CONCLUSION: ASD patients with significant coronal imbalance often have severe concurrent sagittal deformity. APSO is a powerful and effective technique to achieve multiplanar correction without higher risk of morbidity and complications compared to PSO for sagittal imbalance. However, APSO is associated slightly longer ICU and hospital stays.

699 Risk Factors Associated With Symptomatic Deep Vein Thrombosis Following Elective Spine Surgery: A Case Control Study
Thomas Zervos, MD; Michael Bazydlo, MS; Kelly Tundo, BS; Mohamed Macki, MD; Jack P. Rock, MD

INTRODUCTION: Few studies provide insight into risk factors (RFs) associated with postoperative deep vein thrombosis (DVT) following elective spinal surgery. DVTs are detrimental in this population due to the risk of pulmonary embolization or surgical site hemorrhage with treatment.

METHODS: Cases were matched to controls in a 1:2 ratio based on surgery type. Risk of having a prior DVT and choice of subcutaneous heparin dosing following surgery was analyzed in a multivariate regression model with other potentially confounding variables.

RESULTS: 195 patients were included in this study. Independent of patient age, history of DVT was associated with postoperative symptomatic DVT (OR 4.09, 95% CI 1.22-13.78). Two versus three times a day postoperative heparin dosing (OR 1.56, 95% CI 0.32-7.56), surgery length (OR 1.32, 95% CI 0.98-1.79), and patient age (OR 1.04, 95% CI 1.04-1.08) were not statistically significant, independent RFs. Older age and longer length of surgery trended towards association with DVT without reaching significance. Length of stay (LOS) was increased from 3–5 days ($P < .001$) in DVT patients compared to controls.

CONCLUSION: These results suggest that patients with a history of DVT undergoing elective spinal surgery are at higher risk of developing symptomatic DVT postoperatively resulting in significantly increased LOS. Further study on additional preoperative screening and medical optimization in elective spine surgery patients may help reduce the rate of symptomatic postoperative DVT.

700 Outcomes for Elective Spine Surgery in Patients 90 Years and Older
James T. Ebot, DO, MS; Stephanie Foskey; Selby G. Chen, MD

INTRODUCTION: Life expectancy in the United States has steadily increased secondary to continuous advances in the diagnosis and treatment of chronic diseases. Therefore, older adults are living longer with multiple chronic illnesses. Degenerative spine disease is common in this age group and its management is mostly conservative due to advanced age and multiple co-morbidities.

METHODS: Our procedure log was queried for patients undergoing spine surgery for the past 5 years. Patients aged 90 years and above with a diagnosis of degenerative spine disease were included in the study. Patients with spine malignancy and trauma were excluded. A detailed chart review was performed and data were collected regarding patient demographics, co-morbidities, intra-operative complications, post-operative complications, symptom improvement, and the need for rehabilitation at discharge.

RESULTS: Our search produced twenty-three patients. Average age was 92 years (range: 90 - 96y). Twenty patients had no intra-operative complications and three patients had an incidental durotomy which was primarily repaired with no post-operative sequela. At follow-up, two patients reported persistent pain, one patient reported new onset pain, two patients reported urinary retention and one patient reported a postoperative seroma. Nineteen patients reported improvement in their preoperative symptoms. Fifteen patients were discharged to a rehabilitation facility and eight patients were discharged home. One patient returned to the operating room for persistent pain. Non-instrumented spinal decompression was the most common procedure performed.

CONCLUSION: Adults aged 90 years and older can suffer debilitating pain from degenerative spine disease. Spine surgery in this age group for carefully selected patients can be safely performed. Most patients experienced improved pre-operative symptoms.

701 A Novel, Virtual, Multi-Institutional, Multi-Disciplinary Spine Education Program in Response to the COVID19 Pandemic
Ali A. Baaj, MD; Khoi D. Than, MD; Wende Gibbs; Griffin R. Baum, MD; Jonathan J. Rasouli, MD; John H. Shin, MD

INTRODUCTION: The COVID19 pandemic ended all national and international in-person educational conferences. In response to this, and in an effort to continue sharing and advancing knowledge in spine surgery, a multi-institutional collaboration formed a “virtual” spine educational platform.

METHODS: Our group, consisting of five spinal neurosurgeons and one neuroradiologist, formed an online platform called the Virtual Global Spine Conference (VGSC). A website was created and maintained by the Weill Cornell Neurosurgery Department, and biweekly, Zoom meetings were established where prominent spine physicians from various specialties would deliver case-based presentations on spine and spine surgery related conditions at no cost to the participants. The “faculty hosts” coordinated the speakers, promotion and delivery of the program. All sessions are recorded and archived online.

RESULTS: In less than one month, over 1000 surgeons, trainees and other specialists signed up for the program, with a continuous rate of 50–100 new registrants per week. Each session draws an audience of 200–300 participants. An early survey to the participants indicated that 94% would like this program to continue post-COVID.

CONCLUSION: The early success of the Virtual Global Spine Conference is a reflection of the continued interest in spine education despite the COVID pandemic. There is widespread opinion, backed by our own survey results, that many want to see “virtual” education continue post-pandemic. The future goals of VGSC are to continue to deliver high-quality sessions led by prominent surgeons and other specialists, to better engage and collaborate with national organizations, and to collect long-term, granular data to better assess effectiveness and quality of this program.