

The Southern Cross Block (SCB) intraoperative technique for mastectomy analgesia

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Breast cancer in New Zealand

- 7th highest incidence of breast cancer worldwide
- Affects 1 in 9 women in New Zealand
- Māori wahine suffer highest incidence of any ethnic group worldwide



Surgical management and post-mastectomy pain

- **56% of patients with breast cancer underwent mastectomy in Auckland region in early 2000s**
- **~1600 mastectomies were completed in 2021**
- **Post-mastectomy pain (PMP) is a common post-operative complication, affecting up to 60% of patients**

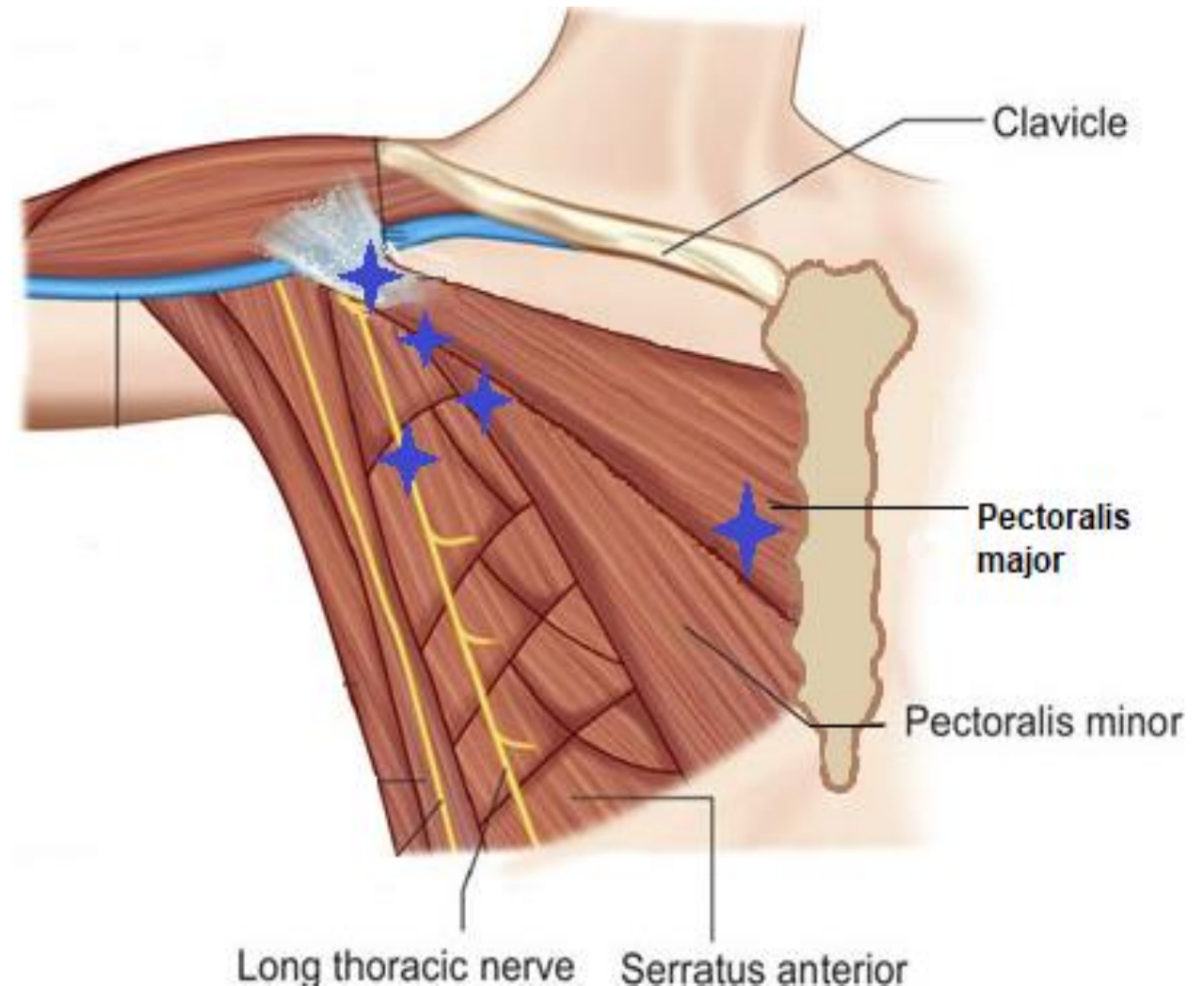
Current regional anaesthesia modalities post mastectomy

