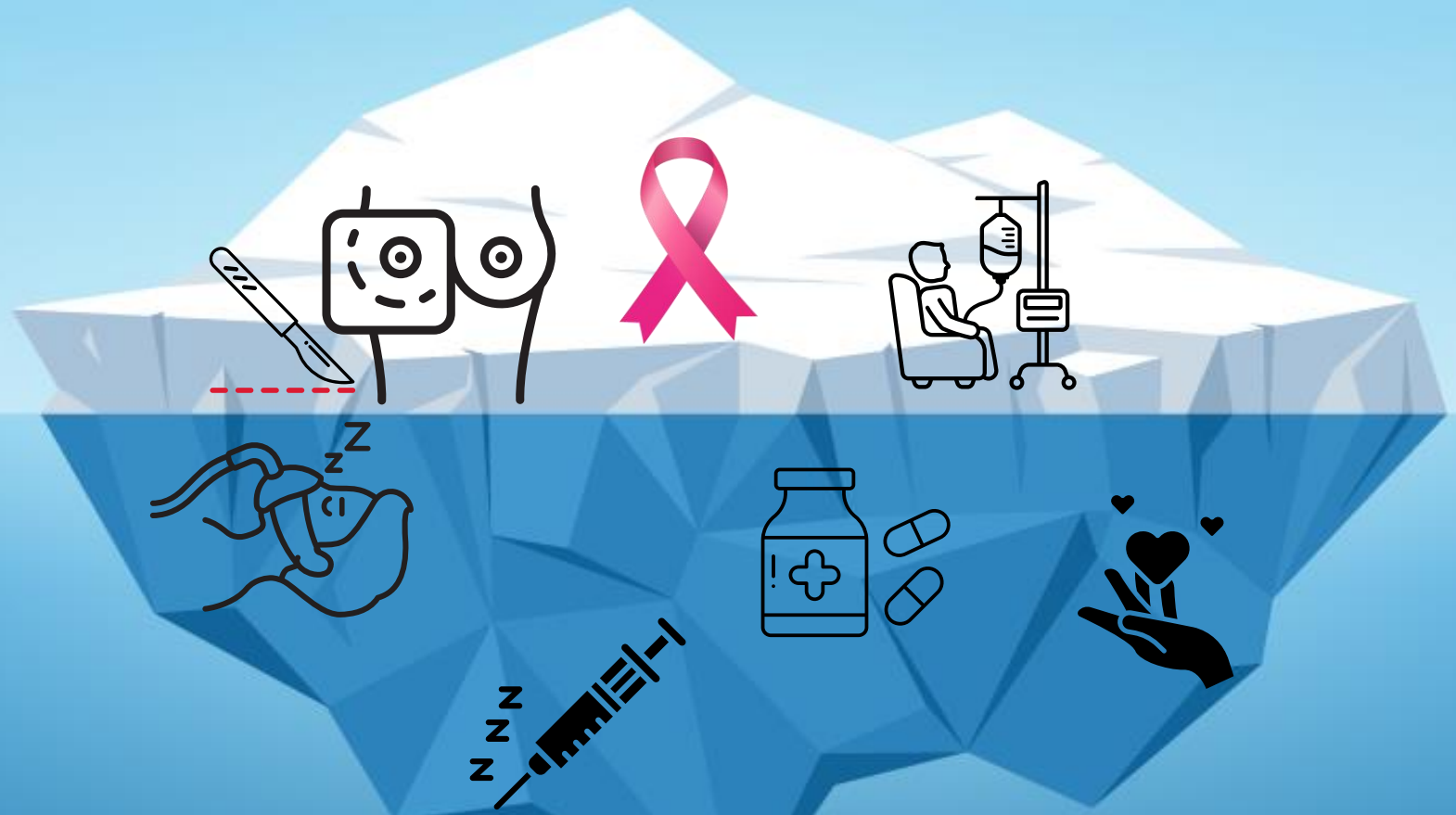
Niet zichtbaar, wel essentieel

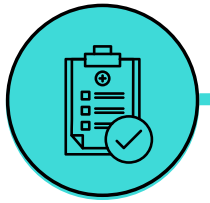
de rol van anesthesie in de multidisciplinaire aanpak van borstkanker



Hoe draagt anesthesie bij aan veilige, comfortabele én geïntegreerde zorg?

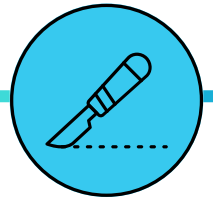
HET ANESTHESIETRAJECT BIJ BORSTKANKER: EEN TIJDSLIJN

PRE



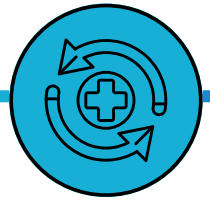
- Algemene conditie en medische VG
- Thuismedicatie
- Neo adjuvante behandeling
- RF chronische pijn
- Bespreking anesthesietype

PER



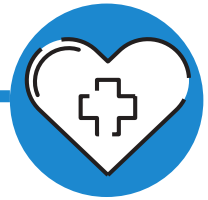
- inhalatie anesthesie versus totale intraveneuze technieken
- locoregionale technieken
- mulitmodale analgesie
- PONV

POST



- ERAS

LAAT POST



- Chronische postoperatieve pijn

VG= voorgeschiedenis
RF= risicofactoren
PONV= postoperative nausea & vomiting
ERAS = enhanced recovery after surgery

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pain after breast cancer surgery

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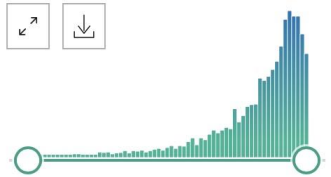
RESULTS BY YEAR



PUBLICATION DATE

- 1 year
- 5 years
- 10 years
- Custom Range

TEXT AVAILABILITY

- Abstract
- Free full text

1 Cite

Breast Surgery: Management of Postoperative Complications Following Operations for **Breast Cancer**.

Al-Hilli Z, Wilkerson A.

Surg Clin North Am. 2021 Oct;101(5):845-863. doi: 10.1016/j.suc.2021.06.014. Epub 2021 Aug 7.

PMID: 34537147 Review.

Breast cancer surgery is associated with low rates of **surgical** morbidity. Postoperative complications related to **breast surgery** include seroma, infection, hematoma, mastectomy flap necrosis, wound dehiscence, persistent postsurgical **pa** ...

2 Cite

Treating Persistent **Pain** After **Breast Cancer Surgery**.

Khan JS, Ladha KS, Abdallah F, Clarke H.

