Random checks of abstracts

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# Abstracts with no hedging

words = 227, hedging = 0

Prenatal inflammation is a major risk for preterm birth and neonatal morbidity, but its effects on postnatal immunity and organ functions remain unclear. Using preterm pigs as a model for preterm infants, we investigated whether prenatal intra-amniotic (IA) inflammation modulates postnatal systemic immune status and organ functions. Preterm pigs exposed to IA lipopolysaccharide (LPS) for 3 days were compared with controls at birth and postnatal day 5 after formula feeding. IA LPS induced mild chorioamnionitis but extensive intra-amniotic inflammation. There were minor systemic effects at birth (increased blood neutrophil counts), but a few days later, prenatal LPS induced delayed neonatal arousal, systemic inflammation (increased blood leukocytes, plasma cytokines, and splenic bacterial counts), altered serum biochemistry (lower albumin and cholesterol and higher iron and glucose values), and increased urinary protein and sodium excretion. In the gut and lungs, IA LPS-induced inflammatory responses were observed mainly at birth (increased LPS, CXCL8, and IL-1 levels and myeloperoxidase-positive cell density, multiple increases in innate immune gene expressions, and reduced villus heights), but not on postnatal day 5 (except elevated lung CXCL8 and diarrhea symptoms). Finally, IA LPS did not affect postnatal gut brush-border enzymes, hexose absorption, permeability, or sensitivity to necrotizing enterocolitis on day 5. Short-term IA LPS exposure predisposes preterm pigs to postnatal systemic inflammation after acute fetal gut and lung inflammatory responses.

words = 130, hedging = 0

[2+2] Photocycloaddition of two olefins is a general method to assemble the core scaffold, cyclobutane, found in numerous bioactive molecules. A new approach to synthesize cyclobutanes through multicomponent cascade reactions by merging aldol reaction and Witting reaction with visible-light-induced [2+2] cycloaddition is reported. An array of cyclobutanes with high selectivity has been achieved from commercially available aldehydes, ketones (or phosphorus ylide), and olefins with visible-light irradiation of a catalytic amount of (fac-tris(2-phenylpyridinato-C2 ,N)iridium) ([Ir(ppy)3 ]) at room temperature. Control experiments and spectroscopic studies revealed that the triplet-triplet energy transfer from the excited [Ir(ppy)3 ]\* to enones, generated in situ from aldehyde and ketone or aldehyde and phosphorus ylide, is responsible for these simple and efficient muticomponent transformations.

words = 253, hedging = 0

To identify the level of evidence for use of nusinersen to treat spinal muscular atrophy (SMA) and review clinical considerations regarding use. The author panel systematically reviewed nusinersen clinical trials for patients with SMA and assigned level of evidence statements based on the American Academy of Neurology’s 2017 therapeutic classification of evidence scheme. Safety information, regulatory decisions, and clinical context were also reviewed. Four published clinical trials were identified, 3 of which were rated above Class IV. There is Class III evidence that in infants with homozygous deletions or mutations of SMN1, nusinersen improves the probability of permanent ventilation-free survival at 24 months vs a well-defined historical cohort. There is Class I evidence that in term infants with SMA and 2 copies of SMN2, treatment with nusinersen started in individuals younger than 7 months results in a better motor milestone response and higher rates of event-free survival than sham control. There is Class I evidence that in children aged 2-12 years with SMA symptom onset after 6 months of age, nusinersen results in greater improvement in motor function at 15 months than sham control. Nusinersen was safe and well-tolerated. Evidence of efficacy is currently highest for treatment of infantile- and childhood-onset SMA in the early and middle symptomatic phases. While approved indications for nusinersen use in North America and Europe are broad, payer coverage for populations outside those in clinical trials remain variable. Evidence, availability, cost, and patient preferences all influence decision-making regarding nusinersen use.

