by the Anterior Approach", Phoenix, AZ, November 11-12, 1988.

- Campbell Clinic Symposium, 1) "Lumbar Spinal Stenosis Experimental and Clinical", 2)
  "Rheumatoid Arthritis of the Cervical Spine: Pathology and Treatment Concepts", Marco Island, FL January 16-19, 1997.
- 105. American Academy of Orthopaedic Surgeons Annual Meeting, 1) "Rheumatoid Arthritis of the Cervical Spine: Pathology and Current Treatment Concepts", 2) "Cervical Spondylosis and Myelopathy", 3) "Techniques of Anterior Cervical Decompression and Fusion", San Francisco, CA February 13-17, 1997
- 106. Cervical Spine and Research Society Annual Meeting, "Late Anterior Decompression and Fusion for Lower Cerivcal Spine Fractures", Atlanta, GA, December 3-6, 1998
- 107. American Orthopaedic Association Combined Meeting, "Cervical Spondylosis and Myelopathy", Auckland, New Zealand, February 2-6, 1998.
- 108. The American Academy of Orthopaedic Surgeons Annual Meeting, "Rheumatoid Arthritis of the Cervical Spine: Pathology and Treatment Concepts", Bohlman, H.H., Carlson, G.D, Emery, S.E., March 19-23, 1998, New Orleans, LA.
- 109. Charles Herndon Alumni Society, Spine Symposium, "Spinal Kyphosis: Diagnosis and Treatment," June 19-20, 1998.
- 110. Cervical Spine Research Society, 1) "Lower Cervical Spine Trauma", 2) "Delayed Anterior Decompression for Cervical Spine Fractures", Atlanta, Georgia, December 3-5, 1998.
- 111. American Academy of Orthopaedic Surgeons Instructional Course Lecture, "The Techniques of Anterior Cervical Decompression and Fusion", Anaheim, California, February 4-8, 1999.
- 112. International Congress on Spine Surgery, "Treatment of Degenerative Cervical Spine Disorders", Istanbul, Turkey, June 22-24, 1999.
- 113. Spine Symposium, University of Chicago, "Spinal Kyphosis: Diagnosis and Treatment", Chicago, Illinois, July 20, 1999.
- 114. Cervical Spine Research Society, "Anomalous Vertebral Artery: Cadaveric and Clinical Case Study," Curylo, L.J., Mason, H., Bohlman, H.H., and Yoo, J., Seattle, Washington, December 16-18, 1999.
- American Academy of Orthopaedic Surgeons, Instructional Course Lecture, "Indications and Techniques of Anterior Cervical Decompression and Fusion", Orlando, Florida, March 15-19, 2000.
- 116. Spine Symposium, Anne Arundel Medical Center, "Cervical Spondylosis and Myelopathy: Treatment with Anterior Decompression and Fusion", Annapolis, Maryland, April 28, 2000.

## **Lectures and Paper Presentations:**

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- Accident Pathology, an International Conference: "Pathology of Fatal Craniospinal Injuries", Washington, DC, June 6-8, 1968.
- Quad City Orthopaedic Meeting: "The Pathology of Fatal Craniospinal Injuries", Philadelphia, PA, April 3, 1970.
- 3. University of California at Stanford and Santa Clara County Medical Society: "The Pathology of Fatal Craniospinal Injuries", "Current Treatment Concepts of Cervical Spine Injuries: A Review of 300 Cases", San Jose, CA, September 21, 1971.
- American Academy of Orthopaedic Surgeons, Instructional Course Lectures: "The Pathology and Current Treatment Concepts of Cervical Spine Injuries", Chicago, IL, January, 1971; Washington, DC, January, 1972.
- 5. University of California, San Francisco Medical Center: Panel on Cervical Spine Injuries, February 12, 1972.
- 6. University of California at Davis: "Fatal Craniospinal Injuries", "Current Treatment Concepts of Cervical Spine Injuries", Sacramento, CA, March, 1971.
- 7. Cleveland Orthopaedic Club, Continuing Education Course: "Errors and Pitfalls in the Diagnosis and Treatment of Cervical Spine Injuries", Cleveland, OH, March 2, 1974.
- 8. American Academy of Orthopaedic Surgeons Course on the Neck: "Errors and Pitfalls in the Diagnosis and Treatment of Acute Cervical Spine Injuries", New York, NY, April 8, 1974.
- 9. American Academy of Orthopaedic Surgeons, Orthopaedic Nurses Course: "Care of Acute Cervical Spine Injuries", Cleveland, OH, May, 1974.
- 10. Ohio State Medical Association Conference on Sports Medicine: "Sports Injuries of the Cervical Spine", Cleveland, OH, November, 1974.
- 11. American Academy of Orthopaedic Surgeons and Veterans Administration Course on Management of Acute Spinal Cord Injuries: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", Scottsdale, AZ, November, 1974.
- 12. University of California at Los Angeles: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", Los Angeles, CA, November, 1974.
- California Medical Association Course on Emergency and Immediate Care of Head and Neck Injuries: "Errors and Pitfalls in the Diagnosis and Treatment of Acute Cervical Spine Injuries", "Treatment Concepts of Cervical Spine Injuries," Los Angeles, CA, February, 1975.

- 14. American Academy of Orthopaedic Surgeons: "Late Anterior Decompression of Spinal Cord Injuries, A Review of 36 Cases", San Francisco, CA, March, 1975.
- 15. American Physical Therapy Association, Sports Medicine Section: "Sports Injuries of the Cervical Spine: 86 Cases", Dallas, TX, March, 1975.
- 16. Veterans Administration Course on Acute Spinal Cord Injuries: "Decompression and Stabilization Procedures of Spinal Cord Injuries", "Surgical Treatment of Spasticity in Spinal Cord Injuries", Palo Alto, CA, April, 1975.
- 17. American Academy of Orthopaedic Surgeons, Chairman, Course on Orthopaedic Nursing: "Treatment of Acute Spinal Cord Injuries", Cleveland, OH, May, 1975.
- 18. Veterans Administration Course on Spinal Cord Injuries: "Current Treatment Concepts of Spinal Cord Injuries", Cleveland, OH, June, 1975.
- American Academy of Orthopaedic Surgeons, Summer Institute, Instructional Course Lecturer, Course on Thoracolumbar Fractures: "Upper Thoracic Spine Fractures with Paralysis, 180 Cases", August, 1975.
- 20. Bethesda Naval Hospital: "Late Anterior Decompression of Spinal Cord Injuries, Review of 50 Cases", Washington, DC, September, 1975.
- 21. The Cleveland Orthopaedic Club: "Cervical Spondylosis", "Pathology and Current Treatment Concepts, Cervical Spine Injury", Cleveland, OH, October 4, 1975.
- 22. Cervical Spine Research Society: "Massive Epidural Hemorrhage in Fractures of the Cervical Spine in Ankylosing Spondylitis", Toronto, Ontario, November, 1975.
- 23. Veterans Administration, Central Office: "Results of Late Anterior Decompressions in Spinal Cord Injuries", Washington, DC, November, 1975.
- 24. American Academy of Orthopaedic Surgeons: "Late Progressive Paralysis and Pain Following Fractures of the Thoracolumbar Spine, Treatment and Results of 10 Cases", New Orleans, LA, January, 1976.
- 25. Cleveland Orthopaedic Club Continuing Education Course: "Sports Injuries of the Cervical Spine", Cleveland, OH, April 3, 1976.
- 26. The Arthritis Foundation, Northeastern Ohio Chapter: "The Surgical Treatment of Cervical Spondylosis", Cleveland, OH, April 21, 1976.
- 27. American Academy of Orthopaedic Surgeons, Chairman, Course on Orthopaedic Nursing: "Treatment of Acute Spinal Cord Injuries," Cleveland, OH, May 14-16, 1976.

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- 28. American Academy of Orthopaedic Surgeons, Summer Institute Instructional Course on: "Treatment of Upper Thoracic Spine Fracture with Paralysis", Chicago, IL, August, 1976.
- 29. Veterans Administration Spinal Cord Injury Conference: "Late Anterior Decompression and Fusion for Spinal Cord Injuries: Results of 65 Cases", Castlepoint, V.A.H., Fishkill, NY, September, 1976.
- 30. Detroit Academy of Orthopaedic Surgery and Wayne State University: "Pathology and Current Concepts in Treatment of Cervical Spine Injuries", "Upper Thoracic Spine Injuries with Paralysis", "Surgical Treatment of Cervical Spondylosis", Detroit, MI, October, 1976.
- 31. Cleveland Veterans Administration Fourth Annual Conference on The Care and Treatment of the Spinal Cord Injured: "Current Treatment Concepts of Spinal Cord Injuries", Cleveland, OH, November, 1976.
- 32. Cervical Spine Research Society: "Treatment of Cervical Spondylosis with Myelopathy: Report of 17 Cases of Anterior Discectomy and Fusion", Philadelphia, PA, November, 1976.
- 33. Case Western Reserve Medical School, Medicine Today, Medical Grand Rounds: "Pyogenic Osteomyelitis of the Spine: A Review of 53 Cases", Cleveland, OH, November, 1976.
- 34. American Academy of Orthopaedic Surgeons Annual Meeting: "Pyogenic Osteomyelitis of the Spine: A Report of 50 Cases With and Without Paralysis", Las Vegas, NV, January, 1977.
- 35. Portsmouth Naval Hospital, Hampton Road Orthopaedic Society: "Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", "Cervical Spondylosis", Portsmouth, VA, March, 1977.
- 36. Cleveland Emergency Medical Services: "Spinal Cord Injuries", Cleveland, OH, March, 1977.
- 37. Cleveland Clinic Foundation, Continuing Education: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", "Upper Thoracic Spine Fractures with Paralysis", "Cervical Spondylosis", Cleveland, OH, April, 1977.
- 38. Visiting Lecturer, Alfred I. DuPont Institute: "Late Anterior Decompressions Spinal Cord Injuries", Wilmington, DE, May 20, 1977.
- 39. Little Orthopaedic Club: "Late Anterior Decompression and Fusion of Spinal Cord Injuries", Hilton Head, SC, May, 1977.
- 40. American Academy of Orthopaedic Surgeons Course on Orthopaedic Nursing: "Atlantoaxial Dislocations in the Arthritic Patient A Threat to Life", "Current Treatment Concepts of Spinal Cord Injuries", Cleveland, OH, June, 1977.

- 67. St. Luke's Hospital, Continuing Education Course: "Anterior Decompressions and Fusion for Spinal Cord Injuries", Cleveland, OH, March, 1980.
- 68. Cleveland Arthritis Society: "Atlantoaxial Dislocations in the Arthritic Patient", Cleveland, OH, March, 1980.
- 69. American Spinal Injury Association: "Late Anterior Decompression and Fusion of Spinal Cord Injuries", Anaheim, CA, April, 1980.
- 70. Canadian Orthopaedic Research Society: "Mechanical Factors Affecting Recovery of Incomplete Spinal Cord Injuries", Calgary, June, 1980.
- 71. Cervical Spine Research Society: "Complications of the Treatment of Cervical Spine Injuries", Palm Beach, FL, December, 1980.
- 72. American Academy of Orthopaedic Surgeons Course on The Spine, Surgery and Rehabilitation: "Primary Tumors of the Cervical Spine", Kissimmee, FL, December, 1980.
- 73. American Academy of Orthopaedic Surgeons Course on Spinal Cord Injuries: "Spinal Cord Monitoring", "Late Surgical Intervention in Thoracolumbar Injuries", Miami Beach, FL, December, 1980.
- 74. American Academy of Orthopaedic Surgeons Annual Meeting: "Highlights of Adult Spine", Las Vegas, NV, March, 1981.
- 75. American Academy of Orthopaedic Surgeons Course on Priorities and Management, Acute Multi-System Orthopaedic Trauma: "Fractures of the Thoracolumbar Spine", Chicago, IL, April, 1981.
- 76. Spine Study Group: "Indications and Planning for Surgery in Cervical Disc Disease", "Cervical Myelopathy", Snowmass, CO, March, 1981.
- 77. International Society for the Study of the Lumbar Spine: "Complications of Harrington Rod Fixation for Fractures of the Thoracolumbar Spine", Paris, France, June, 1981.
- Uniformed Services, University of Health Sciences SOMOS Meeting: "Initial Management of Spinal Injuries", Washington, DC, November, 1981.
- 79. Johns Hopkins Hospital, Department Orthopaedic Surgery: "Pathology and Current Treatment Concepts of Cervical Spine Injuries", Baltimore, MD, March 20, 1982.
- 80. Cleveland Clinic Foundation: "Cervical Spine Injuries", "Thoracolumbar Fractures", Cleveland, OH, April 20, 1982.