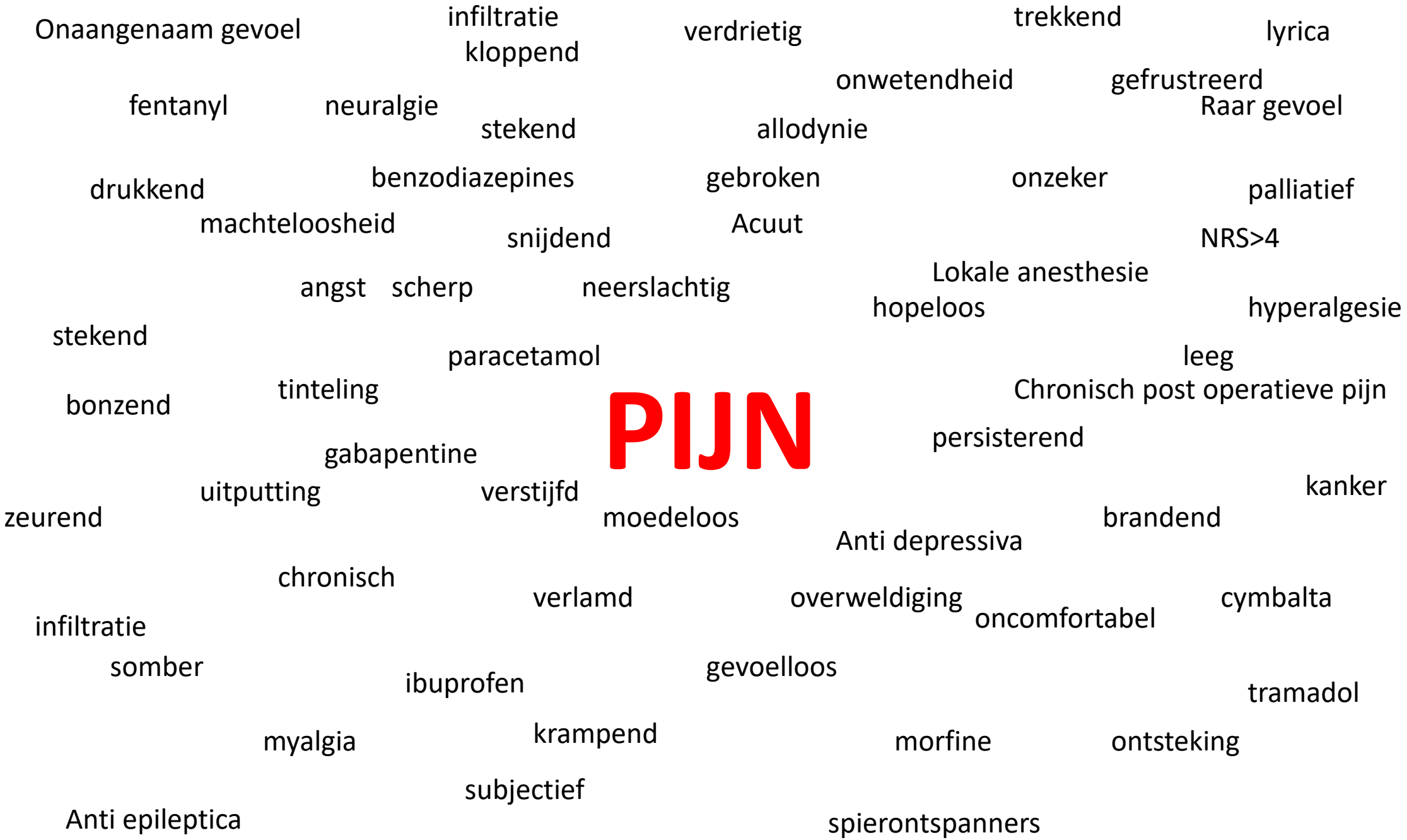
Drugs. 2020 Jan;80(1):23-31. doi: 10.1007/s40265-019-01227-5.

PMID: 31784873 Review.

Persistent **pain** lasting greater than 3 months after **breast cancer surgery** is unfortunately a common complication affecting approximately 30% of patients after tumour resection. ...This review serves to provide an overview on persistent **pain** afte ...

3

Effectiveness of physical therapy in axillary web syndrome after **breast cancer**: a systematic review and meta-analysis


PIJN
Onaangenaam gevoel
infiltratie
kloppend
verdrietig
trekkend
lyrica
onwetendheid
gefrustreerd
fentanyl
neuralgie
Raar gevoel
stekend
allodynie
drukkend
benzodiazepines
gebroken
onzeker
palliatief
machteloosheid
Acuut
snijdend
NRS>4
Lokale anesthesie
angst
scherp
neerslachtig
hopeloos
hyperalgesie
stekend
paracetamol
leeg
tinteling
Chronisch post operatieve pijn
bonzend
persisterend
gabapentine
kanker
uitputting
verstijfd
zeurend
moedeloos
brandend
Anti depressiva
chronisch
verlamd
overweldiging
cymbalta
oncomfortabel
infiltratie
somber
gevoelloos
ibuprofen
tramadol
myalgia
krampend
morfine
ontsteking
subjectief
Anti epileptica
spierontspanners

- 45jarige dame
- **VG:** hypertensie, hypothyroidie, 8maanden geleden rechtszijdige mastectomie met okselklierevidement ikv invasief ductaalcel carcinoom
- Surveillance onderzoeken laatste maand geen evidentie voor metastatische ziekte
- **Huidige klacht:** Steeds erger wordende rechter thorax pijn
    - Brandende pijn
    - jeuk
    - Bij minimale aanraking ontstaat er hevige pijn
    - Af en toe tintelingen richting de rechter hand zonder motorische uitval
    - Huidige medicatie: ibuprofen 600mg 3/d en oxycodone 7,5mg tot 4/d

CPSP = Chronic post surgical pain

Pijn die ontstaat of erger wordt na heelkunde/weefseltrauma

Op de plaats van letsel of de pijn wordt geprojecteerd naar de innervatiezone van de verantwoordelijke zenuw of is gerelateerd tot een dermatoom

