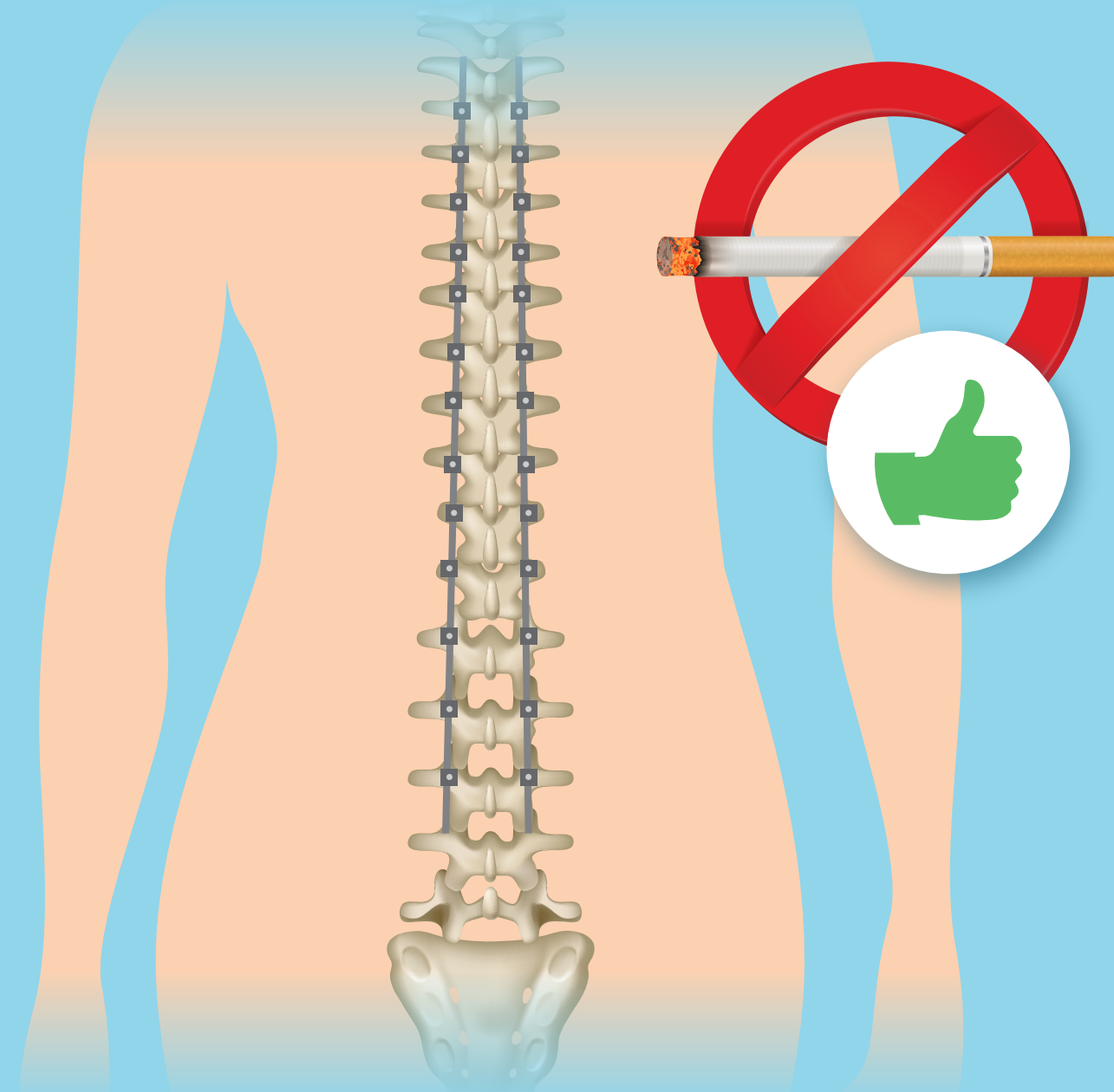


Are Smoking-Cessation Interventions Prior to Lumbar Fusion Cost-Effective?

Smoking cessation reduces short- and long-term complications after lumbar fusion



But is it cost-effective to implement a smoking-cessation program before lumbar fusion?



Data on smokers undergoing posterior lumbar fusion

Five smoking-cessation interventions evaluated



Decision analytic model

Measures calculated



Cost savings



Quality-adjusted life years (QALYs)



Smoking-cessation interventions prior to lumbar fusion can improve patient outcomes and reduce healthcare costs

✓ Combined smoking-cessation intervention most effective and least costly overall

Time horizon	Strategy	Cost savings	Effectiveness (QALYs)
Lifetime	Usual care	—	12.539
	Combined intervention	\$34,825	13.811

✓ All smoking-cessation interventions more effective and less costly than usual care at lifetime

Time horizon	Strategy	Cost savings*	QALYs gained*
Lifetime	Behavioral counseling	\$3,295	0.12
	Nicotine replacement therapy	\$2,573	0.10
	Bupropion monotherapy	\$2,844	0.13
	Varenicline monotherapy	\$6,769	0.27

*Compared with usual care



Increase in QALYs across all interventions

A Cost-Effectiveness Analysis of Smoking-Cessation Interventions Prior to Posterolateral Lumbar Fusion

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