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- 81. University Hospitals, Trauma Update 1982: "Cervical Spine Injuries", Cleveland, OH, June 11, 1982.
- 82. Lakewood Hospital, Continuing Education Department: "Neck Pain", "Back Pain", Lakewood, OH, October 13, 1982.
- 83. Cleveland Orthopaedic Club, Continuing Education Program: "Osteomyelitis of the Spine", Cleveland, OH, October 20, 1982.
- 84. University Hospitals, Department of Radiology, Continuing Education Program: "Cervical Spine Injuries", "Thoracic Spine Fractures with Paralysis", Cleveland, OH, November 10, 1982.
- 85. Cervical Spine Research Society Annual Meeting: "Robinson Anterior Cervical Discectomy and Fusion: Long-Term Results of 103 Patients", New York, NY, December 1-4, 1982.
- 86. Canadian Orthopaedic Association Annual Meeting: "Robinson Anterior Cervical Discectomy and Fusion: Long Term Results in 103 Patients", Quebec, Canada, June 5-9, 1983.
- 87. American Orthopaedic Association Annual Meeting: "Robinson Anterior Cervical Discectomy and Fusion: Long Term Results in 103 Patients", The Homestead, VA, June 27-30, 1983.
- 88. Visiting Professor, University of Massachusetts, Department of Orthopaedic Surgery: "Fractures of the Thoracolumbar Spine", "Complications of Harrington Instrumentation for Thoracic Lumbar Fractures", Worcester, MA, September 19, 1983.
- 89. St. Joseph's Hospital, Rheumatology Seminar: "Low Back Pain", "Lumbar Spinal Stenosis", Akron, OH, September 21, 1983.
- 90. Little Travel Club, Dalhousiana University, Division of Orthopaedic Surgery: "Failed Back Surgery", Halifax, Nova Scotia, September 30, 1983.
- 91. Cervical Spine Research Society Course n The Cervical Spine: "Fractures and Dislocations of the Lower Cervical Spine", Palm Beach, FL, December 7, 1983.
- 92. Cervical Spine Research Society: "The Etiology of Paralysis with Atlantoaxial Dislocations in the Arthritic Patient", Palm Beach, FL, December 8, 1983.
- 93. American Academy of Orthopaedic Surgeons Annual Meeting: "Robinson Anterior Cervical Discectomy and Fusion. Long-Term Results of 103 Patients", Atlanta, GA, February 11, 1984.
- 94. American Academy of Orthopaedic Surgeons Annual Meeting, Symposium on Modern Decision Making in Spinal Disease: "Fractures of the Thoracic and Lumbar Spine", Atlanta, GA, February 13, 1984.

- 95. American Academy of Orthopaedic Surgeons Annual Meeting: "Surgical Treatment of Lumbar Spinal Stenosis: Long Term Follow-Up of 142 Patients", Atlanta, GA, February 14, 1984.
- 96. American Orthopaedic Association; "Surgical Treatment of Lumbar Spinal Stenosis: Long-Term Follow-Up of 142 Patients", Palm Beach, FL, May 14-17, 1984.
- 97. Surgical Grand Rounds, University Hospital, Department of Surgery: "Lumbar Spinal Stenosis", Cleveland, OH, September 8, 1984.
- SICOT The International Society of Orthopaedic Surgery: "Robinson Anterior Cervical Discectomy and Fusion: Long Term Results of 103 Patients", London, England, October 5, 1984.
- 99. Symposium on Sports Injuries: "Sports Injuries of the Cervical Spine", Groningin, Holland, September 28, 1984.
- 100. University of Maryland, School of Medicine, Orthopaedic Division, "Treatment of Thoracolumbar Fractures", Baltimore, MD, October 12, 1984.
- 101. University of Miami, Course on Advances in Spinal Surgery VI: "Cervical Spondylosis and Myelopathy", "Treatment of Herniated Thoracic Discs", Miami, FL, November 26-27, 1984.
- American Academy of Orthopaedic Surgeons Annual Meeting: "Surgical Treatment of Herniated Thoracic Discs by Anterior Excision: Results of 19 Cases", Las Vegas, NV, January 25, 1985.
- American Academy of Orthopaedic Surgeons Annual Meeting: "Complications of Harrington Instrumentation in Thoracolumbar Fractures: A Ten Year Experience", co-author Paul McAfee, Las Vegas, NV, January 29, 1985.
- 104. American Academy of Orthopaedic Surgeons Course on Management of Spinal Cord Injuries: "Spinal Cord Monitoring", Physiology and Pathology of Spinal Cord Injuries", "Application of Late Anterior Decompression of Cervical Spinal Cord Injuries", "Anterior Decompression of Thoracolumbar Injuries", Keystone, CO, March 18, 19 and 20, 1985.
- 105. Barrow Neurological Institute, Department of Neurosurgery: "The Treatment of Thoracolumbar Fractures", Phoenix, AZ, September 6, 1985.
- 106. The American Paraplegia Society: "Late Anterior Decompressions for Spinal Cord Injury: Review of 167 Cases with Long-Term Results of Neurologic Recovery", Las Vegas, NV, September 6, 1985.
- 107. Course on Surgery of the Spine: "Pathology of Spinal Injuries, Osseous and Neural", "Spinal Cord Monitoring and Alternatives", "Surgical Correction of Arthritic Deformities", Philadelphia, PA, December 2-4, 1985.

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- 108. Cervical Spine Research Society Annual Meeting: "The Treatment of Cervical Kyphosis with Myelopathy by Anterior Corpectomy and Strut Graft of Fusion", with Zdeblick, Boston, MA, December 4-7, 1985.
- 109. American Academy of Orthopaedic Surgeons Annual Meeting, Moderator of Symposium, Complications of Spinal Surgery and Their Management: "Complications of Cervical Trauma", New Orleans, LA, February 2, 1986.
- 110. American Academy of Orthopaedic Surgeons Annual Meeting: "Late Pain and Paralysis Following Fractures of the Thoracolumbar Spine: Long Term Results of Anterior Decompression and Fusion in 41 Patients": "Failure of Methylmethacrylate in Spinal Stabilization" with McAfee, P.C., Ducker, T., Eismont, F.J. and Regan, J.J.; "Nuclear Magnetic Resonance in the Diagnosis of Cervical Spinal Cord Compression" with McAfee, P.C., Han, J.S. and Salvagno, R.T.; "The Triple Wire Stabilization Technique for Fracture-Dislocations of the Cervical Spine" with McAfee, P.C., Wilson, W.W. and Britt, J.; "Anterior Decompression of the Cervical Spine Following Traumatic Quadriplegia" with Anderson, P.A., New Orleans, LA, February 20-25, 1986.
- 111. Federation of Spine Association's First Annual Meeting: "Late Anterior Decompression for Cervical Spinal Cord Injuries", New Orleans, LA, February 19, 1986.
- 112. American Spinal Injury Association Annual Meeting: "Late Anterior Decompression for Spinal Cord Injuries: A Review of 417 Patients with Long Term Results of Neurologic Recovery", San Francisco, CA, March 13-15, 1986.
- 113. American Paraplegia Society: "Late Pain and Paralysis Following Fractures of the Thoracolumbar Spine: Long-Term Results of Anterior Decompression and Fusion in 41 Patients", Las Vegas, NV, September 3-5, 1986.
- 114. Cervical Spine Research Society: "Indications and Technique of Occipital Cervical Fusion" with Wertheim, S.B.; "Anterior Extraoral Approach to the Atlas and Axis" with McAfee, P.C.; "One Stage Anterior Decompression and Fusion for Fixed Cervical Kyphosis" with McAfee, P.C.; "Pathophysiological Changes with Non-Acute Spinal Cord Trauma", Palm Beach, FL, December 10-13, 1986.
- 115. Federation of Spine Association Annual Meeting: "Late Anterior Decompression for Spinal Cord Injury: Review of 167 Patients with Long-Term Results of Neurologic Recovery", "Late Pain and Paralysis Following Fractures of Thoracolumbar Spine: Treatment by Anterior Decompression with Fusion", "Pathophysiologic Changes in Non-Acute Spine Cord Trauma", San Francisco, CA, January 21-22, 1987.

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- 116. American Academy of Orthopaedic Surgeons Annual Meeting: "Selection of Long-Term Results and Salvage Operations for the Patient with Failed Lumbar Spine Surgery: Report of 82 Patients", co-authors Delamarter, R. and Martin, J., San Francisco, CA, January 22-27, 1987.
- American Academy of Orthopaedic Surgeons Annual Meeting: "Epidural Hematomas as a Complication of Posterior Lumbar Surgery", co-authors Anderson, P., Wilber, G. and O'Leary,
   P., San Francisco, CA, January 22-27, 1987.
- 118. American Academy of Orthopaedic Surgeons Annual Meeting: "Anterior Extraoral Approach to the Atlas and Axis", co-authors McAfee, P.C., Robinson, R.A., Nakelis, N. and Southwick, W., San Francisco, CA, January 22-27, 1987.
- 119. American Academy of Orthopaedic Surgeons Annual Meeting: "Cervical Spinal Cord Compression from Ossification of the Posterior Longitudinal Ligament", co-authors McAfee, P.C. and Regan, J., San Francisco, CA, January 22-27, 1987.
- 120. American Academy of Orthopaedic Surgeons Annual Meeting: "The Treatment of Cervical Kyphosis with Myelopathy by Anterior Corpectomy and Strut Graft Fusion", co-author Zdeblick, T., San Francisco, CA, January 22-27, 1987.
- 121. American Academy of Orthopaedic Surgeons Annual Meeting: "The Etiology of Paralysis and Rheumatoid Arthritis of the Cervical Spine", co-authors Dodge, L. and Rechtine, G., San Francisco, CA, January 22-27, 1987.
- 122. Little Orthopaedic Club: "Late Pain and Paralysis Following Fractures of the Thoracolumbar Spine: Treatment by Anterior Decompression and Fusion", Sedona, AZ, April 26-29, 1987.
- 123. The International Society for the Study of the Lumbar Spine: "Diagnosis of Lumbar Arachnoiditis by Magnetic Resonance Imaging", Delamarter, R. and Bohlman, H.H., "Late Pain and Paralysis Following Fractures of the Thoracolumbar Spine", Rome, Italy, May 24-28, 1987.
- 124. American Paraplegia Society: "Paralysis Secondary to Rheumatoid Arthritis of the Cervical Spine: Pathogenesis and Treatment", Las Vegas, NV, September 22-24, 1987.
- 125. American Academy of Orthopaedic Surgeons Annual Meeting: "Experimental Lumbar Spinal Stenosis: Cortical Evoked Potential and Neuropathologic Analysis", Delamarter, R.B., Bohlman, H.H., Dodge, L.D. and Biro, C., Atlanta, GA, February 6, 1988.
- 126. Federation of Spine Association Third Annual Meeting: "The Complications of Cervical Spine Surgery", Atlanta, GA, February 7, 1988.

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- 127. The International Society for the Study of the Lumbar Spine Annual Meeting: "Diagnosis of Recurrent Lumbar Disk Herniation Versus Post-Operative Scar by Gadolinium - DPTA Enhanced Magnetic Resonance Imaging", Delamarter, R., Bohlman, H.H. and Masaryk, T., Miami, FL, April 13-17, 1988.
- 128. Medical Grand Rounds, University Hospitals, Case Western Reserve University School of Medicine: "Low Back Pain and Spinal Stenosis", Cleveland, OH, May 21, 1988.
- 129. American Orthopaedic Association: "Post-Operative Epidural Fibrosis Versus Recurrent Lumbar Disk Herniation Diagnosis by Gadolinium - DPTA Enhanced Magnetic Resonance Imaging", Delamarter, R., Bohlman, H.H, Modic, M. and Ross, J., Hot Springs, VA, June 20-23, 1988.
- 130. Cleveland Orthopedic Club: "Thoracic Intervertebral Disk Herniation", Cleveland, OH, November 5, 1988.
- University Hospitals of Cleveland, Comprehensive Management of Spinal Disorders: "Thoracic Disk Disease", "Infections of the Spine", "Cervical Spine Trauma", Saw Mill Creek, Huron, OH, November 19, 1988.
- 132. Orthopaedic Research Society: "Decompression of Experimental Spinal Stenosis: Cortical Evoked Potential Vasculature and Histopathology Analysis", Delamarter RB, Bohlman H.H. and Biro C., Las Vegas, NV, February 6, 1989.
- Orthopaedic Research Society: "Treatment of Cervical Kyphosis with Myelopathy by Anterior Corpectomy and Strut Fusion", Zdeblick T.A. and Bohlman H.H., Las Vegas, NV, February 6, 1989.
- 134. International Society for the Study of the Lumbar Spine: "Decompression of Experimental Spinal Stenosis: Analysis of Cortical Evoked Potentials, Vasculature and Histopathology", Delamarter R.B., Bohlman H.H. and Biro C., Kyoto, Japan, May 26-27, 1989.
- 135. American Orthopaedic Association Annual Meeting: "Decompression of Experimental Spinal Stenosis: Analysis of Cortical Evoked Potentials, Vasculature and Histopathology", Delamarter, R.B., Bohlman, H.H. and Biro C., Colorado Springs, CO, June 12-13, 1989.
- 136. Civilian National Consultant, United States Air Force, Wilford Hall USAF Medical Center, Brook Army Medical Center: "Treatment of Thoracolumbar Fractures", "Degenerative Cervical Spine Disease", "The Etiology of Paralysis and Rheumatoid Arthritis", "Late Anterior Decompression for Spinal Cord Injury - Long Term Results", San Antonio, TX, July 6-8, 1989.
- 137. Presidential Address, Cervical Spine Research Society: "The Evolution of Anterior Cervical Spine Surgery", New Orleans, LA, December 6, 1989.