# Abstracts with some hedging

words = 344 , hedging = 2

To study the connective tissue (CT) structure of upper eyelid skin of primary open-angle glaucoma (POAG) patients. Forty-seven patients aged 47-91 expecting blepharoplasty formed 3 groups: group 1 [16 subjects without POAG, median age 55 years (interquartile range 54-55.5)], group 2 [12 subjects without POAG, median age 73 (72-76.5)], and group 3 [(19 subjects with POAG, median age 74 (70-80.5)]. Age differences between groups 1 and 2 and groups 1 and 3 are significant (p < 0.05). Thermodynamic parameters of skin samples taken during blepharoplasty: Endothermic peak ([Formula: see text], C) and denaturation enthalpy ([Formula: see text], J/g of dry weight) were determined using differential scanning calorimetry. [Formula: see text] and [Formula: see text] in groups 1-3 were, respectively, 8.41 (7.42-10.25) and 66.55 (59.9-66.7); 7.10 (5.76-10.17) and 67.35 (67.0-68.03); 11.40 (9.0-14.9) and 67.70 (67.05-68.45). [Formula: see text] differences between groups 1 and 2 are significant (p < 0.05), and Spearman’s correlation between the age and [Formula: see text] is direct, medium (R = 0.638) and significant. [Formula: see text] in group 3 is significantly higher than in group 2. [Formula: see text] and [Formula: see text] in patients without POAG (groups 1 and 2) and those with POAG (group 3) are, respectively, 7.79 (6.9-10.17) and 66.6 (61.2-67,3); 11.40 (9.0-14.9); 67.7 (67.05-68.45); the respective differences are significant. Patients without POAG show a significant increase in [Formula: see text] with age, while [Formula: see text] slightly decreases. In POAG, [Formula: see text] is significantly higher and [Formula: see text] tends to grow, which may indicate structural changes in eyelid CT (collagen accumulation and cross-linking level rise). Since the upper lid is unaffected by increasing IOP directly, the changes may be viewed as manifestations of systemic CT pathology.

words = 223 , hedging = 1

Neurologic patients have an increased risk for bullous pemphigoid (BP), in which autoantibodies target BP180, a cutaneous basement membrane protein also expressed in the brain. Here we show that 53.6% of sera from patients with multiple sclerosis (MS) (n = 56) had IgG reactivity against full-length BP180 in immunoblotting, while in BP180 non-collagenous 16A ELISA (n = 143), only 7.7% of MS samples studied were positive. Epitope mapping with 13 fusion proteins covering the entire BP180 polypeptide revealed that in MS and Alzheimer’s disease (AD) patients, IgG autoantibodies target regions located in the intracellular and mid-extracellular parts of BP180, but not the well-known BP epitopes located in the non-collagenous 16A domain and the distal part of extracellular domain. In indirect immunofluorescence analysis, 8.1% of MS sera recognized the cutaneous basement membrane and in full-length BP180 ELISA analysis, 7.5% MS and AD sera were positive, indicating that these autoantibodies rarely recognize BP180 in its native conformation. Thus, in MS and AD patients, BP180 autoantibodies have a different epitope profile than in patients with BP, and seldom bind to native BP180. This explains the inability of these autoantibodies to cause skin symptoms. Our results suggest that the autoantibodies against BP180 alone are not sufficient to induce BP in MS and AD patients.

words = 210 , hedging = 1

Glaucoma studies have long taken into account the blood pressure (BP) status of patients. This study summarizes and evaluates the impact of the different criteria that have been used for BP-related variables in glaucoma research. Studies included in two meta-analyses that reviewed the role of BP in glaucoma were analyzed. Additional studies published after the search periods of the meta-analyses were also included. Criteria for the definition of arterial hypertension and other BP-related variables, such as mean arterial pressure (MAP) and mean ocular perfusion pressure (MOPP), were retrieved. Sixty-four studies were evaluated. One-third used 140 mmHg as a systolic BP cut-off to define hypertension, 20% used 160 mmHg and the remaining half used various other criteria. Less than 20% of studies reported MAP and/or MOPP. While eight of the ten studies reporting MAP used a correct formula that only happened for five of the eleven studies reporting MOPP. Using as an example average blood pressure values, incorrectly used formulas could have led to an overestimation of more than 100% of the expected values. Considerable heterogeneity exists in BP-related variables in glaucoma research and different definitions can lead to large disparities. Glaucoma research would benefit from a consensus regarding blood pressure parameters.

