

Carlos Cain (see Facebook posting in Appendix A). The patient is a 54 year white male, an oil industry consultant, was rear-ended while driving in a company car to another worksite. He had persistent pain in his neck and arms. He saw two orthopedic surgeons and two neurosurgeons in Houston, who spent 8 to 11 minutes with him, talked 7 to 8 minutes of the appointment time, and interrupted him within the first 12 seconds (20,21). He had an MRI, which was normal but since 78% of damaged discs are not detected on MRI (22, 23) this was not unexpected. Since he had a normal MRI, he was told that he had chronic cervical sprain. None of the surgeons in Houston would operate on him. They referred him to physical therapy and placed him on narcotics. After two years of constant pain he came to Johns Hopkins Hospital, a Center of Excellence Hospital. At his initial evaluation, he received the Pain Validity Test, which predicted that he would have a 95% chance of having a medical test abnormality on the correct medical testing (24, 25). He also took the Diagnostic Paradigm which provides diagnoses with a 96% correlation with diagnoses of Johns Hopkins Hospital doctors (26), and can predict intra-operative findings with 100% accuracy (27). The Diagnostic Paradigm found that the patient had internal disc disruption at C4-5 and C5-6, and anteriolysthesis of C5 on C6. The Treatment Algorithm, which is based on clinical evaluations at Johns Hopkins Hospital department of neurosurgery, recommended facet blocks, root blocks, and provocative discograms C4-C7 (28). The provocative discograms documented disc damage at C4-5 and C5-6. Based on the results of these test, the patient received an anterior cervical fusion at these levels, with excellent pain relief in his neck and arms. Recovery time post operatively was 12 weeks, and he returned to work after that period of time.

Cost of Incorrect diagnosis for 2 years		Cost of correct diagnosis with surgery for 3 months	
Surgical evaluations X 4	\$2,000	Cost of Pain Validity Test	\$300
MRI 2 Tesla	\$500	Cost of Diagnostic Paradigm	\$800
Physical therapy \$270/week X 50	\$13,500	Neurosurgery Evaluation	\$500
Medication \$400/month X 24	\$ 9,600	MRI 3 Tesla	\$500
Lost wage \$4,000/month X24	\$96,000	Provocative discogram	\$1,500
		Facet blocks	\$1,500
		Root blocks	\$1,500
		3D-CT	\$700
		Flexion Extension X-rays	\$250
		Discectomy/anterior fusion	\$25,000
		Medication \$400/month X3	\$1,200
		Physical therapy \$270 x 4	\$1,080
		Lost wage \$4,000/month x 3	\$12,000
TOTAL COST	\$121,600	TOTAL COST	\$46,830
Cost Savings			\$74,770