- 138. The Spine Current Concepts of Diagnosis and Treatment: "Management of Thoracic Disc Disease", "Anterior Surgery for Cervical Disc Disease", San Diego, CA, April 29-30, 1990.
- 139. Visiting Professor, University of Melbourne: "The Treatment of Upper Thoracic Fractures with Paralysis", "Thoracolumbar Fractures with Paralysis", "The Etiology of Paralysis in Rheumatoid Arthritis of the Cervical Spine", Melbourne, Australia, July 9, 1990.
- 140. Visiting Professor, University of Adelaide, Department of Orthopaedic Surgery: "Lumbar Spinal Stenosis", "Pyogenic Infections of the Spine", Adelaide, Australia, July 11, 1990.
- 141. International Society of Orthopaedic Surgery and Traumatology: "Etiology of Paralysis in Rheumatoid Arthritis of the Cervical Spine", Bohlman H.H., Dodge L.D. and Rechtine G.R., Montreal, Canada, September 8-15, 1990.
- 142. European Cervical Spine Research Society: "Paralysis Secondary to Rheumatoid Arthritis of the Cervical Spine Pathogenesis and Treatment", Bohlman H.H., Dodge L.D. and Rechtine G.R., Taormina, Italy, September 26-29, 1990.
- 143. Cervical Spine Research Society: "A Tribute to Dr. Robert A. Robinson", "Injury to the Spinal Cord", San Antonio, TX, November 28 December 2, 1990.
- 144. Brazilian Orthopaedic Society, ORTRA International: "Anterior Decompression for Cervical Spinal Cord Injuries", "Cervical Spondylosis - Treatment by Anterior Decompression and Fusion", "Lumbar Spinal Stenosis", "Rheumatoid Arthritis of the Cervical Spine", "Herniated Thoracic Discs - Treatment by Anterior Decompression", "Anterior Decompression for Thoracolumbar Spinal Injuries", Rio de Janeiro, Brazil, July 11-13, 1991.
- 145. Cervical Spine Research Society: "Decompression of the Spinal Cord: A Canine Model", Bolesta M.J. and Bohlman H.H., Philadelphia, PA, December 6, 1991.
- 146. Federation of Spine Associations: "Robinson Anterior Cervical Discectomy and Fusion for Cervical Radiculopathy, Long Term Follow up of 122 Patients", Emery S.E., Bohlman H.H. and Goodfellow D.G., Washington, DC, February 23, 1992.
- 147. European Cervical Spine Research Society: "Anterior Decompression and Fusion for Cervical Spinal Cord Injuries", Athens, Greece, June 24-27, 1992.
- 148. International Foundation for Spinal Studies, Arthrodesis and Instrumentation of the Spinal Column for Pain Syndromes: "Anterior Cervical Decompression and Fusion for Cervical Myelopathy", "Treatment of cervical Kyphosis", "Complications of Cervical Spine Surgery", "Surgery for the Failed Back", "Surgical Management of Spondyloptosis", "Complications of Lumbar Spinal Surgery", London, England, September 1-4, 1992.

- 149. American Academy of Orthopaedic Surgeons Summer Institute: "Anterior Cervical Decompression and Fusion (live demonstration and lecture), "Lumbar Spinal Stenosis", "Anterior Decompression and Fusion for Thoracolumbar Fractures", Seattle, WA, September 19-20, 1992.
- 150. American Paralysis Association Annual Meeting: "Indications for Decompression and Stabilization of Spinal Cord Injury", with Bolesta M.J., Las Vegas, NV, September 8-10, 1992.
- 151. Argentinean Society of Pathology of the Vertebral Column: "Treatment of Herniated Thoracic Disc by Anterior Excision", "Treatment of Cervical Radiculopathy and Myelopathy", "Lumbar Spinal Stenosis", "Treatment of Cervical Spine and Spinal Cord Injuries", "Treatment of Fractures of the Thoracic Spine with Paralysis", "Treatment of Fractures of the Lumbar Spine with Paralysis", Buenos Aires, Argentina, October 22-24, 1992.
- 152. University of California at San Francisco: "Treatment of Lumbar Spinal Stenosis: Experimental and Clinical", "Cervical Spondylosis with Radiculopathy and Myelopathy", San Francisco, CA, November 6-8, 1992.
- 153. Cervical Spine Research Society Annual Meeting: "Degenerative Spondylolisthesis of the Cervical Spine", with Bolesta M.J., New York, NY, December 3-5, 1992.
- 154. Course on Techniques in Spinal Instrumentation: "Lumbar Spinal Stenosis: The Influence of Olisthesis", New York, NY, December 11-12, 1992.
- 155. American Academy of Orthopaedic Surgeons Annual Meeting: "Degenerative Spondylolisthesis of the Cervical Spine", San Francisco, CA, February 18-23, 1993.
- 156. Spine Study Group: "Treatment of Fractures of the Cervical Spine", "Cervical Radiculopathy and Myelopathy: Treatment by Anterior Approaches", "Herniated Thoracic Discs: Treatment by the Anterior Approach", "Fractures and Dislocations of the Cervical Spine", Naples, FL, April 29 - May 2, 1993.
- 157. Herndon Society: "Lumbar Spinal Stenosis", Park City, UT, March 22-24, 1993.
- 158. Topics in Geriatric Medicine, Case Western Reserve University: "Lumbar Spinal Stenosis: Experimental and Clinical", Cleveland, OH, May 21, 1993.
- 159. Western Orthopaedic Association Annual Meeting: "The Etiology of Paralysis", "Rheumatoid Arthritis of the Cervical Spine", Sacramento, CA, May 17, 1993.
- 160. Orthopaedic Grand Rounds, University of California, Davis: "Lumbar Spinal Stenosis, Experimental and Clinical", Sacramento, CA, May 18, 1993.
- 161. UOA Review Course: "The Management of Cervical Spine and Cord Injuries", "Spinal Infections", Cleveland, OH, May 20, 1993.

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- 162. State of the Spine from A-Z: "Cervical Myelopathy: Diagnosis and Treatment", Las Croabas, Puerto Rico, November 14, 1993.
- 163. The Spine Current Concepts: "Upper Cervical Spine Lesions: Evaluation and Management", "Cervical Myelopathy and Radiculopathy", "Cervical Management of Cervical Spine Injuries", "Late Decompression Following Spine Trauma", "Thoracic Disc Herniations", Maui, HI, 1994.
- 164. Visiting Professor, Argentinean Congress of Orthopaedics and Traumatology: "The Treatment of Thoracolumbar Fractures with Neurologic Deficit by Anterior Decompression and Fusion", "Fractures and Dislocations of the Lower Cervical Spine", "Lumbar Spinal Stenosis: Experimental and Clinical", "Cervical Kyphosis and Myelopathy: Treatment by Anterior Corpectomy and Strut Grafting", "Results of Treatment of Acute Injuries in the Upper Thoracic Spine with Paralysis by Anterior Decompression and Fusion", Buenos Aires, Argentina, October 30 - November 2, 1994.
- 165. American Academy of Orthopaedic Surgeons, Goldstein, J.A., McAfee, P.C., Bohlman, H.H., Ducker, T.B and Ziedman, S.M. "One Stage Anterior Cervical Decompression and Posterior Stabilization with Circumferential Arthrodesis: The Study of 100 Patients". Orlando, FL, Feb. 16-21, 1995.

Ghanayem, A.J., Leventhal, M., Bohlman, H.H., "Occipital Cervical Pain in Atlanto Axial Ostearthrosis: Long Term Follow-up of Treatment by Arthrodesis".

166. North American Spine Society, "Re-Operation for Lumbar Stenosis: Good Long-Term Results?", Carlson G.D., Phillips F.M., MacNamara T.J. and Bohlman, H.H.

"Adjacent Lumbar Segment Degeneration: Is Surgery Efficacious", Phillips F.M., Carlson G.D., Hughes S.S. and Bohlman H.H.

Iatrogenic Lumbar Spondylolisthesis: "Treatment by Anterior Fibular and Iliac Arthrodesis", Ghanayem A.J., Heller J.G., McAfee P.C. and Bohlman H.H., Washington, D.C., October 18 - 21, 1995.

- 167. The Fifth Congress of Brazilian Pathology of the Vertebral Column, "Lumbar Spinal Stenosis: Experimental and Clinical", "Spinal Kyphosis: Diagnosis and Treatment", Round Table Discussions: Cervical Spine Fractures, Degenerative Pathologies to the Cervical Spine, and Degenerative Pathologies of the Lumbar Spine, Sao Paulo, Brazil, October 31 - November 4, 1995.
- 168. Cervical Spine and Research Society, Palm Beach, FL, December 5-7, 1996, "Complications of Anterior Cervical Corpectomy and Post Laminectomy Patients", Reau K.D., Palumbo M.A., Hilibrand A.S., Carlson G.D. and Bohlman H.H.

: : • 168. "Achieving Solid Arthrodesis Following Anterior Cervical Decompression: Corpectomy vs. Discectomy", Hilibrand A.S., Palumbo M.A., and Bohlman H.H.

"The Success of Anterior Cervical Arthrodesis Adjacent to a Previous Fusion", Hilibrand, A.S., Yoo, J.U., Carlson, G.D., and Bohlman, H.H.

"Higher Instances of Pseudoarthrosis in Poor Outcomes for Three Level Anterior Cervical Discectomy and Fusion", Emery, S.E., Fisher, R.S., and Bohlman, H.H.,

"Radiculopathy Due to Age Adjacent Segment Degeneration Following Anterior Cervical Fusions", Hilibrand, A.S., Carlson, G.D., Palumbo, M.A., and Bohlman, H.H.

169. The Liverpool Spine Course, "Spinal Kyphosis Diagnosis and Surgical Correction"

"Surgical Techniques and the Management of Spondylolyses and Spondylolisthesis"

"Management of Primary Tumors of the Spine", Liverpool, England, Oct 30-Nov 1, 1996,

- 170. Cervical Spine and Research Society, "Complications of Anterior Cervical Corpectomy and Post Laminectomy Patients", Reiw, K.D., Palumbo, M., Hilibrand, A.S., Carlson, G.D., and Bohlman, H.H., Palm Beach, FL, December 5-7, 1996.
- 171. American Academy of Orthopaedic Surgeons Annual Meeting, "At Risk Levels for Adjacent Segment Disease of the Cervical Spine", Hilibrand, A.S., Carlson, G.D., Palumbo, M., and Bohlman, H.H.

"Stenosis of the Thoracic Spinal Canal: Diagnosis and Treatment Concepts", Hilibrand, A.S., Hardy, R., Palumbo, M., and Davis, J.A.

"Diagnosing Basiler Invagination of the Rheumatoid Arthritis Patient: Are Plain Radiographic Criterior Reliable?", Riew, K.D., Palumbo, M., Hilibrand, A.S., and Bohlman, H.H.

"Anterior Cervical Pseudoarthrosis: Natural History and Treatment", Philips, F., Carlson, G.D., Emery, S.E., and Bohlman, H.H.

"Outcome of Anterior Cervical Fusions Adjacent to a Prior Fusions", Hilibrand, A.S., Yoo, J.U., Carlson, G.D., and Bohlman, H.H., San Francisco, CA, February 13-17, 1997.

