Summary of Recommendations

PROSPECT Breast Surgery Subgroup

For each review, a Subgroup of the **prospect** Working Group performs an initial evaluation of the evidence and also drafts clinical practice statements and recommendations, which are then discussed by the whole Working Group before a final consensus is reached. The Subgroup may sometimes include a non-Working Group member, to provide additional expertise in the procedure being reviewed.

For the breast surgery review, the Subgroup members were:

- Professor Francis Bonnet (PROSPECT Working Group member)
- Professor Frederic Camu (PROSPECT Working Group member)
- Dr Emmanuel Barranger (Service de Gynecologue-Obstétrique, Hopital Lariboisiere, Paris)

Grades of Recommendation

Recommendations are graded according to the overall level of evidence (LoE) on which the recommendations are based, which is determined by the quality and source of evidence: *(Levels of evidence and grades of recommendation in PROSPECT reviews (from 2006))*

PROSPECT provides clinicians with supporting arguments for and against the use of various interventions in postoperative pain based on published evidence and expert opinion. Clinicians must make judgements based upon the clinical circumstances

and local regulations. At all times, local prescribing information for the drugs referred to must be consulted.

Summary Recommendations

Pre-, intra- and postoperative interventions have been evaluated for the management of postoperative pain following breast surgery. Unless otherwise stated, 'pre-operative' refers to interventions applied before surgical incision, 'intra-operative' refers to interventions applied after incision and before wound closure, 'postoperative' refers to interventions applied at or after wound closure. The following peri-operative interventions for breast surgery have been reviewed:

Pre-operative analgesic recommendations for breast surgery

	Major breast surgery	**Minor breast surgery**
Pre-operative recommended	– Paravertebral block (Grade A) – Gabapentinoids (Grade A) – COX-2-selective inhibitors (Grade D)/paracetamol (Grade B) in short breast surgery procedures to provide sufficient analgesia in the early recovery period	– COX-2-selective inhibitors (Grade D)/paracetamol (Grade B) in short breast surgery procedures to provide sufficient analgesia in the early recovery period

Intra-operative analgesic recommendations for breast surgery

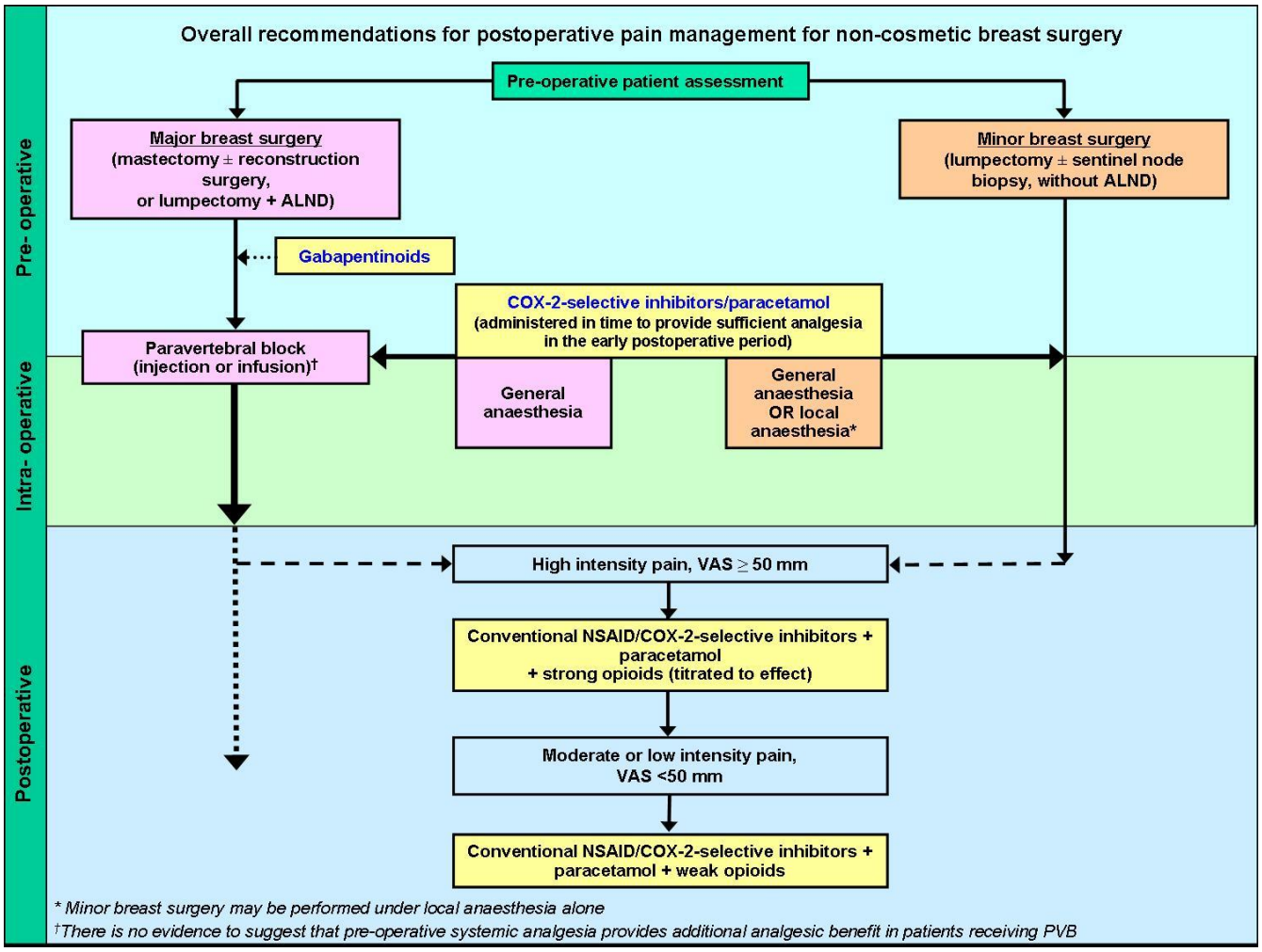
	Major breast surgery	**Minor breast surgery**
Intra-operative recommended	– n/a	– n/a