# Abstracts with no signposting

words = 167, signposting = 0

Biosimilars are increasing in economic importance. Just how similar a biosimilar needs to be to gain market approval is currently still decided on a per case basis. The authors try to shed light on one often cited critical quality attribute of monoclonal antibodies, namely charge heterogeneity. Using high resolution electrophoretic and chromatographic methods, the authors are able to separate and quantify the charge variant content of infliximab originator and three biosimilars. Additionally the authors quantified and compared the antigen binding affinity in an SPR based binding assay and analyzed the glycosylation pattern of all four of these infliximab biosimilar products. Even though the analytical methods did not show full similarity between originator and some biosimilars, all of the biosimilars have gained approval based on their clinical comparability. The authors would therefore argue, that analytical comparison is not always a good predictor for clinical interchangeability. Any future regulatory framework for the approval of biosimilars should reflect that the parameters chosen for analytical comparability have to be chosen carefully.

words = 333, signposting = 0

Lung ultrasound can accelerate the diagnosis of life-threatening diseases in adults with respiratory symptoms. Systematically review the accuracy of lung ultrasonography (LUS) for emergency diagnosis of pneumonia, acute heart failure, and exacerbation of chronic obstructive pulmonary disease (COPD)/asthma in adults. PubMed, Embase, Scopus, Web of Science, and LILACS (Literatura Latino Americana e do Caribe em Ciencias da Saude; until 2016) were searched for prospective diagnostic accuracy studies. Rutter-Gatsonis hierarchical summary receiver operating characteristic method was used to measure the overall accuracy of LUS and Reitsma bivariate model to measure the accuracy of the different sonographic signs. This review was previously registered in PROSPERO (Centre for Reviews and Dissemination, University of York, York, UK; CRD42016048085). Twenty-five studies were included: 14 assessing pneumonia, 14 assessing acute heart failure, and four assessing exacerbations of COPD/asthma. The area under the summary receiver operating characteristic curve of LUS was 0.948 for pneumonia, 0.914 for acute heart failure, and 0.906 for exacerbations of COPD/asthma. In patients suspected to have pneumonia, consolidation had sensitivity of 0.82 (95% confidence interval [CI] 0.74-0.88) and specificity of 0.94 (95% CI 0.85-0.98) for this disease. In acutely dyspneic patients, modified diffuse interstitial syndrome had sensitivity of 0.90 (95% CI 0.87-0.93) and specificity of 0.93 (95% CI 0.91-0.95) for acute heart failure, whereas B-profile had sensitivity of 0.93 (95% CI 0.72-0.98) and specificity of 0.92 (95% CI 0.79-0.97) for this disease in patients with respiratory failure. In patients with acute dyspnea or respiratory failure, the A-profile without PLAPS (posterior-lateral alveolar pleural syndrome) had sensitivity of 0.78 (95% CI 0.67-0.86) and specificity of 0.94 (95% CI 0.89-0.97) for exacerbations of COPD/asthma. Lung ultrasound is an accurate tool for the emergency diagnosis of pneumonia, acute heart failure, and exacerbations of COPD/asthma.

words = 251, signposting = 0

Almost 1.7 million people in the settler colonial nation of Canada identify as Indigenous. Approximately 52 per cent of Indigenous peoples in Canada live in urban areas. In spite of high rates of urbanization, urban Indigenous peoples are overlooked in health care policy and services. Because of this, although health care services are more plentiful in cities as compared to rural areas, Indigenous people still report significant barriers to health care access in urban settings. This qualitative study, undertaken in Prince George, Canada, examines perceived barriers to health care access for urban Indigenous people in light of how colonialism impacts Indigenous peoples in their everyday lives. The three most frequently reported barriers to health care access on the part of the 65 participating health care providers and Indigenous clients of health care services are: substandard quality of care; long wait times; and experiences of racism and discrimination. These barriers, some of which are common complaints among the general population in Canada, are interpreted by Indigenous clients in unique ways rooted in experiences of discrimination and exclusion that stem from the settler colonial context of the nation. Through the lenses of cultural safety and ethical space - frameworks developed by international Indigenous scholars in efforts to better understand and operationalize relationships between Indigenous and non-Indigenous individuals and societies in the context of settler colonialism - this study offers an understanding of these barriers in light of the specific ways that colonialism intrudes into Indigenous clients’ access to care on an everyday basis.