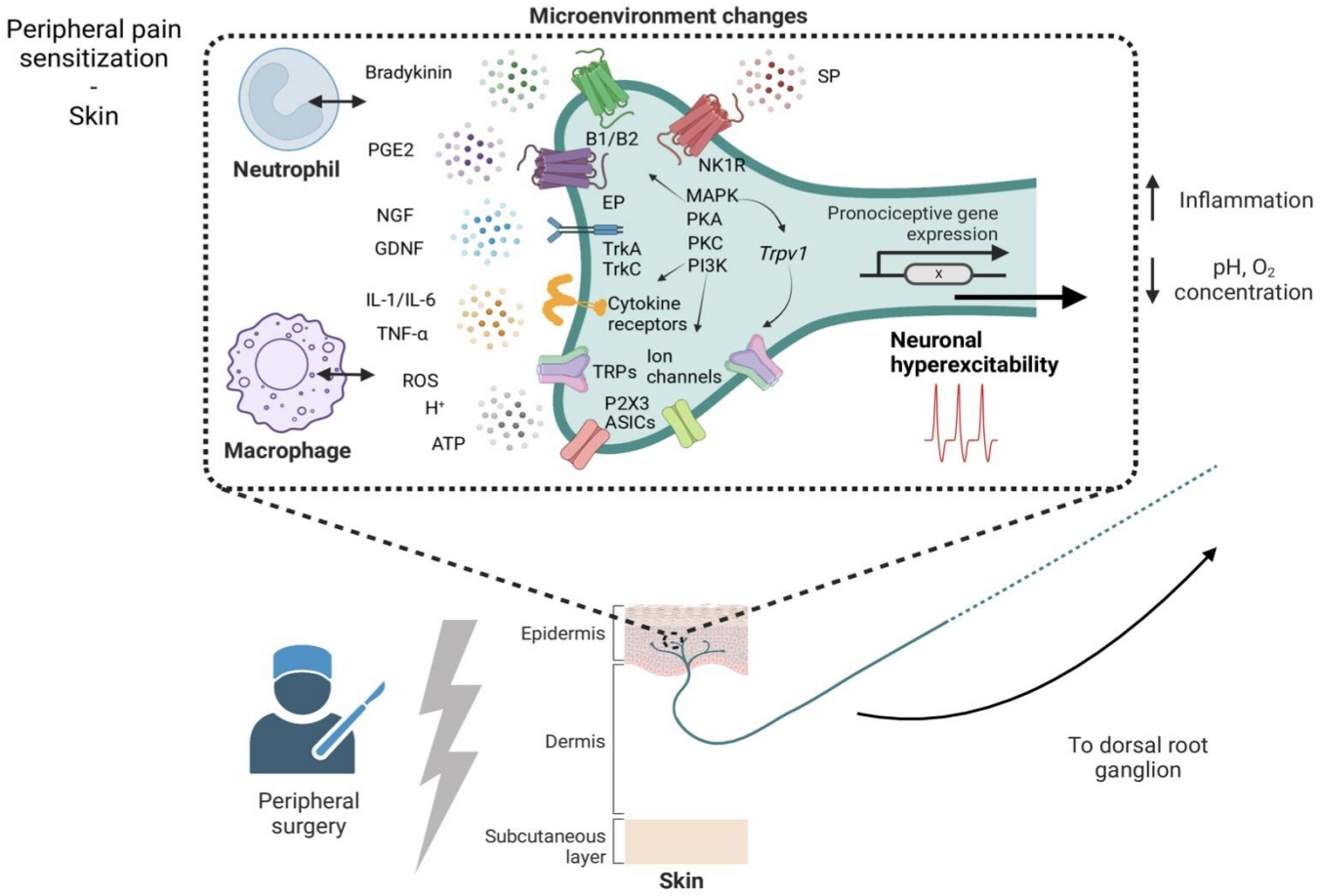
Onderscheid tussen geplande heelkunde en ongecontrolleerde settings

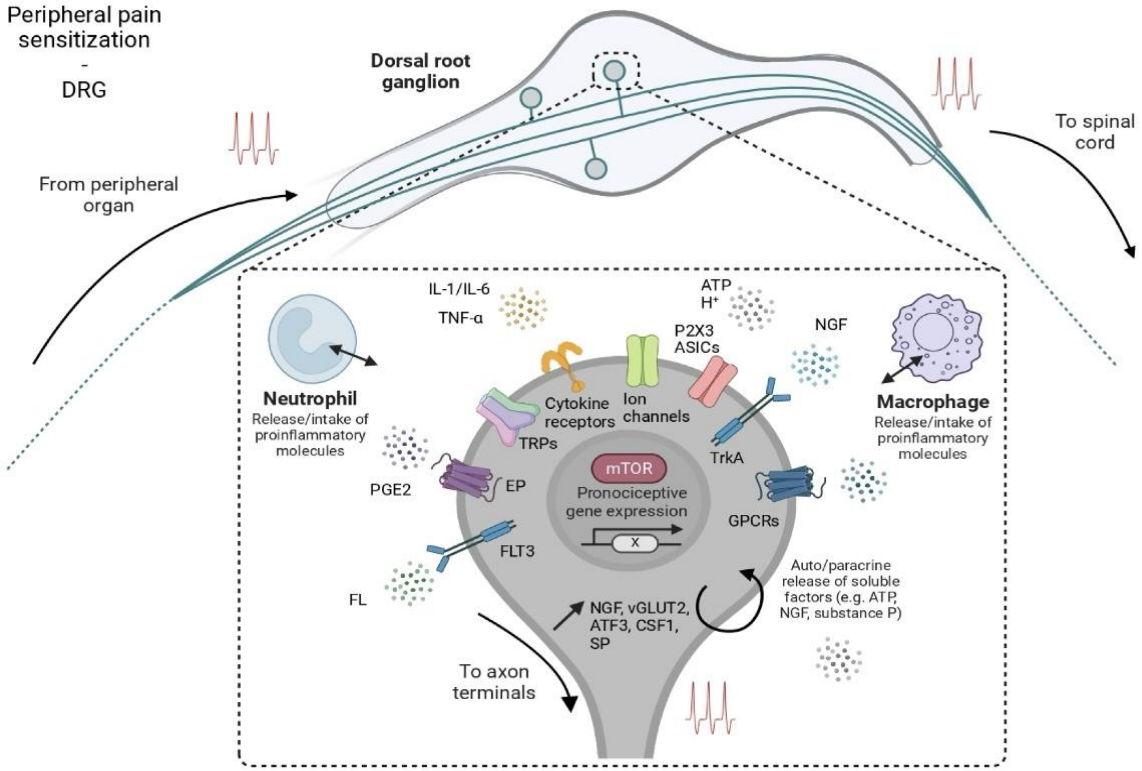
Pijn kan karakteristieken van neuropathische pijn bevatten

