

## *Preface*

Accurately predicting whether an adolescent idiopathic scoliosis curve will progress from a mild curve to a surgical curve remains a challenge. Currently, patients are seen often for follow-up visits and are subjected to numerous radiographs to document curve progression. Furthermore, the decision to observe patients, treat them with braces, or recommend surgery is subject to differing opinions and treatment paradigms. However, the way we analyze and treat scoliosis will undergo very significant changes in the next few years as a new prognostic genetic test, developed to help diagnose whether a patient has a low risk or a high risk for developing a surgical curve, becomes available. With the introduction of this test, we are entering a new era of diagnosing possibilities. As with any new technology, we still have much to learn. There are many questions that need to be answered: How will the prognostic genetic test results alter what we tell families regarding the risk of curve progression? Will the test results change how often we follow up with patients, and will our treatment recommendations change? How accurate does a test have to be in predicting progression or nonprogression to change our routine treatment? The goal of this issue of *Roundtables in Spine Surgery* is to explore these questions and others, and to provide valuable information for our colleagues who are involved in the sometimes difficult and always challenging practice of treating adolescent idiopathic scoliosis.

This issue begins with an article on “Demystifying the Genetic Test for Scoliosis” by Dr. Kenneth Ward, who provides a basic overview of genetics and outlines the details of the saliva-based test. At the end of this article, there is a short question-and-answer section clarifying some of the more complex points of the test. The second portion of this issue is devoted to a Roundtable Discussion on prognostic genetic counseling. We assembled a diverse group of experts with a broad range of experience in treating adolescent idiopathic scoliosis to share their insights. The Discussion is organized around three different patient scenarios: (1) a patient with no genetic testing, (2) a patient with a high-risk genetic test result, and (3) a patient with a low-risk genetic test result. The panelists energetically debate recommended treatment options, benefits of the test, and how the technology will be integrated with existing practices. The discussion is candid, and the

opinions expressed are often diverse—the exciting result of inviting dedicated surgeons to explore noteworthy and often provocative topics in the company of their peers.

Even though there are questions that still need to be answered, it is exciting to know that this test is on the horizon. It is our hope that this publication will enlighten our readers and provide them with a valuable base of information to evaluate how prognostic genetic testing will benefit their practice and ultimately their patients diagnosed with adolescent idiopathic scoliosis.

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