172. North American Spine Society, "Smoking Impairs the Outcome of Anterior Cervical Interbody Grafting", Hilibrand, A.S., Fye, M., Palumbo, M., Bohlman, H.H.

"Improve the Arthrodesis After Multi-Level Anterior Cervical Decompression Through Strut Grafting", Hilibrand, A.S., Fye, M, Palumbo, M., and Bohlman, H.H.

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172. "The Management and Long-term Results of Patients with Dural Tears from Lumbar Spine Surgery", Wang, J.C., Bohlman, H.H., Riew, D.

"Diagnosing Basilar Invagination in the Rheumatoid Patient: Are Plain Radiographic Criteria Reliable?", Riew, K.D., Hilibrand, A.S., Palumbo, M., Emery, S.E., and Bohlman, H.H.

"Surgery of the Lumbar Spine for Spinal Stenosis in Patients Ages 70 years or More: A Clinical Radiographic Outcome Study in 162 Patients", Fye, M., Ragab, A.A., and Bohlman, H.H.

"Incomplete Decompression: Clinical Radiographic Outcomes", Fye, M., Emery, S.E., and Bohlman, H.H.

173. Cervical Spine and Research Society Annual Meeting, "Early Decompression for Spinal Cord Injury: Time Dependent Factors of Recovery", Carlson, G.D., Minato, Y, Okada, A., Gorden, C.D., Warden, K.E., Bohlman, H.H. and LaManna, J.C.

"Reoperation of the Cervical Spine for Incomplete Decompression: Clinical and Radiographic Outcomes", Fye, M.A., Emery, S.E. and Bohlman, H.H., Rancho Mirage, CA, December 4-6, 1997.

174. North American Spine Society, "Smoking Impairs the Outcome of Anterior Cervical Interbody Grafting", Hilibrand, A.S., Fye, M., Palumbo, M., and Bohlman, H.H.

"Improved Arthrodesis After Multi-Level Anterior Cervical Decompression Through Strut Grafting", Hilibrand, A.S., Fye, M., Palumbo, M., and Bohlman, H.H.

"The Management and Long-Term Results of Patients with Dural Tears from Lumbar Spine Surgery", Wang, J.C., Bohlman, H.H. and Riew, K.D.

"Rheumatoid Basilar Invagination: Are X-ray Criteria Reliable?", Riew, K.D., Hilibrand, A.S., Palumbo, M., Emery, S.E., and Bohlman, H.H.

"Surgery of the Lumbar Spine for Spinal Stenosis in Patients Ages Seventy Years or More: A Clinical and Radiographic Outcome Study in One Hundred and Sixty-Two Patients", Fye, M., Ragab, A.A., and Bohlman, H.H.

"Re-Operation of the Cervical Spine for Incomplete Decompression: Clinical and Radiographic Outcomes", Fye, M., Emery, S.E., Bohlman, H.H. New York, NY, October 22-25, 1997.

Revised: May 15, 2001

Henry H. Bohlman, M.D. Professor, CWRU Director, University Hospitals Spine Institute Reconstructive & Traumatic Spine Surgery

11100 Euclid Avenue Cleveland, Ohio 44106 Telephone: 216-844-1025 Fax: 216-844-1735 Appointments: 216-844-7200

# UNIVERSITY ORTHOPAEDIC ASSOCIATES, INC. Claim History

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS:

# <u>Lucija Stele</u>

3/6/90

3/4/91

A lawsuit was filed on August 20, 1991 in the Cuyahoga County Court of Common Pleas and assigned Case No. 216533. This lawsuit is still pending and is being handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

Closed without payment.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS: Murray Lilley 7/7/88

1/3/89

A lawsuit was filed on April 5, 1990 in the Cuyahoga County Court of Common Please and assigned Case No. 187723. This lawsuit is being handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

Went to trial – unanimous decision in favor of Dr. Bohlman.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS: Eleanor L. Petrie

8/2/90 8/12/91

This claim was closed without payment. It was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS:

<u>Charlotte Magill</u> 1/16/90 7/22/91

This claim was closed without payment and was being handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.



## UNIVERSITY ORTHOPAEDIC ASSOCIATES, INC. Claim History

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS:

## <u>Raymond H. Brandt</u>

7/9/88 7/26/89

This claim was closed without payment in February, 1990 due to the expiration of the Statute of Limitations. This file was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS:

### John M. Emerson

12/6/90 12/11/90

This claim was closed without payment in June, 1991 due to the expiration of the Statute of Limitations. This file was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS:

## David O. Harbert

4/12/84 3/15/85

This claim was closed without payment in December, 1985 due to the expiration of the Statute of Limitations. This file was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS: Joseph Laughlin, M.D.

7/20/82

6/20/83

This claim was closed and settled for \$100,000.00 in August, 1984. This file was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS:

## Robert Gordon Lord

6/8/89

9/12/90

This claim was closed without payment in April, 1991 due to the expiration of the Statute of Limitations. This file was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

## UNIVERSITY ORTHOPAEDIC ASSOCIATES, INC. Claim History

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS: Robert W. Reinhard 12/14/82 12/13/83 This claim was closed and settled for \$2,500.00 in July, 1984. This file was handled by the law firm of Jacobson, Maynard, Tuschman & Kalur.

CLAIMANT: OCCURRENCE DATE: REPORTED DATE: STATUS: Ellen Levy 4/10/98 4/17/00 Voluntarily dismissed January 2, 2001. UNIVERSITY ORTHOPAEDIC ASSOCIATES, INC.

## SCHECHTER, DDS, BENJAMIN

## DOB: 12/3/1947

## DATE OF VISIT: 09/27/00

## LOCATION: BHC



Dr. Schechter is a dentist who saw Dr. Emery in 1995 for his cervical spine problems and he worked part-time in a dental practice, but now is a consultant to Medicaid and our HMO healthcare programs and is actually doing a study out in California that he received a grant for. In any case, four years ago he was involved in an auto accident and developed symptoms of numbness and leg pain on the right side with weakness. He fell a couple of times and wound up seeing Dr. Ben Columbi when he first came to University Hospitals and at that time underwent a partial laminectomy. The pain decreased in his leg, but the numbness remained. He has continued to have numbness which has increased and now over the past couple of years has developed pain in the calf as well as the numbness and is having difficulty walking distances. He tries to walk 45 minutes a day but begins limping and his foot starts slapping. He saw Dr. Columbi in follow-up, but was then dismissed. Dr. Richard Stein is his rheumatologist who checked him out and did not think he had any weakness. Standing increases his pain. He has had no other particular injuries. He was actually referred by Mr. Belecek, one of our patients who used to do billing for his office.

**Physical examination** reveals that the patient is no major distress. He can walk on his heels and his toes without difficulty. He bends over with somewhat limited flexion with a thoracolumbar scoliosis. He flexes mostly at his hips. He probably has 40° of flexion. Lateral bend and extension are 20° without major pain. He has no positive straight leg raising. No atrophy to measurement.

Neurologically I can not pick up any other weakness. There is no sensory loss to pin prick. Deep tendon reflexes are 2+ and equal without pathologic reflexes.

X-rays show what appears to be idiopathic thoracolumbar scoliosis and appearance of congenital stenosis with a laminotomy at L5-S1. It appears as though he has a little laminotomy at L5-S1 with huge hypertrophic facets.

Impression: Residual lumbar spinal stenosis L5-S1 with continued L5 radiculopathy.

**Disposition:** I think he probably has continued root stenosis and I would obtain a lumbar gadolinium enhanced MRI at Magnatech. I suspect he will need an additional decompression. Henry H. Bohlman, M.D./jab

cc: Richard Stein, M.D.

Henry H. Bohlinan 1410

### DATE: 10/20/00

### MISC.: MRI REVIEW

I reviewed Dr. Schechter's MRI carried out on October 20, 2000 and he has marked spinal stenosis at L4-5 and L5-S1 with huge hypertrophic facets, especially at the neural foramen. In addition, he has what appeared to be some hard disc protrusions at T10-11 possibly and T11-12. I think he most likely needs un adequate decompression of the lower lumbar, but I would obtain a myelogram and a CAT scan ahead of time and run the dye up to include the lower thoracic area. Henry H. Bohlman, M.D./jab

PATIENTS NAME Benjamin Schechter St. CASE NO .\_\_ DATE 52YO CASE NO SUBSEQUENT VISITS AND FINDINGS WT: 191 bilbs & Shues PCP: RIS CC: RE-UP Spined Spinel Boblman N.D. SAMA -12/14/ (D Muds LIKPA bloven/18th 25 DD HOMG OND Varialio ਹਿਓਂ 100mg BID elep ead + pain + weakness in while or Diavan toke if he fuls bett worke Vit C Ē PATIENT'S NAME FAR'S  $\overline{\mathcal{P}}$ Svel

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### SCHECHTER, DDS, BENJAMIN

### DOB: 12/3/1947

## DATE: 12/19/00

### MISC.: DISCHARGE SUMMARY

Dr. Schechter was admitted to University Hospital on December 14, 2000 with a diagnosis of lumbar spinal stenosis L4-5 and L5-S1 having had a remote laminectomy at L5-S1 in 1998 with persistent L5 radiculopathy. In addition, it was noted on his lumbar MRI at the upper levels that he had the appearance of thoracic spinal stenosis also. Indeed on his pre-operative myelogram and CAT scan which I did not see until the morning of his surgery because it could not be brought up to the office. He indeed has severe thoracic stenosis at T10-11 and T11-12 with severe compression of the spinal cord. Because of when I saw the studies we could not on the spot arrange for intraoperative spinal cord monitoring unfortunately. In any case he was taken to the operating room on the day of admission for a lumbar laminectomy of L4-5 to S1 was carried out with bilateral foraminotomies and then we carried out a very meticulous laminectomy of T10-11-12 decompressing the spinal cord at those levels. Although we were extremely cautious not to manipulate the thoracic cord in any way postoperatively the patient awakened with significant motor deficit in both legs, left greater than the right. In addition he had some left-sided sensory deficit and a patchy fashion to pin prick in the left lower extremity but no specific sensory level. Over a period of hours the patient improved significantly and by afternoon he was significantly better in the right leg and had fairly normal sensation. When I saw him again on December 15. 2000 prior to by going out of town he had significant improvement on the right side with almost normal hip and leg function. On the left he was still profoundly weak with a trace to 2 function and most muscle groups with the exception of the quadriceps, which was about 3/5. Because of this complication I had a long discussion with he and his wife postoperatively. His wife immediately postoperatively when we noted this in the recovery room and told her that I thought his prognosis for recovery was quite good based on my experience with spinal cord injuries over the years and previous vascular thoracic cord insults, mainly because he was so incomplete and had almost normal function on the right-side I thought his recovery would be quite good, although I could not put a time element on it. I later explained the same thing to the patient and once again to Mrs. Schechter and I think they understood. Because of his deficit and difficulty with ambulation he was transferred to Euclid Rehabilitation on December 19th. At that time according to Pam Miller, R.N., he was walking short distances in a walker with a left-sided AFO. He was asked to return to the office in six weeks from the surgery for a follow-up in the office and at that time we will obtain an AP and lateral x-ray from T10-L5. Henry H. Bohlman, M.D./jab

cc: Richard Stein, M.D., 5850 Landerbrook, #100, Mayfield Hts., OH 44124

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#### SCHECHTER, DDS, BENJAMIN

### DOB: 12/3/1947

## DATE: 12/23/00

### **MISC.: REHAB VISIT**

I made a house-call visit to Dr. Schechter on December 23, 2000 at the Euclid Rehabilitation Unit and he seemed to be in good spirits and his neurologic function revealed completely normal motor strength on the right side from the hip distally, on the left side he has still a trace of hip flexion, but hip abduction and adduction are normal, quadriceps and hamstring function are normal and distally his dorsi-flexion is trace on the left and plantar flexion is 4-5/5. So all and all I think he has had very significant improvement over a ten day period and I think he will continue to improve. I think as soon as he is able to take stairs he will be discharged home, which hopefully will be in the next few days.. Henry H. Bohlman, M.D./jab

### DATE: 01/04/01

### **MISC.:** PHONE

Dr. Schechter called on January 4, 2001 and really has been doing extremely well. He has gone to physical therapy, was actually there today when I tried to call earlier. He is actually now walking with two canes. He really does not have any incontinence of bowel or bladder. He only had that one episode, which sounds like some leaking around the fecal inpaction which now is all straightened out. He is significantly better with his balance. He is going out to shopping centers and is using an electric chair and then getting up and walking around and really pushing his stamina. I told him that was great. He is going to see me in the office on January 24<sup>th</sup> for his six week follow-up and we will take a look then. We will obtain an **AP and lateral of the lower thoracic and lumbar spine with a long cassette.** Henry H. Bohlman, M.D./jab

cc: Richard Stein, M.D., 5850 Landerbrook, #100, Mayfield Hts., OH 44124

### **DATE OF VISIT: 01/24/01**

### LOCATION: BHC

Dr. Schechter comes back doing much better. He has had some shoulder pain and right knee pain, but had gone to two canes and then back to walker because of his joint problems.