Pijn blijft bestaan na het herstelproces, >3maanden na het event

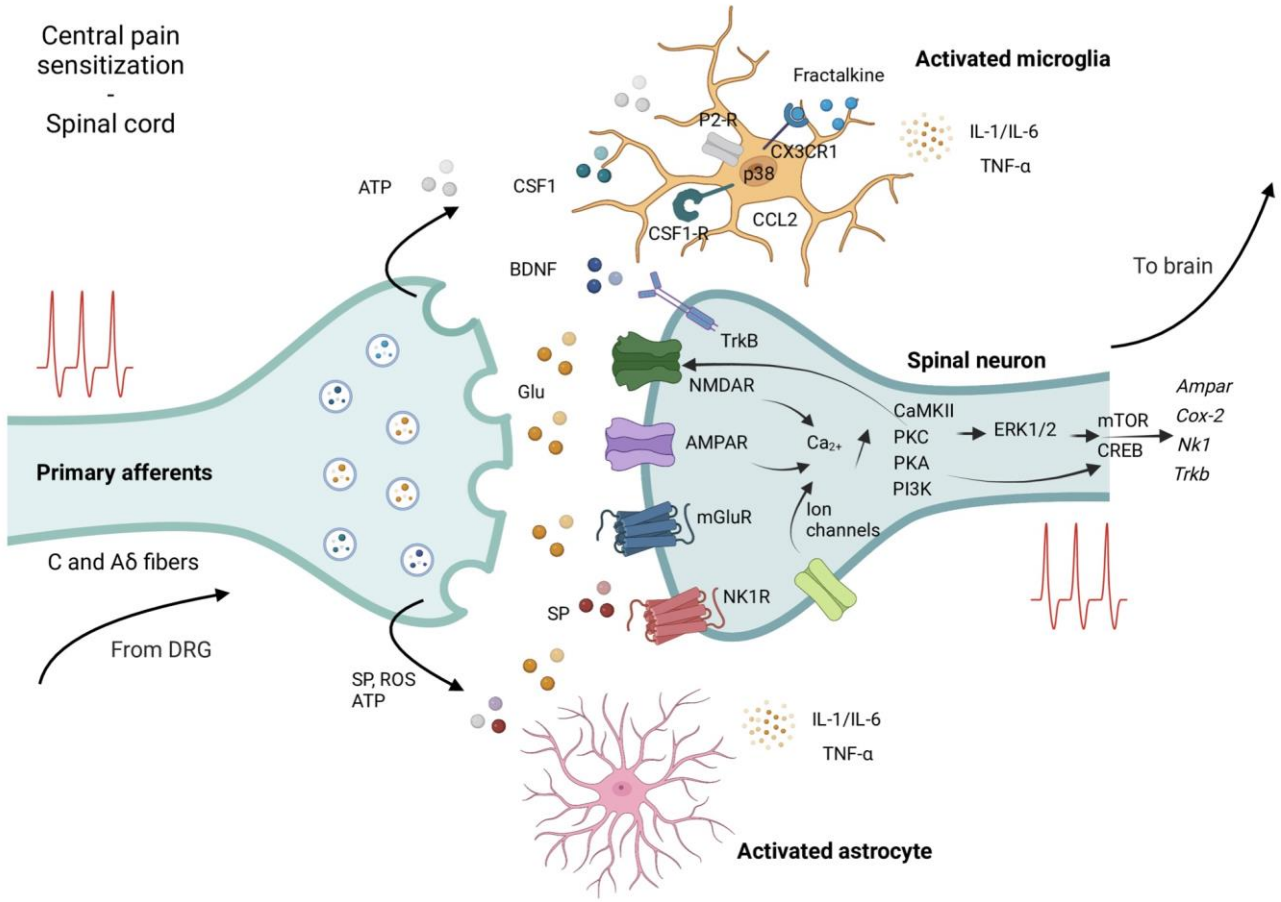
Andere oorzaken van pijn zijn uitgesloten (infectie,kanker)

PERIFERE SENSITIZATIE





CENTRALE SENSITIZATIE



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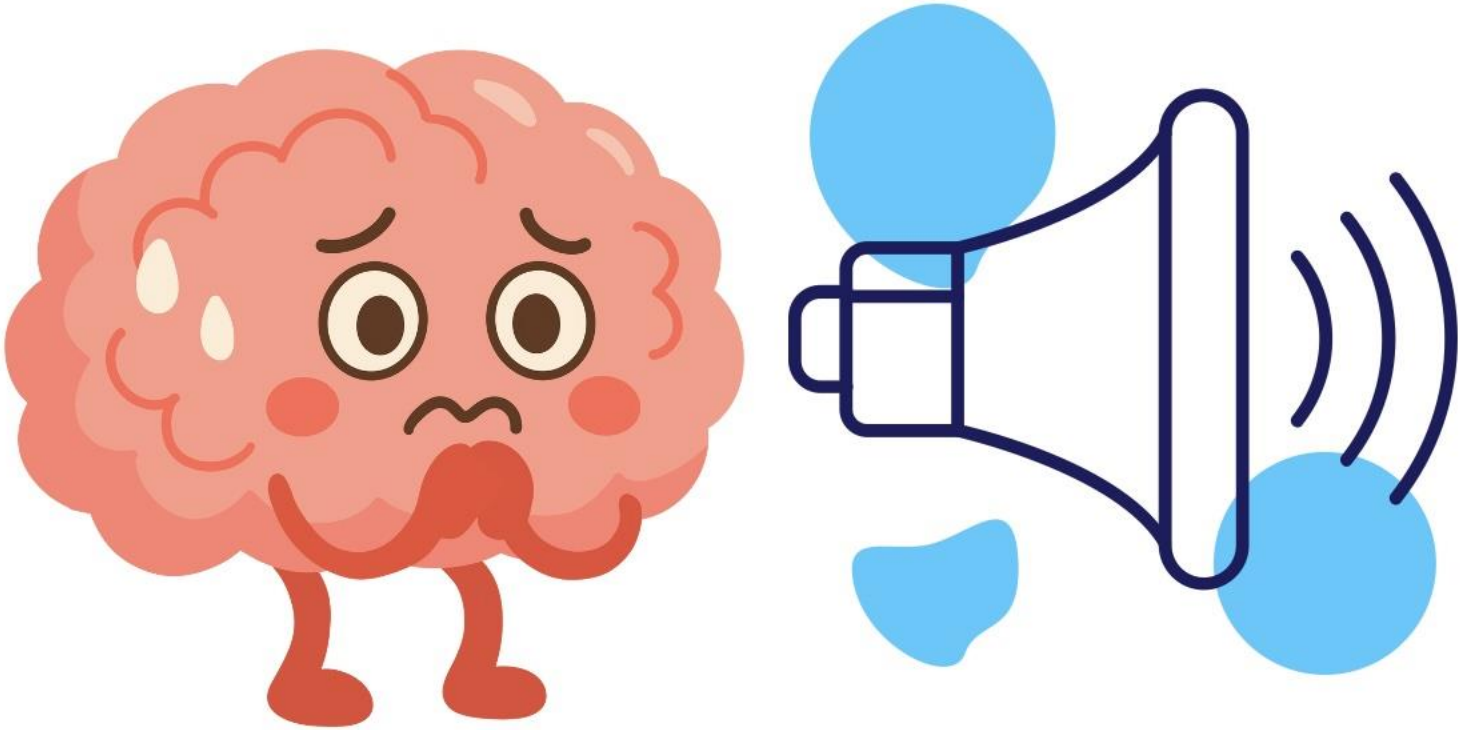
  - Af en toe tintelingen richting de rechter hand zonder motorische uitval

