Introduction: Surgery, as a cause of chronic pain, is unique because the injury is planned and predictable [1]. We report here preliminary results of an ongoing systematic review of clinical trials evaluating pharmacotherapy to prevent chronic postsurgical pain in adults.

Methods: Our review criteria and search strategy included double-blind, placebo-controlled, randomized adult trials of one or more perioperatively administered drugs that measured pain at least three months after surgery. All reviewed trials are graded using the Cochrane risk of bias tool. The primary outcome was defined as the proportion of participants reporting any pain at, or referred to, the anatomical site of the procedure three months after the procedure. The Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, and PaPaS Trials Register were the databases used for the search strategy. Other trials are currently being searched from reference lists of relevant articles in order to complete this review.

Results: The first iteration of the literature search yielded, thus far, 37 trials that met inclusion and evaluated impact on chronic postsurgical pain following administration of: gabapentin or pregabalin (15 trials), NMDA antagonists (14), opioids (2), NSAIDs (2), corticosteroids (2), and single trials of topical local anesthesia, and allopurinol. Twelve studies followed the patients for 3 months; 17 studies for at least six months; 7 followed the patients for one year and only one for two years.

Discussion: Results of this ongoing systematic review have revealed evidence that NMDA antagonists and gabapentinoids may play a role in reducing chronic pain after surgery. Imminent completion of the trial search and meta-analysis of combinable studies will serve to quantify the impact of these two drug classes on the development of chronic postsurgical pain.