Conclusions We found a relevant participation of mitochondrial metabolism in the PPI network that has not been mentioned before as a pain onset in CRPS, but at the same time presence of pain has been reported in patients with mitochondrial disease, the essential role that it could play in the sudden development of pain in CRPS needs to be further analyzed.

Abstract #36241 Table 1 Data comparison

Abstract #36241 Table 2 Impacts on the RA training in Oxford due to COVID-19 pandemic

Abstract #36241 Table 3 Comments by respondents underwent the formal RA training in Oxford during phase 2
Abstracts

Conclusions Our survey suggested high quality of RA training was provided in a supportive environment, rising to the challenge of Covid-19 Pandemic [2]. Some respondents significantly enhanced their non-technical skills leading to successful career progression. The new 2021 RCoA Training Curriculum emphasizes a wide range of ultrasound guided RA training during stage 2 [3]. It is too early to determine the effect of new curriculum on RA training locally and nationally, which needs further evaluation.

#36260 MACHINE LEARNING TO PREDICT POSTOPERATIVE PAIN AND OPIOID OUTCOMES: PROMISE OR PITFALL?
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Application for ESRA Abstract Prizes: I don’t wish to apply for the ESRA Prizes

Background and Aims Machine learning enables complex patient data to be distilled into predictive diagnostic tools. This review identified studies that applied machine learning to predict acute, subacute, or chronic pain or opioid use after any surgical procedure.

Methods We searched PubMed using the following search strategy and terms: 'machine learning' OR 'artificial intelligence' AND 'pain' OR 'opioid' AND 'surgery' OR 'postoperative' AND 'predict.' The inclusion criteria were literature written in English that used machine learning and/or artificial intelligence to predict postoperative and/or opioid use after surgery. The exclusion criteria were reviews; protocol papers; commentaries; not a pain or opioid-related outcome; not a postoperative outcome; diagnostic or measurement tool.

Results Thirty-nine studies were included (figure 1). Nineteen studies (48.7%) utilized machine learning to predict the outcome of chronic postoperative pain or function after any surgical procedure, followed by 12 studies (30.8%) utilizing machine learning to predict chronic postoperative opioid use. The most common algorithms were GBDT (n = 28), random forest algorithms (n = 23) and regularization algorithms (n = 22). 27 studies (69.2%) utilized preoperative pain as a predictor in the initial model. 22 studies (69.2%) utilized preoperative pain as a predictor in the final model. 25 studies (64.1%) utilized preoperative opioid use as a predictor in the initial model. 19 studies (48.7%) utilized machine learning to predict opioid use after surgery. The inclusion criteria were literature written in English that used machine learning and/or artificial intelligence to predict postoperative and/or opioid use after surgery. The exclusion criteria were reviews; protocol papers; commentaries; not a pain or opioid-related outcome; not a postoperative outcome; diagnostic or measurement tool.

Conclusions Machine learning can contribute to personalized perioperative pain management approaches. Patient-reported variables are important, salient predictors of acute, subacute, or chronic pain or opioid use after any surgical procedure.


#35044 A QUALITATIVE ANALYSIS OF INTRAOPERATIVE ACUPUNCTURE FOR NOSOCOMEOFobia: THE UNSEEN PATIENT
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Background and Aims Nosocomophobia, a type of PTSD, is an extreme fear of hospitals. Hospital phobia is usually caused by a traumatic hospital experience. If untreated, nosocomophobia can hinder medical care. There is little research on how nosocomophobia affects elective surgery and how acupuncture can help patients cope with it. Using the transactional model of stress and coping, this qualitative case study examines acupuncture’s role in nosocomophobia patients’ elective surgery appraisal process.

Methods Individual interviews were conducted with participants to inquire about their nosocomophobia and prior hospital experiences. Six reviewers coded the interview transcripts line-by-line. Reviewers labeled meaningful words, phrases, and sentences and produced over 600 codes. All reviewers discuss and identify themes by grouping similar codes and resolving discrepancies. A thematic analysis was used to develop final themes for this study. The coding process was conducted in Dedoose.

Results Sophie had avascular necrosis in both hips and suffered PTSD from a previous traumatic event. Intraoperative acupuncture calmed her hospital anxiety, allowing her to have both hips replaced. Olivia has PTSD and a hospital phobia since age 12. Acupuncture reduced her anxiety about a total knee arthroscopy. Thematic analysis showed how nosocomophobia impacted patients’ views of surgery and distinguished between their unique fear rationale. The transactional model of stress and coping illustrated patients’ appraisal process from surgery (stressor) to coping (acupuncture) to reappraisal (mental state).

Abstract #35044 Figure 1 A theoretical map of the appraisal process