- Thoracic epidural block
- Thoracic paravertebral block
- Regional block via pectoral nerve-1 block (PECs I block)
- Regional block via pectoral nerve-2 block (PECs II block)
- Field infiltration with local anesthetic agents

The Southern Cross Block

40mls of diluted bupivacaine infiltrated into 5 areas:

- **Pectoralis major tendon (10mls)**
- **Interpectoral groove (10mls)**
- **Pectoralis minor tendon (5mls)**
- **Nerve to serratus and intercostal nerves (5mls)**
- **Medial wound (10mls)**



Methodology

- **Inclusion:** 96 patients underwent mastectomy for breast cancer in a single centre by a single surgeon from Jan 2020 to Dec 2021
- **Exclusion:** Patients receiving any type of blocks other than SCB
Reconstructive operations were not included in the study

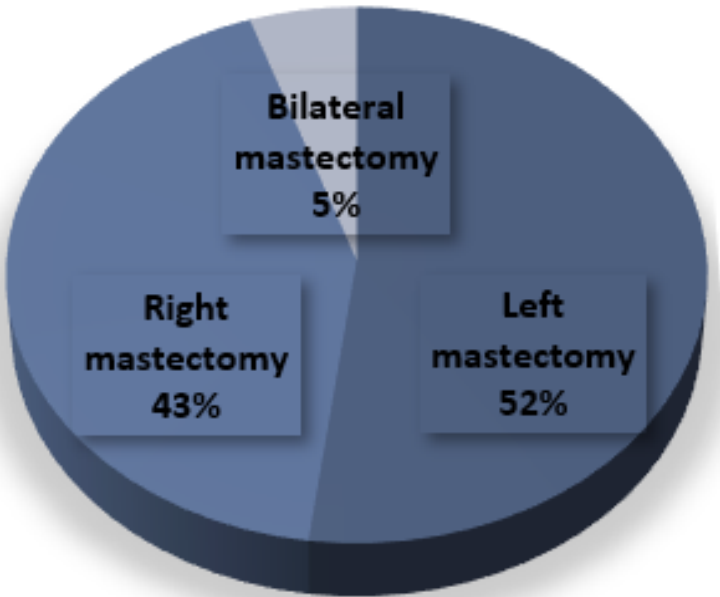
Outcomes

- Post-operative pain scores at rest and on movement
- Time and type to first analgesic administered post-operatively
- Type and total dose of analgesics administered in first 24 hours
- Analgesia administered on discharge
- Return to theatre and readmissions

Cohort characteristics

- 95 females and 1 male
- 29-89 years old (mean 58.57)
- BMI 17-52 (mean 30.67)
- Mean operating time 1.12 hours
- Block administration < 3 minutes