Repeat neurologic examination reveals completely normal motor strength now, which is a pleasant surprise and I told him he did not need his left-sided orthosis anymore. He has a slight decreased sensation to pin prick in patchy areas in both legs but otherwise he is fine. Deep tendon reflexes are 2+ and equal.

X-rays show the laminectomy sites in the thoracic and lumbar spine and everything looks fine. I asked him to continue with his physical therapy and muscle strengthening and return in two months for a check. He will not need x-rays at that time. Henry H. Bohlman, M.D./jab

cc: Richard Stein, M.D., 5850 Landerbrook, #100, Mayfield Hts., OH 44124

Henry H. Bohliman HD

# SCHECHTER, DDS, BENJAMIN

### DOB: 12/3/1947

## **DATE OF VISIT: 04/04/01**

## LOCATION: BHC

Dr. Schechter comes back doing reasonably well. He is still using two canes to walk and I am not sure why. His wife is anxious about the fact that she says he can not put on his own shoes and can not get in and out of a car and flex his hips, can not walk distances, etc, etc...

However on repeat neurologic examination as before he has 5/5 motor strength and I really do not see any reason why he can not do it. In reality I got him to lie down on his back and he could straight leg raise against gravity which indicates very significant and strong hip flexion. In addition when we were all through and I asked him to return in three months he was able to put on his shoes and socks for us, so I am not sure what the problem is, but I think he maybe has some functional weakness when he tries to walk distances, but on testing he is 5/5. Sensation is fairly intact to pin prick. I reinforced the fact that he is only three months from his surgery and he is significantly recovered. I think he will keep improving from a functional standpoint.

He asked about disability and I told him I would be happy to support him in that endeavor until he gets back to normal functioning. He is back to work part-time. Henry H. Bohlman, M.D./jab

cc: Richard Stein, M.D., 5850 Landerbrook, #100, Mayfield Hts., OH 44124

## **DATE OF VISIT: 07/11/01**

## LOCATION: BHC

Dr. Schechter comes back for long-term follow-up. He still has similar complaints of not being able to raise his legs up from the sitting position to get into a car and dress himself, etc., but he is on a tremendous exercise program. He is doing work-outs in the swimming pool, physical therapy and lower extremity exercises. He is back to work about 3 hours a day 3 times a week and the rest of time he is exercising.

Repeat neurologic examination once again he has 5/5 motor strength in all groups of lower extremities. His reflexes are somewhat brisk and he has sustained clonus bilaterally and negative Babinski's. I suggested that he continue his regime. I think he is going to continue to improve from a functional standpoint. I would like to see him in six months for a check and at that time we will obtain AP and lateral of the lumbar spine to include the lower thoracic. Henry H. Bohlman, M.D./jab

cc: Richard Stein, M.D., 5850 Landerbrook, #100, Mayfield Hts., OH 44124

**G** .

#### DATE: 12/03/01

## MISC.: CANCEL APPT

Patient called this morning and spoke with Lynette Bennett, RN - apparently patient is canceling upcoming follow-up appointment with Dr. Bohlman. Scheduling notified on December 3, 2001. /jab
#### REFERRING PHYSICIAN:

HENRY BOHLMAN, M. D. UNIVERSITY HOSPITALS OF CLEVELAND BOLWELL-5<sup>TH</sup> FLOOR 11100 EUCLID AVE. CLEVELAND, OH 44106 MAGNATECH IMAGING CENTER NO: 03-61-34 NAME: SCHECHTER, BENJAMIN DDS. AGE: 52



DATE: 10-20-2000 EXAM: MRI OF THE LUMBAR SPINE WITHOUT AND WITH CONTRAST

#### MAGNATECH IMAGING CENTER \* 216-642-9444 \* 1-800-414-7700 4400 ROCKSIDE RD. INDEPENDENCE, OH 44131

#### CLINICAL: RECURRENT STENOSIS.

# TECHNIQUE: LONG TR AND SHORT TR AND POST CONTRAST IMAGES WERE OBTAINED THROUGH THE LUMBAR SPINE.

#### MRI OF THE LUMBAR SPINE:

At T10-T11, there is focal disc herniation measuring approximately 5.5 to 6mm causing mass effect on the spinal cord. Centrally it is extruding approximately 7mm below the disc space level and approximately 3 to 4mm above the disc space level.

At T11-T12, there is focal disc herniation seen to the left of midline measuring approximately 4.5 to 5mm causing mass effect on the central and left aspect of the spinal cord. This is extruding approximately 3mm above and below the disc space level.

At T12-L1, there is focal disc herniation seen to the left of midline measuring approximately 6mm causing mild flattening of the left aspect of the spinal cord. This is extruded approximately 3mm below the disc space level. At L2-L3, there is mild canal stenosis predominantly secondary to bilateral posterior facet and ligamentum hypertrophy.

At L3-L4, there is moderate canal stenosis secondary to a combination of bilateral posterior facet and ligamentous hypertrophy as well as a mild 2mm bulging disc with accompanying osteophyte formation. At L3-L4, there is loss of disc space height and signal intensity consistent with disc desiccation. There is broad-based disc herniation seen asymmetric to the right measuring approximately 5.5 to 6mm. This is contributing to mass effect on the thecal sac and contributing to moderate canal stenosis. There is also bilateral moderate foraminal stenosis. At L5-S1, there is broad-based disc herniation to the right laterally with accompanying osteophyte formation contributing to severe right-sided foraminal stenosis. There is mild mass effect on the anterior aspect of the thecal sac and there is moderate to severe foraminal stenosis on the left.

#### IMPRESSION:

- 1. Diffuse degenerative disc disease as described in detail above. At T10-T11, T11-T12 and T12-L1 there are focal disc herniations as described above causing flattening of the spinal cord. There is canal stenosis seen within the lower lumbar spine as described above. At L4-L5, there is broad-based disc herniation to the right contributing to foraminal stenosis as well as canal stenosis.
- 2. At L5-S1, there is broad-based disc herniation to the right laterally contributing to severe foraminal stenosis on the right. There is also left sided foraminal stenosis at L5-S1.

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# University Orthopaedic Associates, Inc.

Department of Orthopaedic Surgery Case Western Reserve University

Henry H. Bohlman, M.D. Professor, CWRU Director, University Hospitals Spine Institute Reconstructive & Traumatic Spine Surgery

11100 Euclid Avenue Cleveland, Ohio 44106 Telephone: 216-844-1025 Fax: 216-844-1735 Appointments: 216-844-7200

November 6, 2000

Benjamin Schechter, DDS 4010 Hemlock Drive Orange Village, OH 44122

Dear Dr. Schechter:

I reviewed your MRI that was carried out on October 20, 2000 and you do have fairly severe lumbar spinal stenosis and narrowing of the spinal canal at L4-5 and L5-S1, especially where the nerve roots exit the spinal canal. If your legs bother you enough, I would recommend a lumbar decompression, I do not think you would need any fusion, but you would need a complete laminectomy and foraminotomies and I think this would relieve your legs quite nicely. In addition, there is some small, what appear to be hard disc protrusions in the lower thoracic area and I would want to evaluate that preoperatively if you came in with a myelogram and a CAT scan. It has been brought to my attention that you have scheduled in on a cancellation slot for December 14, 2000.

Very sincerely,

Henry H. Bohlinan Hin

Henry H. Bohlman, M.D.

HHB/ab



University Hospitals of Cleveland • Rainbow Babies & Children's Hospital Southwest General Health Center • Geauga Regional Hospital Cleveland Veterans Administration Medical Center

Schechter, Benjamin

#### **UniversityHospitals**

of Cleveland

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HealthSystem
DEPARTMENT OF RADIOLOGY
University Hospitals

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Sex: M DOB: 12/03/1947 Bohlman, Henry H, MD LAKESIDE PAVILION 40 Pat. type: O

Bohlman, Henry H, MD 11/28/2000 1:19 PM CT L-SPINE S/P WITC MYELOGRAM Acc. #4548721 History: TW PLAINTIFF'S EXHIBIT

4548719 11/28/200012:20 PM LUMBAR MYELOGRAM.

LUMBAR MYELOGRAM & POST-MYELOGRAM CT:

CLINICAL DATA: Rule out stenosis.

TECHNIQUE: The risks, benefits and alternatives of fluoroscopic-guided lumbar puncture were discussed with the patient. Informed written consent was obtained by Dr. Blackham. A lumbar puncture was performed at the L2-3 level. Contrast was infused under direct fluoroscopic guidance. No immediate complications occurred and the patient tolerated the procedure well. The procedure was supervised by Dr. Bangert.

FINDING:

5-2 (7)

Alignment is normal. Anterior epidural impresses, are seen at levels T10-11, T11-12, L1-2, L2-3 and L4-5. A lack of nerve root sleeve filling is seen on the right of the L5 nerve.

Specifically, concentric stenosis is seen at Tll-12.

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Serial axial CT images were obtained from mid-Tl thru mid-Sl with a slice thickness of 2mm.

At level T10-11, central broadbased disc herniation is seen which flattens the cord. The bilateral neural foramina are patent.

At level T11-12, central diffuse disc bulge is seen, with central calcification of the herniated disc. Additionally, ligamentum flavum hypertrophy is seen. This results in deformity of the cord.

At the T12-L1 level, asymmetric disc herniation is seen, on the left. This results in focal effacement of the subarachnoid space, without cord deformity.

At the L1-2 level, diffuse disc bulge is seen which slightly flattens the subarachnoid space. However, no cord deformity is seen and the bilateral neural foramina are patent.

At the L3-4 level, bilateral facet hypertrophy is seen. Asymmetric

Schechter, Benjamin

UniversityHospitals HealthSystem



University Hospitals of Cleveland

01976405

Sex: M DOB: 12/03/1947 Bohlman, Henry H, MD LAKESIDE PAVILION 40 Pat. type: O

Bohlman, Henry H, MD 11/28/2000 1:19 PM CT L-SPINE S/P WITC MYELOGRAM Acc. #4548721 History:

lateral disc bulge is seen, on the left. This results in narrowing of the left neural foramen.

At the L4-5 level, a right lateral laminotomy defect is seen. Bilateral facet hypertrophy is seen, as well as bilateral neural foraminal stenosis.

At the L5-S1 level, postsurgical changes are also seen without significant foraminal narrowing.

Congenitally short pedicles are seen bilaterally from the L3-4 level to the L5-S1 level.

IMPRESSION:

1. Multilevel thoracic disc herniations, as described above.

2. Multilevel lumbar spondylosis as described above.

3. Postoperative changes, as described above.

Kristine Md Blackham

<del>15-</del>2 (7,

Electronically signed by: Robert W Tarr, MD

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Transcribed on: 11/29/2000 7:57 PM by Elma Flemister Finalized on: 11/30/200012:39 PM by Robert W Tarr, MD ć, i

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## University Orthopaedic Associates, Inc.

Department of Orthopaedic Surgery Case Western Reserve University

Henry H. Bohlman, M.D. Professor, CWRU Director, University Hospitals Spine Institute Reconstructive & Traumatic Spine Surgery 11100 Euclid Avenue Cleveland, Ohio 44106 Telephone: 216-844-1025 Fax: 216-844-1735 Appointments: 216-844-7200

November 8, 2000

TO:	Richard Stein, M.D.
	FAX: 440 646-2209

FROM: Julie Bunkelman for Henry H. Bohlman, M.D.

**RE:** Medical Clearance and Routine Lab Work

PATIENT: Ben Schechter, DDS DOB: 12/3/47

SURGERY: Lumbar laminectomy & foraminotomies L4-5, L5-S1

DX Code: 724.02

SX DATE: 12/14/00

To Whom it May Concern:

Dr. Bohlman is requesting medical clearance along with the following routine labs for the above noted patient. We appreciate your help with this matter. If you could please fax the results to the **Attention of Lynette Bennett,** R.N. (Dr. Bohlman's Nurse Clinician) at **216 844-1735**. If you have any questions please do not hesitate to contact me at 216 844-1050 or Lynette at 844-1614.

Once again thank you for your assistance with this patient's care.