# Abstracts with some signposting

words = 290, signposting = 1

Cancer patients in Germany often face payments related to their disease or treatment which are not covered by their health insurance. The aim of this study was to analyze the amount of out-of-pocket payments (OOPPs) among cancer patients in Germany, to explore potential socioeconomic determinants of OOPPs, and to identify how cancer patients are burdened by these payments. Cancer ptients were consecutively enrolled in 16 clinics in Leipzig, Germany. Data on OOPPs for the past 3 months and on socioeconomic status were obtained at the end of their hospital stay (t0) and 3 (t1) and 15 months (t2) after t0. Financial burden was calculated by dividing the monthly OOPPs by the midpoint of the income category, and the perceived burden was assessed by using the financial difficulties scale of the EORTC QLQ-C30. A two-part regression model was used to estimate the determinants of OOPPs. At baseline (t0), 502 cancer patients participated in the study and provided data on OOPPs and socioeconomic status. The mean 3-month OOPPs were the following: 205.8 at baseline, 179.2 at t1, and 148.1 at t2. Compared to the lowest income group (< 500 monthly), all other income groups (500-999, 1000-1499, and 1500) had higher 3-month OOPPs of 52.3 (p = 0.241), 90.2 (p = 0.059), or 62.2 (p = 0.176). Financial burden at t0 was 6.4% (SD 9.2%) on average, 5.4% (SD 9.9%) at t1, and to 3.9% (SD 7.0%) of monthly income at t2. German cancer patients face relatively high OOPPs during their cancer journey. These payments may burden cancer patients, especially certain subgroups like low-income groups.

words = 258, signposting = 1

The purpose of this study is to observe the origin, course, length, diameter and termination of the ilio-lumbar artery (ILA) and its variations in south Indian population. The study was carried out in 34 sides in 19 cadavers (R-18, L-16) used for routine dissection for undergraduate students during the period of 2017-2018 in Department of Anatomy, JIPMER, Puducherry. On each side of the pelvis, the origin, length, diameter, course of the ILA and its relations to the surrounding anatomical structures was observed and documented. Out of 34 formalin-fixed pelvis halves of human cadavers, the ILA originated from the common iliac artery (CIA), the trunk of the internal iliac artery (IIA) and posterior division of IIA in around 0%, 61.76%, and 38.23% of the cases, respectively. In all the cadavers, the ILA passes in between the obturator nerve anteriorly and the lumbosacral trunk posteriorly and ILA terminates by giving iliac and lumbar arteries medial to the psoas major muscle. In our study, we observed that the mean distance between the origin of ILA and the bifurcation of the CIA is significantly less than the study done previously. The knowledge about the variations in the origin, course, length, diameter, and termination of ILA is very important to the surgeon to avoid iatrogenic injury during surgeries in lumbosacral region and moreover, it will be easy to access the ILA for clamping or embolization. A similar study can be done with more sample size in different population to increase the knowledge base regarding ILA anatomy.

words = 206, signposting = 3

Ehlers-Danlos syndrome (EDS) is a rare genetic connective tissue disorders, but the vascular type (type IV) typically poses the greatest risk to patients. We report a case of multiple cranial artery dissection, which was successfully treated with carotid artery stenting. A 50-year-old woman presented with recurrent severe headaches caused by bilateral vertebral artery dissections that were treated conservatively at our hospital. However, she developed right cervical pain and dizziness at 3 days after admission, and a magnetic resonance angiogram revealed dissection of the right internal carotid artery. Because the dissected portion of the artery had narrowed, a stent was placed. The pearl and string formations in the bilateral vertebral arteries then improved spontaneously. Subsequently, the patient was diagnosed with EDS type IV via a skin biopsy, and review of her family history revealed that multiple family members had suffered from subarachnoid hemorrhages. No neurologic deficits were observed, and the patient was discharged without further events at 30 days after admission. It is extremely rare for multiple artery dissections to occur at the same time. EDS type IV should be considered as an important differential diagnosis in similar cases, even in adult patients without a known history of connective tissue disease or vascular complications.