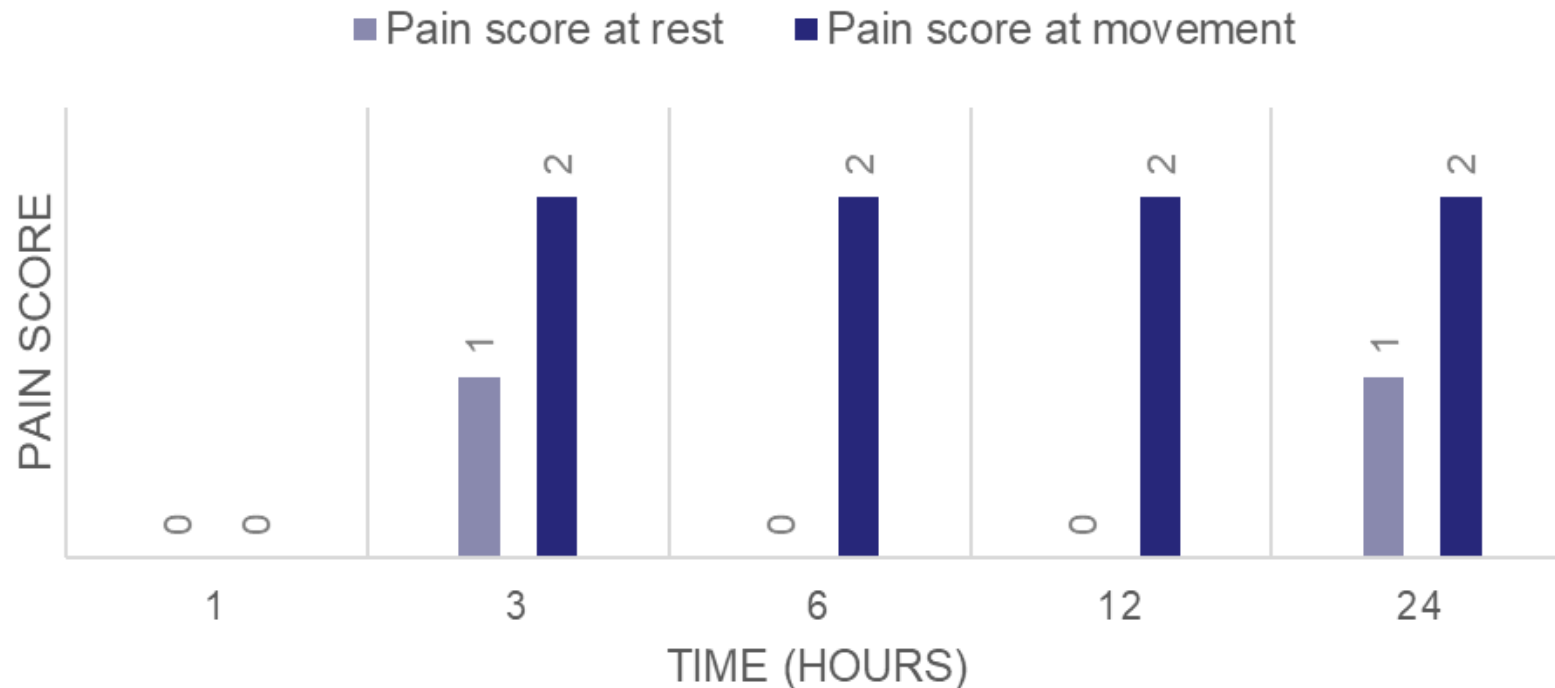
European	40.6%
Māori	17.7%
Pacific Peoples	15.6%
Asian	14.6%
Other	11.5%



No axillary surgery	7.3%
SNB/Sample	58.3%
Axillary dissection (level 2 or 3)	34.4%

Results – analgesics and pain scores

- **First analgesic: Paracetamol in 67.7% of patients**
- **28.1% of patients required second-line analgesia within the first 24 hours**
- **Average post-operative commencement of analgesics at 4.8 hours**



Results – opioid consumption

- Average oral morphine equivalent of 9.7mg over inpatient stay
- 12.5% of patients required a short course of opioids on discharge



Paracetamol	8.42 g
NSAID	94 mg
Tramadol	37 mg
Oxynorm	0.4 mg
Oxycodone	1.32 mg
Sevredol	1.8 mg
Morphine	3.07 mg
Average post-operative analgesic consumption over 24 hours	

Discussion

PECS II	SCB
Requires US guidance	Under direct visualisation
Risk of intravascular injury and pneumothorax	Significantly lower risk of vascular injury

Conclusion

The SCB, is quicker, safer, more accurate, well tolerated, with excellent analgesic effect post mastectomy

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Thank you