

related neck pain, and (2) determination of its predictors, its personal and occupational consequences, and the different management methods adopted for it. **Methods:** A cross-sectional survey of 411 spine surgeon members of AO spine was conducted during March–May 2021, using the Modified Nordic Questionnaire and the Neck Disability Index. Data on experience of neck pain during the last 12 months, and its consequences and risk factors were collected. Logistic regression analysis was done to identify significant predictors of neck pain. Statistical significance was considered at $p < 0.05$. **Results:** The majority of spine surgeons were married (360, 92.3%), and their average age was 45.31 ± 7.86 years, and average BMI was 26.95 ± 4.07 kg/m². They experienced 66.7% 1-year neck pain prevalence. According to the Neck Disability Index, more than one-half (52.8%) of surgeons experienced disability due to neck pain of mild (45.5%), moderate (6.5%) and severe (0.8%) grades. Neck pain was responsible for stopping work in 17.5% of surgeons, with a median 3.5 (IQR, 2–7.8) days off work during the last year. One half of participants (56.3%) were treated by medical care, 31.5% by physiotherapy, and 16.5% requested rest days and/or sick leave. Physical stress ($p < 0.001$) and non-exercising ($p = 0.04$) were significant predictors of neck pain, while demographics, workload-related factors and the use of surgical magnification (Loupes and microscopes) were not significantly associated with neck pain prevalence ($p > 0.05$ each). **Conclusion:** The 12-month prevalence of neck pain was high among spine surgeons, with an impact on activities of daily living, mostly of mild degree, reported by one-half of surgeons. Physical stress was the only significant predictors while sports practice was a protective factor of neck pain. Medication was the main management adopted. An increased focus on pain prevention through improved workplace ergonomics, and sports activity programs to reduce the risk of neck pain and arrange for proper rest periods is recommended.

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P276: Analysis of the implications of cervical spine alignment on lumbopelvic alignment

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Introduction: To date, normal patterns of alignment in the cervical spine have not been conclusively defined. Previous studies have attempted to correlate cervical spine alignment with the remainder of the spine and pelvis. Results however, were inconsistent and limited by small sample size. Knowledge of normal alignment is essential in evaluation and preoperative planning for deformity

correction. This study aims to establish normative values and correlate these with established patterns of lumbopelvic alignment. We hypothesize alignment of the cervical spine can predict lumbopelvic morphotype. **Material and Methods:** Healthy volunteers (N = 497) between 20–40 years of age with no pre-existing spine pathology were recruited. Baseline demographics, Oswestry Disability Index, and Neck Disability Index were collected. Whole body 2D EOS imaging was obtained for all participants. Using a semi-automated image analysis software (KEOPS, by SMAIO), standard measures of alignment of the pelvis, lumbar, thoracic, and cervical spine were obtained. Roussouly morphotype (RM) was identified for each participant. Principal components (PC) of cervical vertebral body centroids were input into a support vector machine algorithm to predict RM. **Results:** Average age of participants was 28.4 ± 5.2 years. Fifty six percent of participants were female, average BMI was 24.9 ± 4.2 . Number of participants of each RM were: Type 1 = 26, Type 2 = 126, Type 3 = 221, Type 4 = 124. When PC explaining 90% of variability were used, RM was appropriately predicted as follows: Between Type 1, 2, 3 and 4 = 50%, Type 2, 3, 4 = 53%, Type 2, 3 = 69%, Type 2, 4 = 47%, Type 3, 4 = 69%. Including nearly all PC (99.99% of the variance), classification rates improved: Between Type 1, 2, 3 and 4 = 68%, Type 2, 3, 4 = 88%, Type 2, 3 = 89%, Type 2, 4 = 99%, Type 3, 4 = 99%. **Conclusion:** This study demonstrates that a predictable relationship between cervical and lumbopelvic alignment exists; this relationship is sensitive to subtle features of cervical spine shape, captured by higher order PCs. It provides a robust normative database for cervical spine alignment and will provide insight into normal patterns of lumbopelvic compensation with “abnormal” cervical spine alignment. Future work will aim to classify patterns of cervical spine alignment, and identify features specifically captured by each principal component, particularly the higher components.