# Abstracts with no narrator

words = 263, narrator = FALSE

Hydrogen peroxide (H2O2) acts as a signaling molecule in cells by oxidising cysteine residues in regulatory proteins such as phosphatases, kinases and transcription factors. It is unclear exactly how many of these proteins are specifically targeted by H2O2 because they appear too unreactive to be directly oxidised. One proposal is that peroxiredoxins (Prxs) initially react with H2O2 and then oxidise adjacent proteins via a thiol relay mechanism. The aim of this study was to identify constitutive interaction partners of Prx2 in Jurkat T-lymphoma cells, in which thiol protein oxidation occurs at low micromolar concentrations of H2O2. Immunoprecipitation and proximity ligation assays identified a physical interaction between collapsin response mediator protein 2 (CRMP2) and cytoplasmic Prx2. CRMP2 regulates microtubule structure during lymphocyte migration and neuronal development. Exposure of Jurkat cells to low micromolar levels of H2O2 caused rapid and reversible oxidation of CRMP2, in parallel with Prx2 oxidation, despite purified recombinant CRMP2 protein reacting slowly with H2O2 (k~1M-1s-1). Lowering Prx expression should inhibit oxidation of proteins oxidised by a relay mechanism, however knockout of Prx2 had no effect on CRMP2 oxidation. CRMP2 also interacted with Prx1, suggesting redundancy in single knockout cells. Prx 1 and 2 double knockout Jurkat cells were not viable. An interaction between Prx2 and CRMP2 was also detected in other human and rodent cells, including primary neurons. However, low concentrations of H2O2 did not cause CRMP2 oxidation in these cells. This indicates a cell-type specific mechanism for promoting CRMP2 oxidation in Jurkat cells, with insufficient evidence to attribute oxidation to a Prx-dependent redox relay.

words = 246, narrator = FALSE

Anticholinergic drug use has been associated with a risk of central and peripheral adverse effects. There is a lack of information on anticholinergic drug use in persons with diabetes. The aim of this study is to investigate anticholinergic drug use and the association between anticholinergic drug use and self-reported symptoms in older community-dwelling persons with and without diabetes. The basic population was comprised of Finnish community-dwelling primary care patients aged 65 and older. Persons with diabetes were identified according to the ICD-10 diagnostic codes from electronic patient records. Two controls adjusted by age and gender were selected for each person with diabetes. This cross-sectional study was based on electronic primary care patient records and a structured health questionnaire. The health questionnaire was returned by 430 (81.6%) persons with diabetes and 654 (73.5%) persons without diabetes. Data on prescribed drugs were obtained from the electronic patient records. Anticholinergic drug use was measured according to the Anticholinergic Risk Scale. The presence and strength of anticholinergic symptoms were asked in the health questionnaire. The prevalence of anticholinergic drug use was 8.9% in the total study cohort. There were no significant differences in anticholinergic drug use between persons with and without diabetes. There was no consistent association between anticholinergic drug use and self-reported symptoms. There is no difference in anticholinergic drug use in older community-dwelling persons with and without diabetes. Anticholinergic drug use should be considered individually and monitored carefully.

words = 185, narrator = FALSE

Agalactia is an infectious and contagious disease of small ruminants caused by Mycoplasma agalactiae (M. agalactiae). Although different microorganism strains contribute to this disease, M. agalactiae is known as the most prominent causative agent. Therefore, this study aimed to investigate the rate of M. agalactiae involvement in contagious agalactia in the southeast region of Iran. Sampling was performed from milk, conjunctiva, ear lesions, and joints exudate of suspicious sheep and goat flocks according to the reports of Iran Veterinary Organization. The presence of Mycoplasma and its species, namely M. agalactiae, was evaluated through microbial culture and polymerase chain reaction (PCR) techniques. The detected microorganisms were confirmed to be Mycoplasma and M. agalactiae by the PCR amplification of 16S rRNA and lipoprotein target genes. According to the findings of present study, 14.8% and 36.0% of the samples were diagnosed as positive for Mycoplasma by culture and PCR, respectively. Moreover, the incidence of M. agalactiae was determined as 6.1% using the specific PCR method. Therefore, it is recommended to identify the other species of Mycoplasma in small ruminant samples involved with contagious agalactiae disease.