Routine Lab Work to include:

UA

CBC

Chest X-ray

PT/PTT

Chem 7

EKG



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# University Orthopaedic Associates, Inc.

Department of Orthopaedic Surgery Case Western Reserve University

Henry H. Bohlman, M.D. Professor, CWRU Director, University Hospitals Spine Institute Reconstructive & Traumatic Spine Surgery

11100 Euclid Avenue Cleveland, Ohio 44106 Telephone: 216-844-1025 Fax: 216-844-1735 Appointments: 216-844-7200

November 8, 2000

Benjamin Schechter, DDS 4010 Hemlock Drive Orange Village, OH 44122

#### RE: CT/Myelogram & Surgery Information

Dear Dr. Schechter:

The following arrangements have been made for your upcoming hospital admission and surgery.

## Please note that you may receive a phone call from University Hospital's Admitting Department regarding Pre-Admission Testing if they deem it necessary.

Lumbar myelogram:	Tuesday, November 28, 2000	Time: 10:30 am
Report to:	Admitting Office/Humphrey Bldg/1st Floo	or (see map)
CT Scan:	Tuesday, November 28, 2000	Time: 12:00 pm
	Follows myelogram	· · · · · · · · · · · · · · · · · · ·

Surgery Date: Arrive at Hospital: Report to: Length of Stay: Thursday, December 14, 2000 Time: 7:00 am One hour before scheduled surgery time Information Desk - Mather Pavilion (see enclosed map) 2 days (estimated)

We have enclosed the following IMPORTANT INFORMATION & INSTRUCTIONS -PLEASE READ IT VERY CAREFULLY:

- 1. Pre-operative instructions
- 2. Map of University Hospitals
- 3. Myelogram Pamphlet



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University Hospitals of Cleveland • Rainbow Babies & Children's Hospital Southwest General Health Center • Geauga Regional Hospital Cleveland Veterans Administration Medical Center Benjamin Schechter November 8, 2000 Page 2

IMPORTANT: All patients are seen six weeks after surgery. Please call patient scheduling NOW at (216) 844-7200 to arrange this follow-up appointment. Please do this prior to coming in for your surgery to assure getting an appointment.

Lynette Bennett, R.N. is the Orthopaedic Nurse who will be following your progress while you are hospitalized. She will contact you prior to your surgery with further instructions. However, if you have any medical related questions or concerns feel free to contact her at (216) 844-1614.

Please call me if you need clarification of this information or if you have any questions at (216) 844-1050.

Very sincerely,

Enc.

Julie Bunkelman Secretary to Henry H. Bohlman, M.D.

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	Preprocedural Admission Histor		at the first of th			913	976405 11/07/00 12/03/1947
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	Procedure Date: 12-114	<u>///</u> Si	irgeon: Bohlma		<u>&gt;, -&gt;</u>	4:	25:21 PAT
	Procedure: Umbar la	m	nectoring + for am	1)14	stomits		معر اور المعرفين الم
:	GENERAL	-	BPH, prostate cancer	-	- CVA/TIA		Duration:
	Je: 6 J Age>59? Yes	-	Diurelics		MS/myasthenia gravis/paralysis		other
]	Male Female		Urinary tract infection		olher		ANESTHESIA DIFFICULTIES
Ì	Patient Request APEC		Kidney stones		PSYCHIATRIC		Difficult intubation
	Surgeon Request APEC		Other		Depression/Anxiety		Personal/Family History
├	Ht. cm Wt. kg 183		HEPATIC		Bipolar disorder		Malignant Hyperthermia
	Hospitalized/Rehab in past 6 mo's? Seen a physician in past 6 months?	-	Recent hepatitis		other		<u>Severe</u> Nausea/Vomiting
	Cardiologist/Internist/Primary MD		Hx hepatitis or jaundice		HEENT		Other migrane plast sur-
ļ	Name Phone # ( )		- Cholelithiasis		Dentures/Partials ↑↓		ISOCIAL +
-	Lichland lasts K EKG Stern	1	Cirrhosis/ascites?	操	TMJ OKANA	-	ETOH DUnday Iweek
ĺ	stress test., echo., cath (1 yr)	妅	other:		Hearing deficit	-	Smoking: pk yrs.
	new symptoms since visit?.	-	Endocrine/Metabolic		Sight-deficit of asse		Quit:
1		1	-Diabetes		- Glaucoma		Cocaine/Marijuana
	CARDIOVASCULAR	1-	Hypo/Hyper thyroid	+-	Speech/anguage problem		Other
-	Congenital Heart Disease	+	other		other	-	PSYCHO/SOCIAL
	Ml/angina/anginal equivalent		GASTROINTESTINAL		MUSCULOSKELETAL		Occupation devitis Acorian, e
 	Allygical chaot pain		GE Reflux/Hiatal Hemia	hill	Rheumatoid/Oster Arthritis	-	Support person/system
	Hypertension, usual BP/		Peplic ulcer disease	-111	C. T. L. S. Spine problems		Housing liner Ecorfe.
7	Arrhythmias		Diamhea/constipation		Muscular Dystrophies (P) ( OU		Use of home health agency A Afan
	CHF		Pancreatitis		other CUMMPIN	4	Name
سیسر میرا	PVD/claudication	+	Initable bowel		SKIN Withes		Location
	Valvular disease or murmur		other GERD in Plast		Rashes / Lesions	<u></u>	Ability to manage at home after d/c
	Cardiac surgery, angioplasty		NUTRITIONAL		Eczema, Psoriasis		other
2	cemaker/ICD		Restrictions DW Rat		other		
	1x of abril EKG	<b>R</b> (TH	Unintentional wt loss/gain_3046		FUNCTIONAL CAPACITY		
n b	Family Hx CAD further		Obese/morbid obesity	<b>۲</b>	Lifestyle: Active/Sedentary		ADVANCED DIRECTIVES
	High Cholesterol		Diet medications		Poor/Mod/Excellent Swims		Living will
鼲	PND, orthopnea, DOE		other		Impaired Mobility Walks	1	Durable power of att'y for healthcare
	other		REPRODUCTIVE		Walking aids:		
	PULMONARY		Breast disease		Assistance with Care		Surgical Classification 1 2 3
1	Recent pneumonia (2 months)		LNMP:		History of Falls/at Risk		Estimated ASA Class: 1/2 3 4
[	Recent cold/URI, fever, chills (2 wks)		Pregnant/possibly pregnant?		other		RECOMMENDATIONS
1	Chronic cough: 7 Sputum		other		MALIGNANCY	$\nabla$	1. APEC Appointment
	Asthma: at baseline?		HEMATOLOGIC		Туре:	¥	PV v request
-	COPD/Emphysema Home O <sub>2</sub> ?		Sickle Cell Disease/Trait		Location	<u></u>	Procedure class 3 or 4
	Cystic fibrosis		Anemia		Chemo past 3 months	L.	CARE FO_
	Sleep apnea	-	Bruising or bleeding disorder		Radiation past 3 months	P	ASA 3 or 4
	Home vent, CPAP, BiPAP		DVT/Superficial phlebitis		pther		2. Patient Education
- and	Pulmonary embolism	1	Transfusion past 3 months		INFECTIOUS		NPO guidelines reviewed
			Anticoagulants	iÌ.	HIV/AIDS		Medication instructions reviewed
	Other		other				Other
	RENAL Chronic renal failure				PAIN/DISCOMFORT	<u> </u>	3, Labs/Studies: See Att/d Copy
-					······································		4. Other
- 1					ocation: <u>NUMbress</u> Describe:	<u> </u>	
-	ncontinence, diff voiding		Seizures:well controlled?	!			

Interviewer Comments:

Informant:\_\_\_ Key: Yes = No

\_(Reliable\_\_\_\_)

Interviewer: Poleme P

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University nuspitals of dievolution

#### Surgical Service Physical Examination

Findings below are within the normal limits. If an assessment item is not performed, it is crossed out, marked N/A and initialed. If an assessment is found abnormal, the statement is crossed out, initialed and appropriate finding noted.

