surgery (SSS), including patient experience and team logistics from initial consultation through post-operative care and follow up. **Results:** An evidence-based guideline, optimizing pre-, intra-, and post-operative phases of care was developed. Specific focus catered to pre-operative education and patient barriers to discharge. Further improvements in pre-admission patient goal setting, introduction of a patient care "passport", post-operative reduction in narcotic administration, and increased same day post-operative mobilization were means to reduce LOS. **Conclusions:** A spine ERAS pathway was developed, allowing our care program to better facilitate patient recovery after SSS. Future work will aim to determine economic impact of the pathway.

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"Inappropriate" spinal ultrasounds for suspected occult spinal dysraphism in northern Alberta

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Background: Occult spinal dysraphism (OSD) may be associated with visible cutaneous manifestations. A common non-pathological mimic of a dermal sinus tract is an incidental sacrococcygeal dimple. Choosing Wisely Canada Guidelines recommend these dimples not be imaged. **Methods:** This study assessed the appropriateness of spinal ultrasounds performed for the investigation of an OSD. We interrogated our local imaging system to analyze spinal ultrasounds being performed in babies less than 6 months of age, from 2017-2018. **Results:** 429 children had spinal ultrasounds ordered by pediatricians (55%), family doctors (21%), and neonatologists (20%). 183 children (43%) had imaging indications that was deemed "inappropriate". Some of this cohort had further MRI imaging (5/183) or neurosurgical referral (8/183). None of these children underwent neurosurgery. 231 (54%) children had appropriate indications for imaging. Within this cohort MRI imaging (23/231), neurosurgical referral (24/231) and neurosurgical intervention occurred (4/231). All four "surgical children" harboured either a dorsal appendage or a subcutaneous lipoma. We estimated, declining inappropriate scans would save \$22, 500 annually. **Conclusions:** A significant portion of local spinal ultrasound requests for OSD are inappropriate. Collaboration with other sites is ongoing to investigate if the Choosing Wisely guidelines for imaging this patient population are being practiced more efficiently.

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Differences in Human, Pig, and Rat Spinal Cord Stem Cells in Response to Inflammatory and Regenerative Factors In Vitro

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Background: While the use of neural stem/progenitor cells has been reported as a promising therapeutic approach for spinal cord injury, direct comparison of adult primary animal spinal cord NSPCs have not been compared to human NSPCs under the same conditions to characterize intrinsic differences between human/animal NSPC response to inflammatory/regenerative factors. **Methods:** To mimic post-injury inflammation, primary-derived NSPCs from adult humans, pigs, and rats were treated with pro-inflammatory factors.To direct regeneration, NSPCs were treated with retinoic acid, platelet-derived growth factor or bone morphogenic protein-(BMP4) to induce neurons, oligodendrocytes or astrocytes, respectively.Cultures were treated for 7 or 14 days and characterized by immunocytochemistry. **Results:** Pro-inflammatory factors promoted more astrogenesis in rat and pig NSPCs compared to human NSPCs and induced neuronal differentiation in human NSPCs. RA increased neurogenesis of human and rat NSPCs, PDGFα increased oligodendrocyte differentiation of rat NSPCs, and BMP4 increased astrogenesis of human and rat NSPCs **Conclusions:** For the first time, differences in response of human, pig and rat primary NSPCs to inflammatory and regenerative factors have been identified. Better understanding of these differences is essential to improving the successful translation of regenerative therapies to humans.