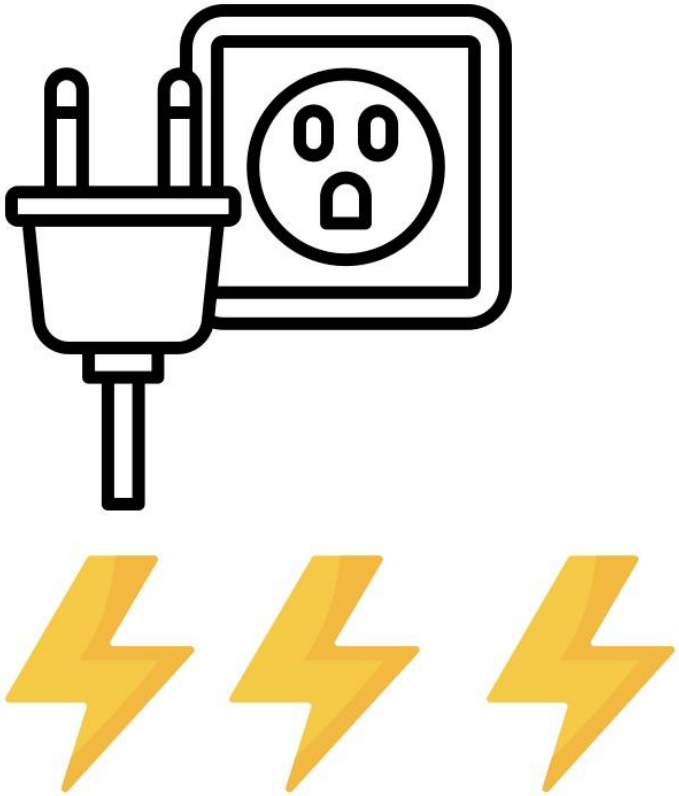
3/d en oxycodone 7,5mg tot 4/d

ALLODYNIE

HYPERALGESIE

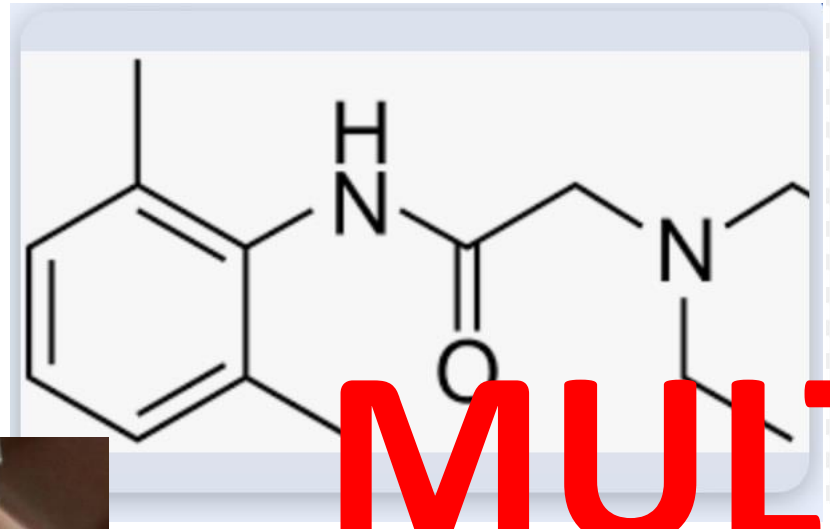


DYSESTHESIE

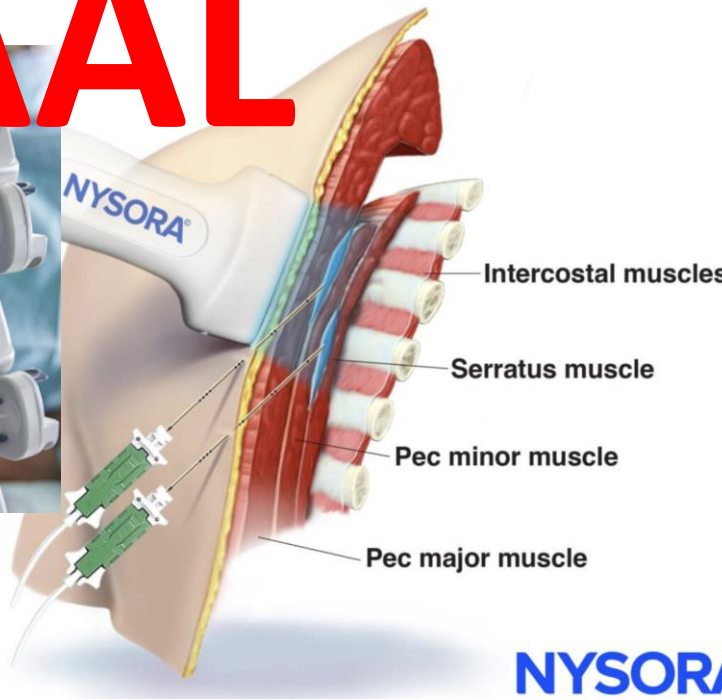



CPSP
risk factors

Preventie



MULTIMODAAL



Recommendations

1. Systemic analgesia should include paracetamol and non-steroidal anti-inflammatory drugs (NSAID) administered pre-operatively or intra-operatively and continued postoperatively.
2. Pre-operative gabapentin is recommended.
3. A single dose of intravenous (i.v.) dexamethasone is recommended for its ability to increase the analgesic duration of peripheral nerve blocks, decrease analgesia use and anti-emetic effects.
4. Opioids should be reserved as rescue analgesia in the postoperative period.
5. Paravertebral blockade is recommended as the first-choice regional analgesic technique. Pectoral nerves block may be used as an alternative to paravertebral block. Local anaesthetic wound infiltration may be added to regional analgesia techniques.