# Abstracts with narrator

words = 206, narrator = TRUE

The health of Canadians depends on effective leadership among health care providers to facilitate the translation of new health discoveries into clinical practice. Clinician-scientists play an important role in bridging the gap between research and clinical practice, and require effective leadership skills to advance clinical practice successfully. To accelerate the leadership development in clinician scientist trainees, with the aim of developing strong leaders in administration and health advocacy, the Leaders in Medicine (LIM) training program at the University of Calgary created an Executive Leadership Coaching Program involving three phases: 1) an evidence-based evaluation tool, the Core Values IndexTM (CVI), that was used to identify the key drivers behind how individuals can be most effective in making their contribution; 2) small group workshops to debrief the results of the CVI assessment; and 3) one-on-one executive coaching sessions to facilitate the discovery, development and deployment of individual leadership capabilities. Coaching in leadership strategies enables clinician-scientist trainees to lead, influence, manage and deliver science-based improvements into the practice of medicine. We strongly recommend that other Canadian scientist-clinician training programs consider opportunities like the ones we offer to our LIM trainees. This training has important implications for the delivery of healthcare in Canada.

words = 260, narrator = TRUE

Preoperative prediction of lymph node (LN) status is of crucial importance for appropriate treatment planning in patients with colorectal cancer (CRC). In this study, we sought to develop and validate a non-invasive nomogram model to preoperatively predict LN metastasis in CRC. Development of the nomogram entailed three subsequent stages with specific patient sets. In the discovery set (n=20), LN-status-related miRNAs were screened from high-throughput sequencing data of human CRC serum samples. In the training set (n=218), a miRNA panel-clinicopathologic nomogram was developed by logistic regression analysis for preoperative prediction of LN metastasis. In the validation set (n=198), we validated the above nomogram with respect to its discrimination, calibration and clinical application. Four differently expressed miRNAs (miR-122-5p, miR-146b-5p, miR-186-5p and miR-193a-5p) were identified in the serum samples from CRC patients with and without LN metastasis, which also had regulatory effects on CRC cell migration. The combined miRNA panel could provide higher LN prediction capability compared with computed tomography (CT) scans (P<.0001 in both the training and validation sets). Furthermore, a nomogram integrating the miRNA-based panel and CT-reported LN status was constructed in the training set, which performed well in both the training and validation sets (AUC: 0.913 and 0.883, respectively). Decision curve analysis demonstrated the clinical usefulness of the nomogram. Our nomogram is a reliable prediction model that can be conveniently and efficiently used to improve the accuracy of preoperative prediction of LN metastasis in patients with CRC.

words = 267, narrator = TRUE

Since the growth traits of chickens are largely related to the production of meat and eggs, it is definitely important to understand genetic basis of growth traits. Although many quantitative trait loci (QTLs) that affect growth traits have recently been reported in chickens, little is known about genetic architecture of growth traits across all growth stages. Therefore, we conducted a longitudinal QTL study of growth traits measured from 0 to 64 weeks of age using 134 microsatellite DNA markers on 26 autosomes from 406 F2 females, which resulted from an intercross of Oh-Shamo and White Leghorn chicken breeds. We found 27 and 21 independent main-effect QTLs for body weight and shank length, respectively. Moreover, 15 and 4 pairs of epistatic QTLs were found for body weight and shank length, respectively. Taken together, the present study revealed 48 QTLs for growth traits on 21 different autosomes, and these loci clearly have age-specific effects on phenotypes throughout stages that are important for meat and egg productions. Approximately 60% of Oh-Shamo-derived alleles increased the phenotypic values, corresponding to the fact that Oh-Shamo traits were higher than those of White Leghorn. On the other hand, remaining Oh-Shamo alleles decreased the phenotypic values. Our results clearly indicated that the growth traits of chickens are regulated by several main and epistatic QTLs that are widely distributed in the chicken genome, and that the QTLs have age-dependent manners of controlling the traits. This study implies importance of not only cross-sectional but also longitudinal growth data for further understanding of the complex genetic architecture in animal.

