

**Randomized Double Blinded Study Comparing Timing of PEC Block  
for Post-Operative Pain in Bilateral Mastectomy Patients**

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The current standard of care at the [REDACTED] is to receive a pectoralis nerve block PEC I/II block prior to surgery for mastectomy and reconstruction cases. We will compare whether patients will have better pain control if they were to receive (PEC I/II block) before surgery or after the mastectomy. Patients undergoing mastectomies at the [REDACTED] receive general anesthesia and a regional block for pain control. The most commonly employed regional anesthetic technique is a PECS I/II block to anesthetize the pectoral, intercostobrachial, third to sixth intercostal and long thoracic nerves. The PECS I/II blocks are pectoralis field blocks where local anesthetic medication is injected under ultrasound guidance between the tissue planes of pectoralis major and minor muscles (PECS I) and in the plane of the serratus anterior muscle at the level of the third rib (PECS II). We will randomize patients into two groups and blind the patient and the research assistant collecting the data. Group I will have the block performed after induction of general anesthesia and prior to surgical incision by the anesthesiologist. Group II will have the block administered by the surgeon after mastectomy is performed and before reconstruction. On the day of surgery, we will have patients fill out forms to measure pain catastrophizing and depression and anxiety. We would like to measure if there is any difference in postoperative pain scores (visual analogue scale)-immediately post-surgery in post-anesthesia care unit(PACU), and then on the admission unit every 4 hours for the first twenty four hours or on discharge (whichever time-point occurs sooner) and we will collect the average pain scale of the day on post-op day (POD) 2,3,5 and 7 via patient communication electronic message in RedCap. We will also measure intraoperative and post-operative narcotic use (converted to morphine equivalents), post-operative nausea and vomiting, length of (PACU) stay. In addition, we will collect pain scores and pain catastrophic scale on POD 14 after surgery at their clinic visits to the surgeon. Other data collected will include time taken to perform block, post-operative infection rate and post-operative flap necrosis rate.