SCHECHTER, BENJAMIN 01976405 11/27/00 M 12/03/1947 11:45:29 PAT -

	Temp.	P	ulse	Respir	ation		Blood Pressure	
	Gener	al: Age <u>52</u>		ЦС		······································	ent is in no apparen	
~		Skin: No rashes,	. no ecchymosis,	no lesions,	, no eryth	ema, no cyan	iosis, no jaundice, n	o bruises
~~~							······	
	Head I	& Neck: Pharynx:	No inflammation,	no masses,	no edema	a, no exudate.	Teeth: No apparen	t decay or disrepa
_						nganananan ang sa	د د منصب مورد و دیکشت و د	
		Trachea: Midline	Nodes: Nonpalpa	ble ROM: S	upple exte	nsion, flexion	and lateral bending	without discomfo
L				· D:I_4-	le bla moti			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
/	ř	Thyroid: Midline, s	mooth Carotid B	runs, bhate	al. Negau	YC		
/	Ever	Sciera: No redness	s iaundice or dis	scharge EC	DM's: Fiel	ds intact PEI	RRL: Intact bilaterall	У
/	Lyes.		, , , , , , , , , , , , , , , , , , , ,					·····
L	Thora	<b>&amp; Lungs:</b> Expar	ision: Equal bilat	erally Aus	cultation:	Clear anteric	or and posterior to a	ll five lobes
							. <u></u>	
	Heart:	Rhythm: Regular	Murmur: Neg	ative Ext	tra Sound	s: Negative		
	Abdon	nen: Organomega	ly: Negative N	Aasses: Neg	gative	lenderness: /	Vegative Distention	1: Negative
	<u> </u>	Bowel Sound	s: Normal Abdo	minal Bruit	s (Epigas	tric, Renal, Ili	ac, Femoral): Negati	ive
/								
	Genita	lia, Pelvic, Recta	I: Deferred					
		*****		Negative	ROM: No	rmal for age	Edema: Negative	
4								
1	Neurol	ogical: Alert: Po:	sitive Oriented	: To person	, place <b>, ti</b> i	me and situat	tion CN II - XII: Gro	ossly intact
							OKa	rbey
	Special S	ystem Exam: Pulse:	s R B C	FPC		eflexes:	Babro	'S44 OL
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#### UNIVERSITY HOSPITALS OF CLEVELAND CONSENT FORM

#### Authorization for Treatment

che chter, Ben + 976405

I [patient/patient's legal representative] agree to permit authorized personnel of University Hospitals of Cleveland [the Hospital] to perform such diagnostic and therapeutic procedures that my treating physician(s) deem necessary for care. By signing below I agree to permit x-rays, laboratory tests, routine medical treatment (for example, medications, injections, drawing blood for tests), emergency procedures as necessary and hospital services performed at the request of physicians assisting in my care. I understand that, except in an emergency, any further treatment or procedures will be performed only after I have been informed of the benefits, material risks and complications associated with such treatment or procedures and I have given my consent. I further understand that the Hospital is a teaching institution and that physicians, nurses and other healthcare personnel in training may assist, be present and participate in providing my care and that my medical records may be used for educational purposes.

I recognize and understand that the physicians, including, but not limited to emergency department physicians, who provide services at the Hospital, with the exception of residents, are independent practitioners and not employees or agents of the Hospital. The Hospital is not responsible for the acts or omissions of physicians who are not directly controlled by the Hospital.

#### Authorization to Release Information

The undersigned hereby permits University Hospitals Health System, the Hospital, its affiliated health care providers, and/or their authorized personnel to access and/or release all or any part of the patient information (including information regarding substance abuse, HIV testing, AIDS and psychiatric treatment) to, including but not limited to, the appropriate health care insurer(s), third party payor(s), and/or the Hospital's agent(s), attorney(s) and/or consultant(s) for purposes including collecting payment for services, improving patient care, performance improvement initiatives, discharge planning, risk management and/or as required by law.

#### Assignment of Benefits

nt of Benefits In consideration of the Hospital's and/or physician(s)' services received or to be received for medical/surgical services, I assign to the Hospital and/or my physician(s) all benefits herein specified, not to exceed the above hospital/physician(s) charges. I direct such insurer(s) to pay such benefits directly to the Hospital and/or my physician(s). I hereby agree to pay any and all hospital and/or physician(s) fees that exceed or that are not covered by my insurance coverage and waive any and all notices and demands in the event of non-payment therefor.

#### Medicare/Champus Payment

I certify that the information I gave if applying for payment under Title XVIII of the Social Security Act (Medicare) is correct. I authorize any holder of medical or other information about me to release to the Social Security Administration or its intermediaries or carriers any information needed for this or a related Medicare claim (including Champus/Champus claims). I request that payment of authorized benefits be made on my behalf. I assign the benefits payable for physician services to the physician or organization furnishing the services or authorize such physician or organization to submit a claim to Medicare for payment to me.

#### I acknowledge that if I am a Medicare and/or Champus Beneficiary, I have 1. been provided with a copy of the notice from Medicare and/or Champus regarding my rights as a Medicare and/or Champus patient and that the form has not been altered.

PLEASE CHECK THE APPROPRIATE BOX:

- I agree to release my Social Security number to the manufacturer of any 2. Medical device that I may receive, in accordance with both federal law And regulations. I further understand that my Social Security number May be used by the manufacturer to help locate me if there is a need to Contact me regarding my use of a medical device. I release the Hospital from any liability that might result from the disclosure of this information.
- I hereby agree to be liable for and pay the Hospital the difference between 3. the established hospital rate for the private room accommodations, all telephone charges and the payment rate provided for in my benefits contract.

# N/A Yes

#### Record Retention Policy

The Hospital retains patient medical records for 22 years following the last patient visit and they may be confidentially destroyed after that time.

#### Computer Data

1 understand that my medical records will be accessible to authorized Hospital personnel through computers and that the Hospital will comply with certain safeguards established by federal state and local law as well as Hospital policy.

#### Certification

L certify that to the best of my knowledge and belief the information provided is complete and correct.

#### Patient Personal Property

I understand that the Hospital is not responsible for loss or damage to money and valuables, unless these are placed in the hospital safe.

I AM THE PATIENT OR AUTHORIZED TO SIGN THIS DOCUMENT. I HAVE READ ALL THE ABOVE AND UNDERSTAND ITS TERMS.

Patient Name	
Km/10	
Signature of Patient or	
Legal Representative	

Witness

1976405 Hospital No.



 $\frac{1/-28-00}{\text{Date}}$ 

<u>11-28-00</u> Date

	<b>PRAD</b> 11/14/0			3	ប	ннς	5 PATIE	T CARE AND OPERATIONS SUPPORT - HSP (QCG\$\$P) PAGE	<b>1</b> 2001
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	Х	Х	Х	Х	Х	Х	х	SERV: ADLT RAOR	
1	X		х	XXXX	XX		x	MD: BOHLMAN, HENRY ADM: 11/28	/00
	PRE-(	OP	ASS.	ESSMEN	r R	EPC	)RT		

#### UNIVERSITY HOSPITAL OF CLEVELAND PRE-OP ASSESSMENT

ADMIT DIAGNOSIS: SPINAL STENOSIS-LUMBAR 724.02

ADMISSION PROFILE

02/26	18:54	MEDICAL HISTORY: HYPERTENSION	KBAI
02/26	18:54	MEDICAL HISTORY ESOPH REFLUX , DISC HERNIATION,	
		HYPERCHOLESTEROLEMIA	KBAI
02/26	18:54	ALLERGY: NKDA	KBAI
		MEDICAL HISTORY: ARTHRITIS	KBAI
02/27		MEDICAL HISTORY: ARRHYTHMIA	KBAI
11/14		SURGICAL HISTORY: 1998 LUMBAR LAMI	PSAO
11/14		SURGICAL HISTORY: 1999 HEMORRHOIDS	PSAO
11/14	13:20	SURGICAL HISTORY: 1980'S HYDROCELE	PSAO
11/14	13:20	ALLERGY: NUTRASWEET , REACTION: HEADACHE	PSAO

ADMISSION SCREENINGS

11/14 13:20 ADVANCE DIRECTIVE : THE PATIENT OR A SURROGATE HAS BEEN ASKED IF HE/SHE HAS EXECUTED AN ADVANCE DIRECTIVE (LIVING WILL OR DURABLE POWER OF ATTORNEY FOR HEALTH CARE). PATIENT HAS NO LIVING WILL OR DUR. POWER OF ATTY. PSAO

INFORMATION CHARTED BY: BAKER, KATHRYN KBAI SHAUGHNESSY, PATRICIA L RN PSAO

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CONTINUED

SCHECHTER, BENJAMIN

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PRE-OP ASSESSMENT REPORT



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PLANNED SUR	GICAL PROCEDURE	-4-5	-Si Lon ba	f	***	in a fie	AV
PAST MEDICAL	🗋 Diabetes	ursing Admission History	y /Preop Evaluation Fo Seizures Sickle Cell	rm 🛛 None 🗆 Thyroid Dise 🗇 Vascular Dis	ase	1770/8	~ / • <
Asthma     Blood Clots	Diatysis Gtffingh BGI Disease	🗆 Kidney Disease	🗋 Stroke	Other			
	Hallucinations Heart Disease	Liver Disease     Respiratory Disease	Transplant	<u></u>	<u>`</u>		
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## PREPARATION FOR SURGERY CHECKLIST

	YES	NO	COMMENTS		YES	NO	COMMENTS
IO BAND				GEN AUTH FORM	<i>i</i> ⁄⁄		
ALLERGY BAND		/		ADV DIRECTIVES ADDRESSED			Common da
HEP COMPLETED	V			Equipment sent to OR			
CONSENT FORM	K	$\geq$		SKIN PREP		~	
NPO SINCE: 12/13.	* 2204	TIME	LAST VOID:	PERSONAL BELONGINGS			glasses

LAB RESULTS	-YES -	NO	Not. Ordered	COMMENTS	LAB RESULTS	YES	NO	· Not Ordered	COMMENT
СВС				нст:	EKG				
ELECTROLYTES /13				K: 33	X-RAY	,			
PT#TT				11.4/31	TYPE/SCREEN 1/2 Y				AT
UA-	$\overline{}$		<del></del>	JNR1,10	TYPECROSS				
OTHER			-		#OFUNITS.				· · · · · · · ·

ADDITIONAL DOCUMENTATION 1 pain lun ď plart 20 500

Preop/Recovery Room Routines Reviewed: DIYES Comments:

<u>3</u>Y

URSING NO

S 🗆 NO

Swan-Ganz Line Insertion Performed: DYES (If YES, See Back of Form) DNO

Time to OR: <u>6730</u> Pre-op Nurse: <u>Joy Markela</u> (signature) (print)

	University Hospitals		
	of Cleveland	212-AJ., 1	укр рна
CUI	PROCEDURE	M 12-01	1947 P :
	ANESTHESIA OR CONSCIOUS SEDATION	TELMA	
	<ul> <li>BLOOD AND BLOOD COMPONENTS</li> </ul>	162 336	
Pati	ient's Name	↓; t <sub>x</sub> ; r	<u>AVELLE</u>
	(LAST)	(MI)	(FIRST)
<b>1.</b>	You have been informed of the material risks, benefits, ne scheduled to treat your medical condition. You understa answered. You agree that Dr	ind the procedure(s) and and/or his/her assistant.	have had all of your questi s who may be selected by y
2.	You have been informed of the material risks, benefits, ne anesthesia or conscious sedation, and you consent to its us		to ensure your comfort throu
3.	You have been informed of the material risks, benefits	, need, and alternatives	to receiving blood and blo
	components, and you consent to their use.		
4.	You recognize that unexpected complications can happen additional care that was not described to you already. You perform additional or different procedures that may be nece	r agree that your doctor(s)	care and that this may requ and his or her assistants m
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UHHS PATIENT CARE AND OPERATIONS SUPPORT - HSP1 MPAC -4161 (QOA\$\$\$) PAGE 001 12/14/00 11:30 \*\*\*\* \*\*\*\*\* \*\*\*\*\* М SCHECHTER, BENJAMIN ÷ 53 ÷ \* ÷ \* MR#: 01976405 ACCT#: 12653520 SERV: ADLT ORTHO G MOR \* \* \* \* \* \* \* \* \* \* \* \* \* \* MD: BOHLMAN, HENRY \*\*\*\* ADM: 12/14/00 \*\*\*\*\* DX: SPINAL STENOSIS-LUMBAR OPERATIVE SERVICES SUMMARY \_\_\_\_\_ SUMMARY: 12/14 06:00 TO 11:30 NEW ORDERS ENTERED FOR THE DAY: RADIOLOGY ENTERED 12/14/00 07:03 ENTERED FOR: BOHLMAN, HENRY H, MD ENTERED BY: IDXUSER 118 LUMBAR SPINE 1 VIEW TOWER, ACC# 4565499, VIA: PT, SCHEDULED FOR 12/14/00, 07:05, <12/14/00>, (RIDX) in the state of the second . . . . . . . 12/14/00 11:10 ENTERED BY: CHOUNG MD, STEVEN C 119 ADMIT TO-T4, <12/14/00-..>, (SCAK) 120 ATTEND MD: BOHLMAN, <12/14/00-..>, (SCAK) 12/14/00 11:11 ENTERED BY: CHOUNG MD, STEVEN C 121 DIET: NPO EXCEPT ICE ADVANCE TO REGULAR AS TOLERATED, <12/14/00-..>, (SCAK) 122 NASAL CANNULA 02 FLOW RATE-LPM 1.5, TARGET PAO2 92, INDICATION: POST-ANESTHESIA RECOVERY, SCHEDULE: CONTINUOUS MAY ADJUST L/MIN AS NEEDED FOR PT TO MAINTAIN PAO2 OF 90% D/C IF PULSE OX 92%, <12/14/00-..>, (SCAK) 123 OCCUPATIONAL THERAPY CONSULT (SEE & TREAT), <12/14/00-..>, (SCAK) 124 PHYSICAL THERAPY EVAL SEE & TREAT, <12/14/00-..>, (SCAK) 125 ACTIVITY/MOBILITY OOB (DECOMPRESSION PTS) SAME DAY AS TOLERATED, <12/14/00-..>, (SCAK) 126 POSITIONING: LOGROLL SIDE TO BACK TO SIDE Q2HR, (12/14/00 14:00-..), (SCAK) 127 T/P/R Q4H X24HRS, (12/14/00 13:00-12/15/00 09:00), (01 OF 02), (SCAK) 128 T/P/R Q SHIFT, <12/15/00 09:00-..>, (02 OF 02), (SCAK) 129 BP Q4H X24HRS, (12/14/00 13:00-12/15/00 09:00), (01 OF 02), (SCAK) 130 BP Q SHIFT, <12/15/00 09:00-..>, (02 OF 02), (SCAK) 131 CONVERT IV TO HEPLOCK WHEN TAKING PO WELL, <12/14/00-..>, (SCAK) 132 DRESSINGS/WOUND CARE REINFORCE DRESSING PRN, <12/14/00-..>, (SCAK) 133 HEMOVAC DRAIN TO CONTINUOUS DRAIN, <12/14/00-..>, (SCAK) 134 HEMOVAC DRAIN EMPTY & RECORD QSHIFT, (12/14/00 07:00-..), (SCAK) 135 NEURO CHECKS Q4H X24HRS, (12/14/00 13:00-12/15/00 09:00), (01 OF 02), (SCAK) 136 NEURO CHECKS QSHIFT, (12/15/00 16:00-..), (02 OF 02), (SCAK) 137 PULSE OX MONITORING QSHIFT IF APPLICABLE, (12/14/00 16:00-..), (SCAK) 138 TED HOSE KNEE LENGTH PER ROUTINE, <12/14/00-..>, (SCAK) CONTINUED 

SCHECHTER, BENJAMIN