eratief

Locoregionale techniek

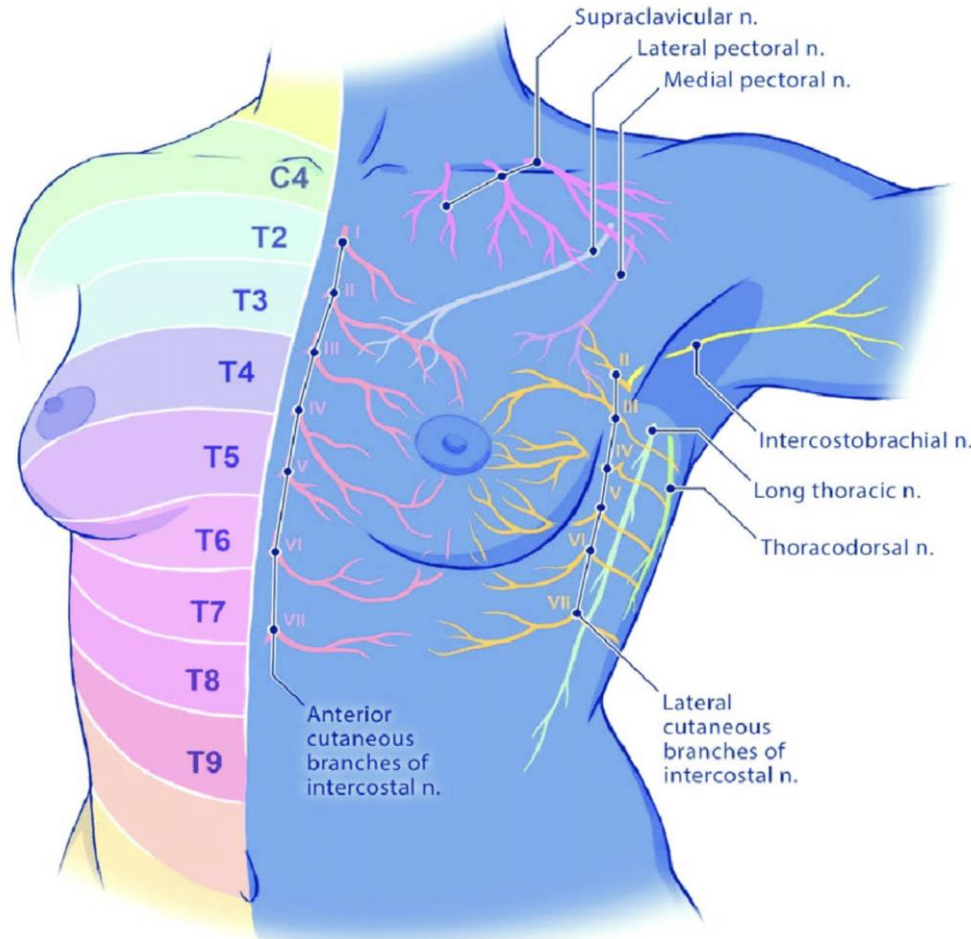
- PECS 2 (incl pecs 1) wordt pre inductie geprikt, idealiter in kinderrecovery.
- Sedatie aan te bieden

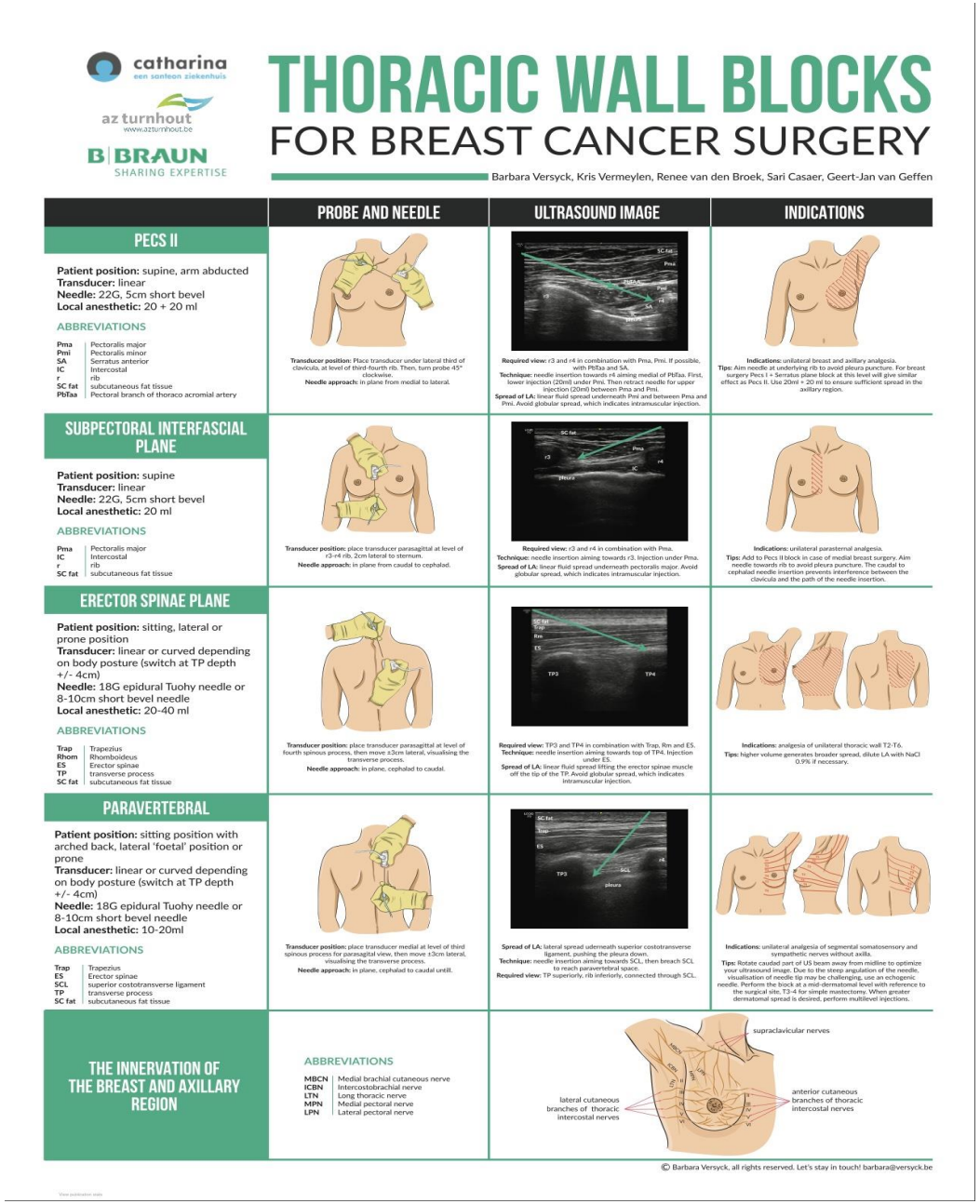
Algemene anesthesie

- TCI propofol – ultiva
- Sufenta 5 microgram bij inductie
- Linisol 1mg/kg bij inductie
- Dexamethasone 0,2 mg/kg bij inductie
- Vessiera 0,15 mg/kg
- Paracetamol 1g