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P277: Level of spin in the abstracts of RCTs in spine surgery - an ORG-LOC tool based assessment

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Introduction: There has been a massive surge in published spine literature in the last few years. Even in highly credible research models like Randomised Control Trials (RCTs), many pitfalls do exist that a reader must be aware of. One common but less explored pitfall is the spin. Particularly in the abstracts, it is a potential source of deception. Grading of RCTs based on spin will help readers to interpret their results better. Hence we aim to grade the RCTs of spine surgery based on spin in their abstracts, analyze

its prevalence, and highlight on the usefulness of spin grading for any RCT. **Materials and Methods:** We selected 250 recent RCTs from top 5 spine journals. Baseline data were collected. CONSORT Adherence Score (CAS) based on the adherence of the abstracts of the RCTs to CONSORT checklist was calculated. The abstracts of the RCTs were graded using the Level Of Confidence (LOC) grading tool developed by the Orthopaedic Research Group. The association of spin grade with other characteristics of the articles were analyzed. **Results:** The median CAS was 11 (IQR 10-12). Only 47.6% (n = 119) articles had High LOC with no or one non-critical spin in abstract and 12.4% (n = 31) had Moderate LOC with more than one non-critical spin. 28% (n = 70) had at least one critical spin and 12% (n = 30) had more than one critical flaw making their results have Low and Critically Low LOC respectively. Of the ten variables analyzed in multivariate regression analysis, CAS was the only significant factor that determines the level of confidence in the abstract of RCTs. **Conclusion:** Spin based grading of RCTs is the need of the hour to aid readers to interpret the true essence of research papers. 40% of the RCTs in top spine journals had low to critically low LOC. Structuring of abstracts is the way forward to prevent spin.

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P278: Does English speaking status affect post-acute care in thoracolumbar fusions? A retrospective study in a multiethnic population

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Introduction: English speaking status is an often-overlooked risk factor that influences the longitudinal progression of patient care. Obstacles such as the procurement of physician appointments, comprehension of treatment plans, misdiagnoses, and delayed treatment are all amplified in the setting of a language barrier. Thoracolumbar fusions are indicated for the management of degenerative disc disease, degenerative spondylolisthesis, spinal stenosis, tumors, and fractures with more than 300,000 performed annually. Post-operative clinical outcomes of non-English speaking patients who undergo thoracolumbar fusion have not been thoroughly studied. A comprehensive understanding of the post-operative sequelae of non-English speaking and minority patients is crucial for the development of interventions aimed at reducing complications and post-operative readmissions. The purpose of this study is to compare rates of readmission, complications, and treatment durations between English and non-English speaking patients undergoing thoracolumbar fusions. **Material and Methods:** A retrospective study of 301 patients who underwent a thoracolumbar fusion at a level 1 trauma center in the Bronx from 2016 was performed. Demographic, surgical, and post-

operative measures were collected. The primary outcome were readmission to the emergency department (ED) within 30 days, 90 days and chief complaint. Our secondary outcome was length of stay defined as days patient spent in inpatient admission post-operatively. Odds ratio were calculated using SPSS to determine differential rates of re-presentation to the ED post-operatively. An independent-samples t-test was run to determine if there were differences in postoperative length of stay(days) between non-English speakers and English speakers. **Results:** All 301 patients who undergone thoracolumbar fusions in 2016 were analyzed in this study, consisting of 62 non-English speakers and 239 English speakers. There were 7 non-English patients that returned to ED within 30-days post-operation compared to 36 English speakers. The odds ratio of returning to the ED within 30-days post-operation in non-English speakers versus English speakers was 1.393 (95% CI, .588 to 3.302). There were 21 non-English speakers who returned to the ER compared to 63 English speakers. The odds ratio of returning to the ED within 90 days post-operation was .699 (95% CI, .384 to 1.273). There was no significant different in length of stay between non-English speakers (7.8 ± 6.4) and English speakers (8.5 ± 8.8) with a difference of 1.2 (95% -3.05 to 1.67), T (299) = -.579, p = .563. **Conclusion:** We have described that a large portion of patients undergoing thoracolumbar surgery in the Bronx present back to the ED within 30 and 90 days of operation. English speaking status was determined not to be associated with different rates of presentation to the emergency room within 30 and 90 days of thoracolumbar fusion, or different lengths of stay. Taken together, English-speaking status is not evidenced to be a risk factor that influenced post-operative readmission of patients undergoing thoracolumbar fusion.

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P279: Epidemiological features of traumatic spinal cord injury in a tertiary hospital in Cagayan Valley: a 5-year cross-sectional study

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Introduction: Globally, the recorded prevalence and incidence of people with Traumatic Spinal Cord Injury (TSCI) is maybe underreported due to the lack of a national registry system for spinal cord injuries particularly in developing countries, hindering injury prevention, health care, and other social planning. Numerous articles on TSCI epidemiology have been published in Europe, North America, and Australia because most Western nations have implemented TSCI registries or databases. In the Philippines, Cagayan Valley Medical Center (CVMC) is the largest medical facility and has the greatest number of admitted patients in the entire region. However, little is known and documented about the prevalence of TSCI at this time. The overall objective of this study is to describe the epidemiological