Het PECS block
PECS 1: BORST regio. (vb. tumorectomies)

PECS 1+2: BORST + OKSEL regio (vb. ME+/ - OE, TOS, ICD).

Techniek: WAAR
Anatomie:
1. Lateral Pectoral Nerve
2. Medial Pectoral Nerve
3. Intercostobrachial Nerve
4. Thoracodorsal Nerve
5. Long Thoracic Nerve

II – VI: Lateral cutaneous branches of intercostal nerves II to VI (with II being the intercostobrachial nerve, also marked as number 3).

1. LRA met target borst en oksel
Techniek: HOE
Techniek: ECHOBEELD

Succutaneous fat tissue

Pectoralis major muscle (PMm)

Site of injection 10 ml

Pectoralis minor muscle (Pmm)

Site of injection 20 ml

Serratus Anterior muscle (Sam)

Needle: injection of 10 ml levobupivacain 0,25%

Needle: injection of 20 ml levobupivacain 0,25%

Serratus Anterior muscle (Sam) (white arrow): the injected fluid is compressing the muscle

Third rib

20ml of levobupivacain injected

Serratus Anterior muscle (Sam) (white arrow): the injected fluid is compressing the muscle

Third rib
### PECS blok: impact op alle betrokken partijen

<table>
<thead>
<tr>
<th>Patient</th>
<th>Anesthesiologist</th>
<th>Surgical team</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ High patient satisfaction: low VAS scores</td>
<td>▪ Fast learning curve</td>
<td>▪ Minimal time to apply</td>
</tr>
<tr>
<td>▪ Reduced opioid consumption</td>
<td>▪ Structures are superficial and far from neuraxis</td>
<td>▪ Easy to implement in daily practice</td>
</tr>
<tr>
<td></td>
<td>▪ No additional investments required</td>
<td>▪ No impact on surgical site</td>
</tr>
</tbody>
</table>

Bron: Large scale application of the PECS block, an alternative to the paravertebral block in breast cancer surgery. B. Versyck and P. Van Houwe. Presented @ ASRA 2014
PECS vs PVB
A French Nationwide Survey on Anesthesiologist-Perceived Barriers to the Use of Epidural and Paravertebral Block in Thoracic Surgery

Christian Duale, MD, PhD, Guillaume Gayraud, MB, Hammou Taheri, MB, Olivier Bastien, MD, PhD, Pierre Schoeffler, MD


A. Barriers to Epidural Analgesia in the Surgical Ward

Do you feel limited in your practice by:
- the risk of the technique?
- the complexity of the technique?
- the time consumption of the technique?
- the cost of the technique?
- insufficient nursing supervision?
- insufficient training for nurses?
- the reluctance of the surgeons?
- the reluctance of the nurse manager(s)?
- the reluctance of the hospital manager(s)?
- other (free field).

B. Barriers to Paravertebral Analgesia in the Surgical Ward

Same questionnaire as for A.

The scope of the survey:
~ yearly practice of 28 000 thoracoscopies & thoracotomies.
~ yearly number of thoracic procedures was 240 per center (150-400)
~ number of full-time-equivalent anesthesiologists per center was 5 (4-9),
~ estimated yearly number of thoracic procedures per anesthesiologist physician was 48 (21-96).

The number of anesthesiologists replying I don’t know or no opinion was high for all items relating to PVB (19.0% to 33.3%, 25% overall), compared with those for EDB (1.2% to 11.3%, 4.9% overall).
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Christian Dualé, MD, PhD*†, Guillaume Gayraud, MB‡, Hammou Taheri, MB§, Olivier Bastien, MD, PhD¶║,**, Pierre Schoeffler, MD††


<table>
<thead>
<tr>
<th>Perceived barriers to use</th>
<th>Epidural</th>
<th>Paravertebral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk</td>
<td>83.3%</td>
<td>29.3%</td>
</tr>
<tr>
<td>Complexity</td>
<td>63.4%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Time consumption</td>
<td>65.3%</td>
<td>17.3%</td>
</tr>
<tr>
<td>Cost</td>
<td>44.9%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Supervision</td>
<td>33.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Training</td>
<td>16.5%</td>
<td>20.9%</td>
</tr>
<tr>
<td>Surgeons</td>
<td>3.8%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Nurse manager</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Hospital manager</td>
<td>2.4%</td>
<td>28.2%</td>
</tr>
</tbody>
</table>

⇒ PVB te moeilijk voor borstchirurgie?
⇒ PVB te moeilijk voor CDC-patiënten?
⇒ PVB te moeilijk voor snelle implementatie in dagdagelijkse praktijk?