# Abstracts with no noun chunks

words = 259, noun\_chunks = 0

Recent three-dimensional constructive interference in steady state (3D-CISS) studies have shown that the involved arteries decrease not only their own luminal caliber but also outer diameter in moyamoya disease (MMD). This study was aimed to clarify how the outer diameter of the involved arteries serially change during disease progression in MMD using qunatitaive 3D-CISS imaging. This study included 8 hemispheres of 7 patients with MMD whose Suzuki angiographic stage spontaneously progressed during follow-up. Using 3D-CISS, the outer diameter was quantified serially in supraclinoid portion of internal carotid artery (C1), the horizontal portion of middle and anterior cerebral arteries (M1 and A1, respectively) before and after the spontaneous disease progression, and also 3-12 months later. In 7 hemispheres with early disease stage (stage 1-3) at initial presentation, the involved arteries decreased in their outer dimater in parallel with luminal stenosis during spontaneous disease progression in the C1 (P = 0.005), M1 (P < 0.0001), and A1 portions (P = 0.0048). In the remaining 1 hemisphere with stage 4 at initial presentation, 3D-CISS imaging showed no significant change in the outer diameter of C1, M1, and A1 segments during disease progression. Using quantitative 3D-CISS imaging, this study clearly shows that the involved arteries serially decrease in their own outer diameter in parallel with luminal stenosis during spontaneous disease progression in early stages of MMD (stage 1-3). This phenomenon has not been reported previously and may result from the pathognomic mechanisms underlying the development of MMD.

words = 202, noun\_chunks = 0

Cortical interneurons are born in the ventral forebrain and migrate tangentially in two streams at the levels of the intermediate zone (IZ) and the pre-plate/marginal zone to the developing cortex where they switch to radial migration before settling in their final positions in the cortical plate. In a previous attempt to identify the molecules that regulate stream specification, we performed transcriptomic analysis of GFP-labelled interneurons taken from the two migratory streams during corticogenesis. A number of cadherins were found to be expressed differentially, with Cadherin-8 (Cdh8) selectively present in the IZ stream. We verified this expression pattern at the mRNA and protein levels on tissue sections and found approximately half of the interneurons of the IZ expressed Cdh8. Furthermore, this cadherin was also detected in the germinal zones of the subpallium, suggesting that it might be involved not only in the migration of interneurons but also in their generation. Quantitative analysis of cortical interneurons in animals lacking the cadherin at E18.5 revealed a significant increase in their numbers. Subsequent functional in vitro experiments showed that blocking Cdh8 function led to increased cell proliferation, with the opposite results observed with over-expression, supporting its role in interneuron generation.

words = 282, noun\_chunks = 0

Enteric duplication is a congenital anomaly with varied clinical presentation that requires surgical resection for definitive treatment. This had been approached with laparotomy for resection, but has changed with minimally invasive technique. The purpose of our study was to determine the demographics, natural history, operative interventions, and outcomes of pediatric enteric duplication cysts in a contemporary cohort. With IRB approval, we performed a retrospective chart review of all patients less than 18 years old treated for enteric duplication between January 2006 and August 2016. Demographics, patient presentation, operative technique, intraoperative findings, hospital course, and follow-up were evaluated. Descriptive statistical analysis was performed; all medians were reported with interquartile range (IQR). Thirty-five patients underwent surgery for enteric duplication, with a median age at surgery of 7 months (2.5-54). Median weight was 7.2 kg (6-20). Most common patient presentations included prenatal diagnosis 37% (n = 13). Thirty-four patients (97%) had their cyst approached via minimally invasive technique (thoracoscopy or laparoscopy) with only three (8%) requiring conversion to an open operation. Median operative time was 85 min (54-133) with 27 (77%) patients requiring bowel resection. Median length of bowel resected was 4.5 cm (3-7). Most common site of duplication was ileocecal (n = 15, 42%). Postoperative median hospital length of stay was 3 days (2-5) and median number of days to regular diet was 3 (1-4). No patients required re-operation during their hospital stay. Median follow-up was 25 days (20-38). In our series, most enteric duplication cysts were diagnosed prenatally. These can be managed via minimally invasive technique with minimal short-term complications, even in neonates and infants.