› geen contra indicaties
ij uitleiding
tiënt met neo adjuvante chemotherapie
:hv contralaterale zijde
vochttoediening
ik maken van bair hugger

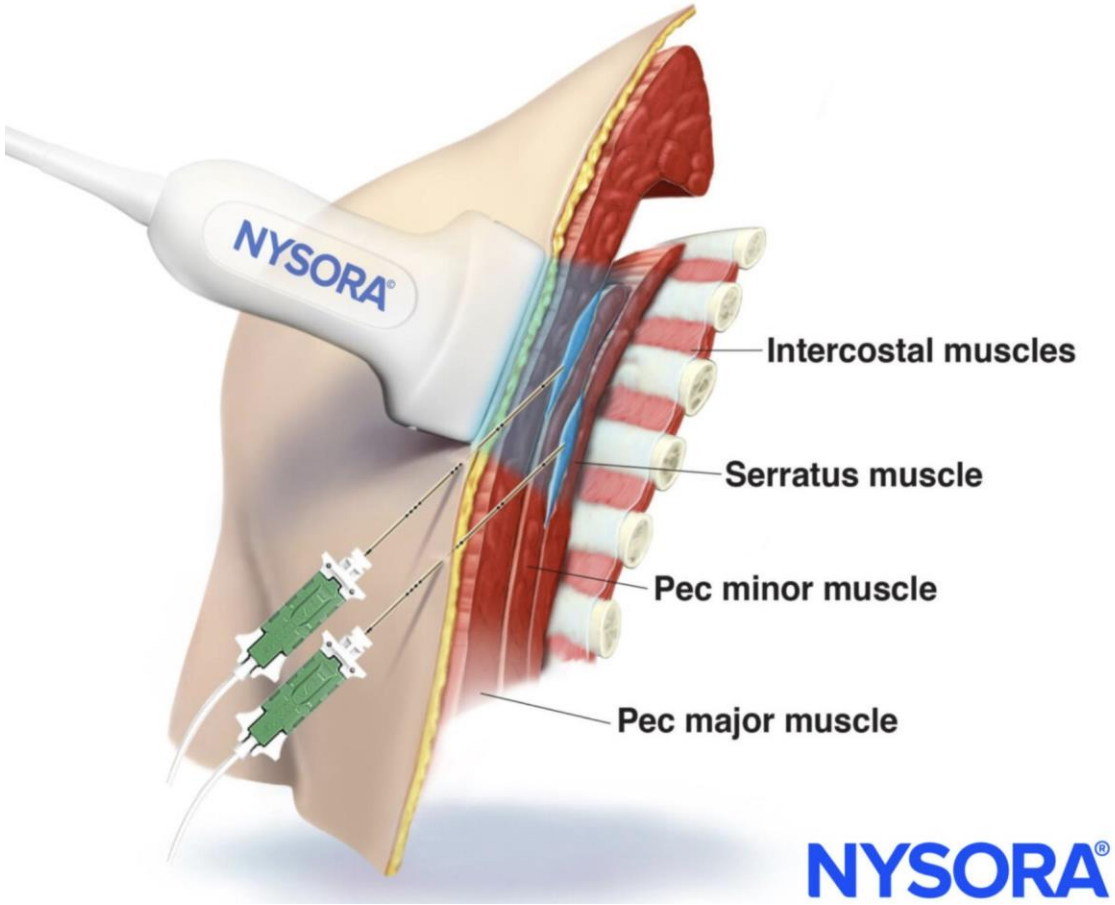
e operatiekant armsteun
ijde langs het lichaam

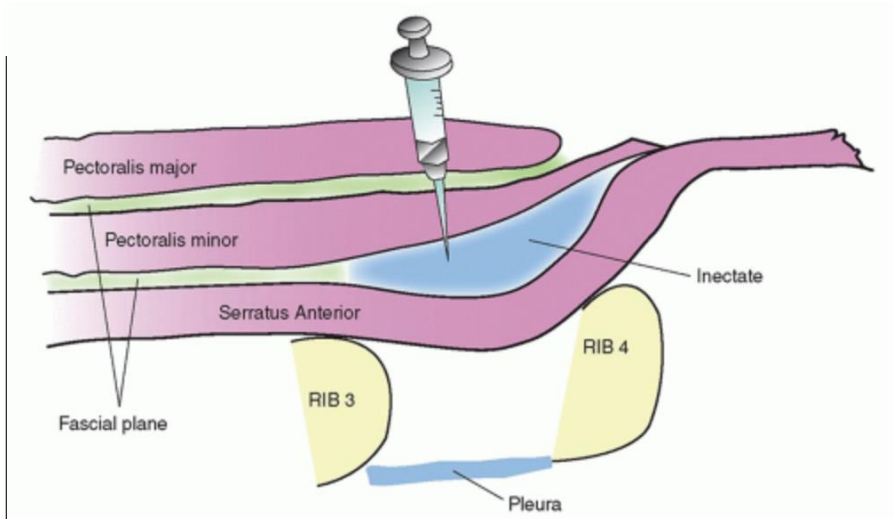

Supraclavicular n.
Lateral pectoral n.
Medial pectoral n.
C4
T2
T3
T4
T5
T6
T7
T8
T9
I
II
III
IV
V
VI
VII
Intercostobrachial n.
Long thoracic n.
Thoracodorsal n.
Anterior cutaneous branches of intercostal n.
Lateral cutaneous branches of intercostal n.



