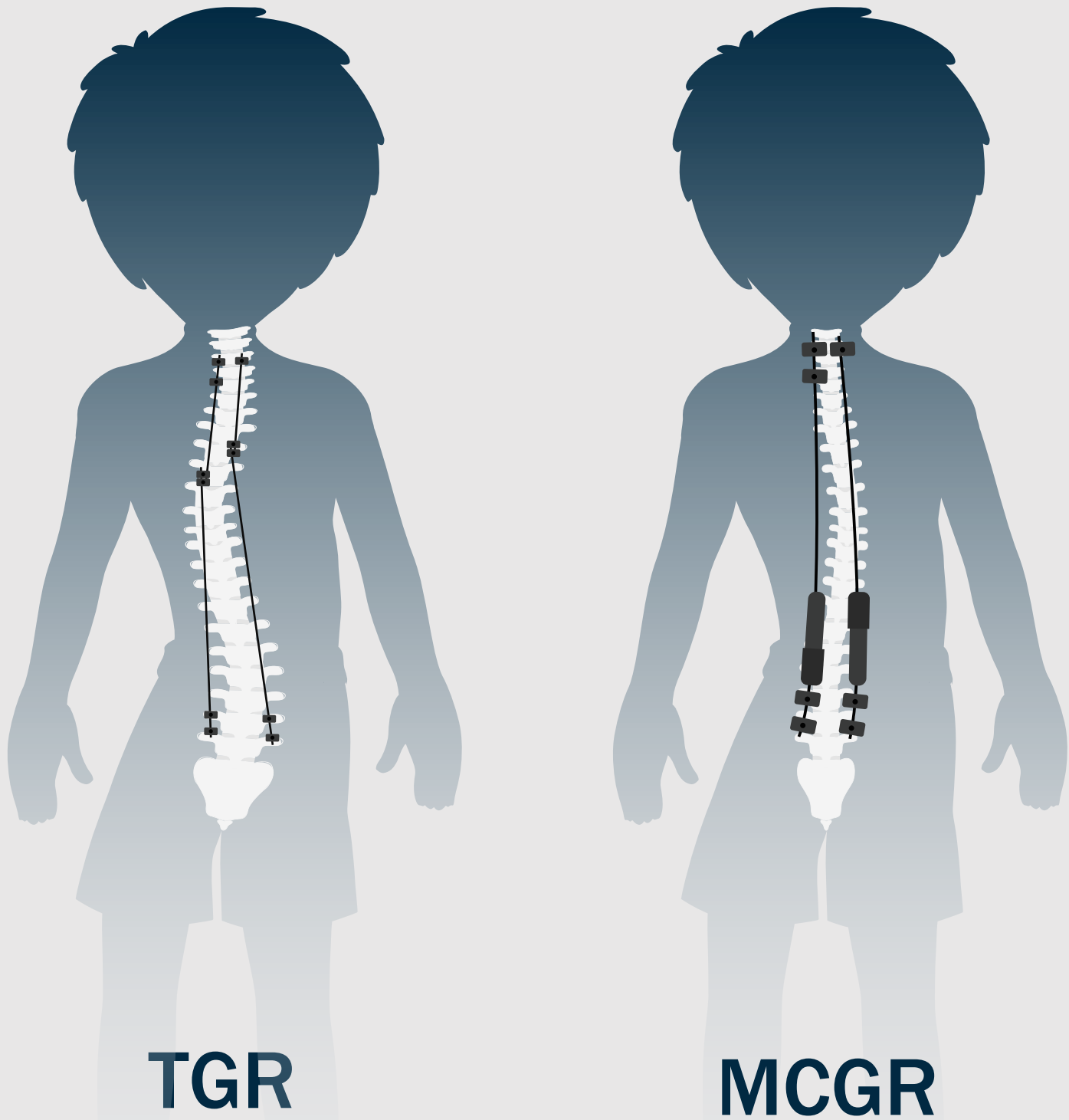


# Are Magnetically Controlled Growing Rods an Optimal Surgical Treatment Option for Severe Early-Onset Scoliosis?

This study compares traditional growing rods (TGRs) with the less invasive magnetically controlled growing rods (MCGRs) in treating severe early-onset scoliosis (EOS), a type of pediatric spinal deformity



## Retrospective review of a prospectively collected international database to compare...



44 pediatric patients with severe ( $\geq 90^\circ$ ) EOS treated with MCGRs

Vs



44 etiology, age, and sex-matched pediatric patients treated with TGRs





2-year follow-up



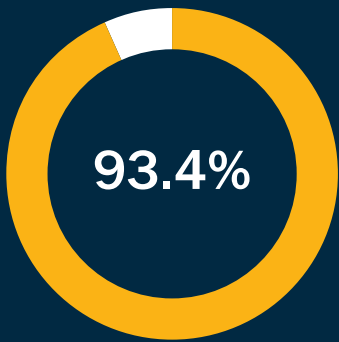
Health-related quality of life assessed via 24-item EOS questionnaire (EOSQ-24)



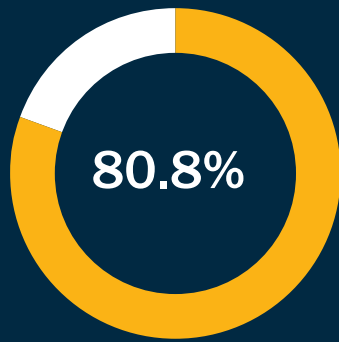
Radiographs

	MCGR group	TGR group
 Mean major coronal curve (t = 0 years)	104°	104°
 Mean major coronal curve (t = 2 years)	52°	66°
 Mean T1–T12 heights (t = 0 years)	155 mm	152 mm
 Mean T1–T12 heights (t = 2 years)	202 mm	192 mm

### 2-year EOSQ-24 pulmonary function score

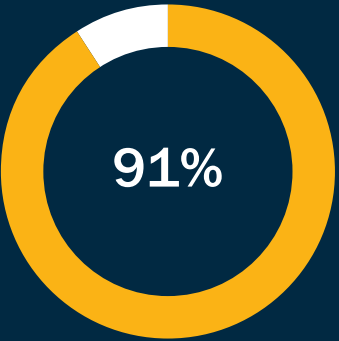


MCGR group

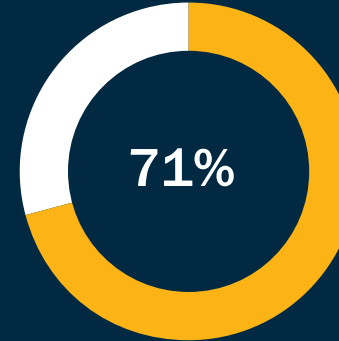


TGR group

### 2-year unplanned-revision-free survival



MCGR group



TGR group



MCGRs offered a more efficient, less invasive, and less complicated surgical option than did TGRs for severe EOS

Matched Comparison of Magnetically Controlled Growing Rods with Traditional Growing Rods in Severe Early-Onset Scoliosis of  $\geq 90^\circ$ : An Interim Report on Outcomes 2 Years After Treatment  
Saarinen et al. (2021) | DOI: 10.2106/JBJS.20.02108

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