# Abstracts with noun chunks

words = 271, noun\_chunks = 1

This study aimed to investigate the effects of media reporting of a homicide committed by a patient with schizophrenia on the knowledge about and stigma regarding psychosis among the general Hong Kong population. The effects of using the term ‘schizophrenia (jing-shen-fen-lei)’ in the news on the perceptions of the new Chinese term ‘psychosis (si-jue-shi-tiao)’ were explored. Random telephone surveys of the general Hong Kong population were conducted in April 2009 (1 month before the incident) and June 2009 (1 week after the incident). Stigma was measured with the Link’s Perceived Discrimination-Devaluation Scale (LPDDS). Knowledge about the symptoms, treatment and belief of dangerousness of psychosis were assessed. The emotional reaction of the public to the news was explored, and its effects on knowledge and stigma were studied. Overall, 1016 and 506 participants completed the two surveys. More participants in the post-incident survey agreed that people with psychosis are dangerous to the public (2 = 4.934, p = 0.026). However, no significant differences were observed in the LPDDS scores. Participants who reported a high level of distress related to the news were more likely to perceive people with psychosis as dangerous to the public (2 = 6.738, p = 0.009). Women and older people reported greater distress. These findings suggest that media reporting of violent incidents involving people with schizophrenia increases the public belief in the dangerousness of people with psychosis but not the overall stigma. Further studies of the differential effects of violence reporting on public perceptions about people with psychosis and schizophrenia are warranted.

words = 199, noun\_chunks = 3

Revision total knee arthroplasty (RTKA) has poorer results than primary total knee arthroplasty (TKA), and the prostheses are invasive and cause strain-shielding of the bones near the knee. This paper describes an RTKA system with extracortical fixation. It was hypothesised that this would reduce strain-shielding compared with intramedullary fixation. Twelve replica tibiae were prepared for full-field optical surface strain analysis. They were either left intact, implanted with RTKA components with cemented intramedullary fixation stems, or implanted with a novel design with a tibial tray subframe supported by two extracortical fixation plates and screw fixation. They were loaded to simulate peak walking and stair climbing loads and the surface strains were measured using digital image correlation. The measurements were validated with strain gauge rosettes. Compared to the intact bone model, extracortical fixation reduced surface strain-shielding by half versus intramedullary fixation. For all load cases and bone regions examined, the extracortical implant shielded 8-27% of bone strain, whereas the intramedullary component shielded 37-56%. The new fixation design, which offers less bone destruction than conventional RTKA, also reduced strain-shielding. Clinically, this design may allow greater rebuilding of bone loss, and should increase long-term fixation.

words = 281, noun\_chunks = 5

The neuromuscular blocking agent (NMBA) rocuronium is a relevant cause of perioperative hypersensitivity (POH) with a significant risk of diagnostic error. Recently, it has been suggested to reclassify hypersensitivity to NMBA as type A reactions resulting from off-target occupation of the nonimmune MRGPRX2 receptor. To investigate whether basophil activation experiments can benefit diagnosis and add to the insights in the pathomechanisms of rocuronium hypersensitivity. A total of 140 patients with a suspected POH to rocuronium in whom peak tryptase was available had complete diagnostic workup for all potential culprits including triple confirmatory testing with skin tests, basophil activation test (BAT), and quantification of specific IgE (sIgE) antibodies to rocuronium and morphine. To further analyze the clinical relevance of sIgE antibodies, quantitative basophil inhibition experiments were performed by coincubation of the cells with rocuronium and morphine, an opiate known to harbor a substituted ammonium structure. Diagnosis of rocuronium hypersensitivity was established in 72 of 140 patients (51.4%), of whom 65 (90.3%) demonstrated mast cell activation. Of the 72 patients, 64 displayed a positive skin test, 8 (11.1%) had their diagnosis documented only by BAT. Coincubation of morphine and rocuronium induced a dose-dependent inhibition of BAT with rocuronium that was restricted to 4 of 6 patients with IgE reactivity to rocuronium and/or morphine. BAT can benefit diagnosis of rocuronium hypersensitivity. As basophils barely express MRGPRX2 and BAT rocuronium can be inhibited by morphine, we believe that hypersensitivity to rocuronium still mainly results from IgE/high-affinity receptor for sIgE (Fc mu RI)-dependent effector cell activation. However, it cannot be excluded that in a few patients rocuronium hypersensitivity results from off-target occupation of the MRGPRX2 receptor.