01976405006 OPERATIVE SERVICES SUMMARY



### UniversityHospitals ofCleveland

PATIENT NAME: SCHECHTER, BENJAMIN HOSPITAL NO.: 1976405 DATE OF SURGERY: 12/14/2000 DIVISION: TO4

\*cc: HENRY BOHLMAN, M.D. cc: RALPH STANFORD, M.D. cc: STEVEN CHOUNG, M.D.

PREOPERATIVE DIAGNOSIS: LUMBAR SPINAL STENOSIS, L4-5, L5-S1. REMOTE LUMBAR LAMINECTOMY, L5-S1, WITH PERSISTENT RADICULOPATHY AND NEUROGENIC CLAUDICATION. THORACIC SPINAL STENOSIS AT T10-11, T11-12 WITH NEUROGENIC CLAUDICATION AS MANIFEST ON THE MYELOGRAM AND CT SCAN.

POSTOPERATIVE DIAGNOSIS:

LUMBAR SPINAL STENOSIS, L4-5,

L5-S1. REMOTE LUMBAR LAMINECTOMY, L5-S1, WITH PERSISTENT RADICULOPATHY AND NEUROGENIC CLAUDICATION.

THORACIC SPINAL STENOSIS AT T10-11, T11-12 WITH NEUROGENIC CLAUDICATION AS MANIFEST ON THE MYELOGRAM AND CT SCAN.

**OPERATION:** 

LUMBAR LAMINECTOMY, L4-L5; BILATERAL FORAMINOTOMIES, L4-5 AND L5-S1; LYSIS OF EPIDURAL SCAR AND ADHESIONS, L5-S1; THORACIC LAMINECTOMY T10, T11, T12 WITH DECOMPRESSION OF THE SPINAL CORD.

SURGEON:

HENRY BOHLMAN, M.D.

GENERAL ANESTHESIA.

RALPH STANFORD, M.D. STEVEN CHOUNG, M.D.

450 CC.

ANESTHESIA:

ESTIMATED BLOOD LOSS:

TIME OF SURGERY:

ASSISTANT SURGEON:

TWO AND ONE-HALF HOURS.

CLINICAL NOTE:

The entire operative procedure was explained to the patient including the potential hazards of paralysis, spinal fluid fistula and no relief of pain, as well as the hoped for benefits of relief of pain and restoration of more normal activities. He elected to go ahead.

**OPERATIVE NOTE:** 

The patient was brought to the operating room where he was given general anesthetic. He was carefully turned on the knee-chest frame. Care was taken to pad all bony prominences so there was no pressure over the peripheral nerves. The thoracolumbar area was prepped and draped in the usual manner. A solution of saline and epinephrine was injected along the erector spinae muscles from T10 to T12 and from L4 to S1.

A midline incision was made over the thoracic spine from approximately T10 to T12. Subcutaneous bleeders were clamped and cauterized. Dissection was carried down to the spinous processes and using subperiosteal elevators, CONTINUED:



PHYSICIAN COPY

## **UniversityHospitals** ofCleveland

PATIENT NAME: 1976405 HOSPITAL NO.: DATE OF SURGERY: 12/14/2000 T04 **DIVISION:** 

SCHECHTER, BENJAMIN

PAGE 2

the erector spinae muscles were dissected off of them and the laminae. We placed self-retaining retractors and controlled bleeders with Bovie and bipolar coagulation. We then made an incision over L4 to the sacrum. Subcutaneous bleeders were clamped and cauterized. Dissection was carried down through the old scar and using subperiosteal elevators, we elevated the erector spinae muscles off of the laminae and sacrum. Two Kocher clamps were placed on the spinous processes of L5 and also of T11. A check x-ray identified the correct positions.

We then proceeded to do the thoracic laminectomy first. We removed the spinous processes of T10, T11 and T12 with a bone cutter. We entered the spinal canal at T12-L1 by removing the inferior lamina of T12 with a Leksell rongeur and dissecting the ligamentum flavum off of the lamina with a curette. Using small to medium-sized Kerrison punches, we proceeded to do a laminectomy at Tl2 and Tl1 and Tl0. With very gentle palpation, we could feel the ventral hard disk mass in the lateral gutters. We were very careful not to manipulate the spinal cord with any palpation or instrumentation.

Once the laminectomies were completed, the dura expanded quite nicely. Bleeders were controlled with bipolar coagulation. A strip of Gelfoam was applied over the entire dura.

Attention was then drawn to the lumbar area where the spinóus processes of L4 and L5 were removed with the bone cutter. The inferior lamina of L5 was removed with a Leksell rongeur and we almost immediately encountered epidural scar. We then moved up to the L4-5 space and removed the inferior lamina of L4 and the ligamentum flavum and dissected the dura off of the undersurface of the ligamentum flavum and lamina. We then proceeded to do a laminectomy of L4 with a Kerrison punch. The laminae and facet joints were extraordinarily thick. Once the L4 lamina had been completed, we dissected the epidural scar off of the L5 lamina with curettes and Penfield elevators. Once it was free, we completed the laminectomy of L5 with a Kerrison punch. We then proceeded to do foraminotomies at L4-5, first on the right which was extremely tight. We had to use a Hall burr to burr away the thickened facet joint and undermine it in order to get the Kerrison in to complete the foraminotomy and decompress the fourth nerve root. Once that had been done, Gelfoam was placed over the root itself.

We then moved down to L5-S1 where there was a huge hypertrophic facet and once again we had to use the Hall power burr to burr away the thickened bone in order to get the medium Kerrison under the facet and complete the foraminotomy. Finally, we used a small curved osteotome to remove a bony lip and hard disk over SI that was compressing the ganglion of the fifth nerve root. Once that had been done and curettes cleaned out the disk, the nerve root and ganglion were totally free. Gelfoam was placed over the nerve root and we then carried out a minimal foraminotomy on the L4-5 level on the left and minimally at L5-S1 on the left. Gelfoam was placed over these nerve roots. CONTINUED:

## **UniversityHospitals** ofCleveland

PATIENT NAME: HOSPITAL NO.: 1976405 DATE OF SURGERY: 12/14/2000 DIVISION: T04

SCHECHTER, BENJAMIN

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The wound was irrigated with antibiotic solution multiple times in both places and suction drains were placed. Both wounds were closed with #0 Vicryl interrupted sutures in the erector spinae muscle fascia, #2-0 Vicryl in the subcutaneous tissue and a running #4-0 subcuticular Vicryl in the skin. Prior to closure, we injected the erector spinae muscles with 0.75% Marcaine with epinephrine diluted in half to control pain and Anesthesia gave the patient 30 mg of Toradol. Dr. Bohlman was the primary surgeon and was present throughout all the critical portions of the case.

PHYSICIAN SIGNATURE

HENRY BOHLMAN, M.D. HB/MRC#30/9101 D: 12/14/2000 T: 12/15/2000

DOCUMENT #: 502268

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	Initials, Signature, & Printed Name of Nursing Personnel	NAME Schuchter, Mujanin '+ HOSP NO. 1976405 DATE 12.14.10 SEX AGE DR. 12.14.10
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PATIENT'S NOTES-SURGICAL

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Division	T BOHLMAN 162 3389	H[NĀ Rm_No,

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## UniversityHospitals of Cleveland

PATIENT NAME: SCHECHTER, BENJAMIN HOSPITAL NO.: 1976405 ADMITTED: 12/14/2000 DISCHARGED: 12/19/2000 PHYSICIAN: HENRY BOHLMAN, M.D.

Xcc: HENRY BOHLMAN, M.D. cc: STEVEN CHOUNG, M.D.

UNIVERSITY HOSPITALS OF CLEVELAND

#### DISCHARGE SUMMARY

CLINICAL NOTE: The patient is a 53-year-old, white male who was evaluated by Dr. Bohlman in clinic and noted to have lumbar spinal stenosis. He was admitted following elective thoracolumbar decompression and foraminotomies.

PAST MEDICAL HISTORY: Hypertension.

MEDICATIONS: Maxzide one q.d., Celebrex 100 mg b.i.d., Pravachol 40 mg q.d., and niacin 1000 mg q.d.

ALLERGIES: The patient has no known drug allergies.

PAST SURGICAL HISTORY: Notable for lumbar laminectomy in 1998, hemorrhoidectomy in 1998, and hydrocele in the 1980s.

The patient underwent elective thoracolumbar decompression by Dr. Henry Bohlman on December 14. There were no intraoperative complications. Please see the operative note for details of the procedure. The patient was transferred to the PACU in stable condition. He did have two Hemovac drains in place. He was also fit for TED hose and SCDs. He was maintained on antibiotics for a total of 48 hours.

The patient was noted in the immediate postoperative period to have some left lower extremity weakness. He was noted to have 2 out of 5 hip flexor strength on the left, 4 out of 5 hip abductor and hip adductors, 2 out of 5 knee extensor, and 1 out of 5 knee flexors, and 1 out of 5 ankle dorsiflexor and plantar flexors. It was felt at this time that perhaps some of the Marcaine used locally had been dripped on the dura. Alternatively there may have been an ischemic problem to the cord secondary to decompression. The cord, however, was not manipulated intraoperatively.

We elected to observe this patient's neurologic exam. In the immediate postoperative period again he was noted to have decreased strength in his quadriceps, hamstrings, as well as dorsiflexors. However, on postoperative check later he did have some return of strength of his plantar flexor to 3 out of 5.

On postoperative day number 1 the patient did have some interval improvement in his strength. At this point his hip flexor were 2 out of 5, his hip abductor and adductors were 4 out of 5, his quadriceps was 3 out of 5, his hamstrings were 1 out of 5, his plantar flexors were 4 out of 5, and his dorsiflexors were 1 out of 5. He was otherwise doing well. On postoperative day number 2 his Hemovac drain was removed. His antibiotics were stopped. Physical Therapy was consulted to assist with mobilization of the patient. His incision was examined on postoperative day number 2 and noted to be clean and dry without evidence of infection.

Postoperative day number 3 he continued on interval improvement. By day of discharge on postoperative day number 5 he was noted to have 4 out of 5 CONTINUED:



## **UniversityHospitals**

PATIENT NAME: SCHECHTER, BENJAMIN HOSPITAL NO.: 1976405 ADMITTED: 12/14/2000 12/19/2000 **DISCHARGED**: HENRY BOHLMAN, M.D. PHYSICIAN:

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PAGE 2

quadriceps and hamstrings, 4 out of 5 plantar flexors and EHL, and 2 out of 5 dorsiflexor. He was mobilizing reasonably well with physical therapy. He will be transferred to Euclid for further rehabilitation. He was restarted on preoperative medications as well as given a prescription for pain control. We will continue to follow his neurological exam postoperatively. He is going to follow up with Dr. Bohlman in two weeks.

THORACOLUMBAR SPINAL STENOSIS. FINAL DIAGNOSIS:

PHYSICIAN SIGNATURE

STEVEN CHOUNG, M.D. FOR HENRY BOHLMAN, M.D. SC/MRC#30/6670 D: 03/26/2001 T: 03/26/2001

ofCleveland

DOCUMENT #: 526071

# University Orthopaedic Associates, Inc.

Department of Orthopaedic Surgery Case Western Reserve University

Henry H. Bohlman, M.D. Professor, CWRU Director, University Hospitals Spine Institute Reconstructive & Traumatic Spine Surgery

11100 Euclid Avenue Cleveland, Ohio 44106 Telephone: 216-844-1025 Fax: 216-844-1735 Appointments: 216-844-7200

December 23, 2000

Richard Stein, M.D. 5850 Landerbrook, #100 Mayfield Hts., OH 44124

#### RE: Dr. Benjamin Schechter

Dear Rich:

I am enclosing a copy of my discharge summary on Dr. Benjamin Schechter. On the preoperative myelogram, which I did not see until the morning of the surgery, it was apparent that he not only lumbar stenosis, but severe thoracic spinal stenosis, which is quite a rare entity on which we have composed a paper with our 20+ year experience. Ordinarily I would use intraoperative spinal cord monitoring in this situation, but because of the timing we could not arrange it on the morning of the surgery. In any case, although we were extremely meticulous in dealing with the thoracic cord, he awakened with significant deficit, although incomplete both sensory and motor. Within a period of hours and over the next 24 hours he improved significantly. As I explained to he and his wife I think his prognosis for recovery is excellent.

Because I went away on vacation after the surgery and only saw him one day, I took a trip over to Euclid Rehabilitation Center, which is where he is now. He is actually in excellent spirits I believe and he has no leg pain and he has been ambulating in a walker with an AFO on the left. Re-examination revealed completely normal motor strength on the right side from the hip distally, on the left side he has still a trace of hip flexion, but hip abduction and adduction are normal, quadriceps and hamstring function are normal and distally his dorsi-flexion is trace on the left and plantar flexion is 4-5/5. So all and all I think he has had very significant improvement over a ten day period and I think he will continue to improve. I think as soon as he is able to take stairs he will be discharged home, which hopefully will be in the next few days. I remain cautiously optimistic that he will have very good recovery.

Very sincerely,

Henry H. Bohliman UN

Henry H. Bohlman, M.D.

Enc. HHB/jab



University Hospitals of Cleveland • Rainbow Babies & Children's Hospital Southwest General Health Center • Geauga Regional Hospital Cleveland Veterans Administration Medical Center

IMPORTANT MESSAGE FOR. A.M. DATE \_ P.M. ta\_ be М OF PHONE\_ AREA CODE EXTENSION TELEPHONED PLEASE CALL 23 CAME TO SEE YOU WILL CALL AGAIN WANTS TO SEE YOU RUSH RETURNED YOUR CALL SPECIAL ATTENTION A ARM ANDILLA MESSAGE Nill CONTA MMAD ĊÍN forter SIGNED. 1184

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T'N PLAINTIFF'S EXHIBIT

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