FASCIA PLANE BLOCKS
= REGIONALE ANESTHESIETECHNIEK WAARBIJ LOKAAL ANESTHETICUM WORDT INGEBRACHT IN EEN POTENTIELE ANATOMISCHE RUIMTE TUSSEN TWEE FASCIALAGEN

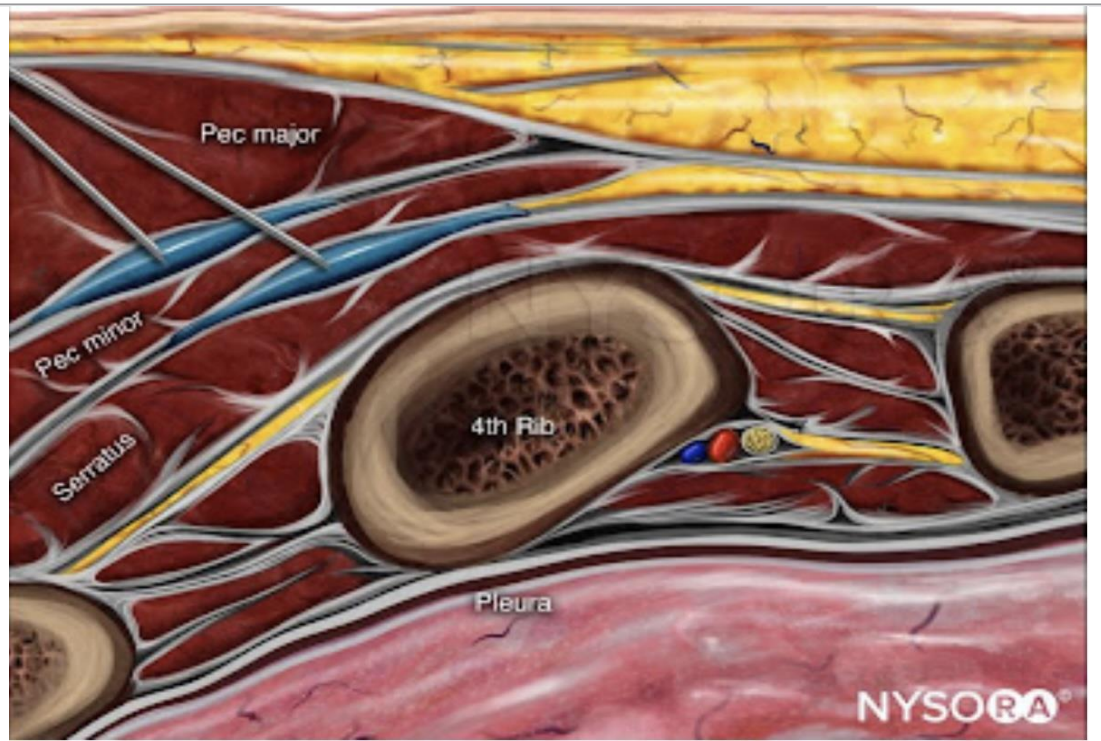
DOEL = SENSORISCHE VEZELS DIE DOORHEEN DEZE FASCIA LOPEN TE BLOKKEREN WAARDOOR ER PIJNVERLICHTING ONTSTAAT





ne nerve block—PECS II is simply a PEC I block with additional injection of local anesthetic between the deep fascia or the superficial serratus anterior muscle to block the lateral branches of the T2-T4 intercostal nerves and occasionally the long thoracic nerve.

- Borstsparende ingreep + sentinel/okselklierevidement
- Mastectomie +/- sentinel/okselklierevidement
- Okselklierevidement



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Treatment	Evidence
Intercostobrachial nerve blocks	A case series of ultrasound-g modified radical mastectomy pain relief at 4 weeks follow-
Serratus plane blocks: superficial serratus plane, deep serratus anterior plane[41]	A case series of serratus plan pain relief and duration of pai
Paravertebral block	A single-center retrospective paravertebral block may be c
Pectoralis (PECS) nerve block	The PEC I block targets the m between the pectoralis major includes an additional injecti I point of injection, to target t observational study of 140 pa decreased post-mastectomy 9, and 12 months after surger PECS I block may be appropri while PECS II block may be ap
Stellate ganglion block	A single-center retrospective consideration of stellate gang pain with complex regional pa
Intercostal nerve block	A systematic review demonst most of these cases lead to m
Botulinum toxin	Botulinum toxin can be used t upper limb. This strategy has outlet syndrome.[47]

Treatment	Evidence
Neuroma excision	• Neuromas are most commonly identified at sites of transection of intercostal brachial nerves along the lateral chest wall. The clinical diagnosis is made by palpation of the site of pain leading to radiating pain impulses. Subsequent confirmation can be made with ultrasound or a nerve block with improvement of symptoms. • When the neuroma is excised, the proximal portion is relocated into intercostal muscles where the neuroma recurrence risk is lower. • Three case series, representing a total of 14 patients, followed patients for an average of 24 months following neuroma excision; 80% experienced partial or complete pain relief.[48,50,51]
Axillary scar release	• Axillary scar release can be performed with or without fat grafting. • Z-plasty lengthens the initial wound or scar, for release of flexion contractures (usually due to burns) occurring in the axilla, neck, antecubital fossa, or popliteal fossa.[52]

Autologous fat grafting	• The mechanism of autologous fat grafting is not well elucidated, but potential benefits include:
	  ◦ Improved vascularization
	  ◦ Secretion of anti-inflammatory molecules that improve tissue differentiation and scar softness
	  ◦ Creation of a cushion around a transected nerve stump that leads to reduction of nerve compression and stimulation
	  ◦ Liberation from nerve entrapment.
	• Comparative studies and small trials have demonstrated that fat grafting is associated with reduced postoperative pain and/or reduction in use of analgesic medication after mastectomy;[53-56] however, larger trials are needed to evaluate the efficacy of autologous fat grafting.

	• SCS or PNS may be considered as last-line options according to an interventional pain management algorithm for treatment of post-mastectomy pain.[43] ost-mastectomy pain are unlikely to be approved by insurance providers; ave another condition such as complex regional pain syndrome (e.g., of receive insurance approval for coverage of neuromodulatory devices mastectomy.

Treatment	Evidence
Cryoneurolysis	Cryoneurolysis has shown promise as an effective technique for postoperative pain management in mastectomy patients.[57] By utilizing preoperative ultrasound guidance, percutaneous cryoneurolysis selectively targets the intercostal nerves associated with the surgical site. This innovative approach offers a nonpharmacological means of achieving prolonged analgesia, potentially reducing the need for opioids and enhancing patient recovery. The study underscores cryoneurolysis as a viable adjunctive strategy for optimizing pain relief and improving the overall perioperative experience in mastectomy patients. Furthermore, ongoing clinical trials are investigating the efficacy and safety of cryoneurolysis, contributing to the evolving understanding of its role in postoperative pain management for mastectomy patients.[58]

Wat betekent dit voor jullie?

- CPSP = frequent, tot 60% incidentie
- Ook na een relatieve mineure ingreep
- CPSP = moeilijk te voorspellen
- Opiaten = geen goede therapie
- **Non - medicamenteuze interventies**
- Gabapentine = 1e keuze
- **Maar laagdrempelige doorverwijzing naar pijnkliniek is aangewezen**