Postoperative analgesic recommendations for breast surgery

	Major breast surgery	**Minor breast surgery**
Postoperative recommended	– Conventional NSAID (Grade A) or COX-2-selective inhibitor (Grade B) – Strong opioid, titrated to effect (for high intensity pain) (Grade B) or weak opioids for moderate- to low-intensity pain (Grade B)	– Conventional NSAID (Grade A) or COX-2-selective inhibitor (Grade B) – Weak opioids for moderate- to low-intensity pain (Grade B) – Paracetamol alone or in combination with other non-opioid

	– Paracetamol alone or in combination with other non-opioid analgesics (Grade B) for low-moderate intensity pain – Paracetamol in combination with opioid analgesics (Grade D) for high intensity pain	analgesics (Grade B) for low-moderate intensity pain – Paracetamol in combination with opioid analgesics (Grade D) for high intensity pain

Overall PROSPECT Recommendations for Non-Cosmetic Breast Surgery



Not recommended for breast surgery

	Major breast surgery	Minor breast surgery
Pre-operative not recommended	– **Conventional NSAIDs** (Grade B) because of inconsistent procedure-specific and transferable evidence for benefit of pre- vs. postoperative administration, and increased risk of bleeding – **Corticosteroids for analgesia** (Grade D) due to insufficient procedure-specific evidence – **COX-2-selective inhibitors (except in short breast surgery procedures)** (Grade D) as transferable evidence shows inconsistent benefit of pre- vs. postoperative administration, and there is no procedure-specific evidence – *NMDA antagonists* ○ **Dextromethorphan** (Grade B) due to limited procedure-specific evidence ○ **Magnesium for analgesia** (Grade B) due to transferable evidence showing a lack of analgesic effects – **Paracetamol (except in short breast surgery procedures)** (Grade D) as there is no procedure-specific or transferable evidence to show whether pre-operative administration has any analgesic benefit compared with postoperative administration – **Strong opioids** (Grade D) due to no procedure-specific evidence of an analgesic benefit of pre- vs. postincisional administration – **Thoracic epidural analgesia** (Grade D) due to the risk of complications – **Electro-acupoint stimulation** (Grade D) due to limited procedure-specific and transferable evidence	– **Gabapentinoids** (Grade D) because pain intensity is commonly not severe enough to justify an adjuvant to the usual analgesic agents – **Conventional NSAIDs** (Grade D) because of inconsistent procedure-specific and transferable evidence for benefit of pre- vs. postoperative administration – **Corticosteroids for analgesia** (Grade D) due to insufficient procedure-specific evidence – **COX-2-selective inhibitors (except in short breast surgery procedures)** (Grade D) as transferable evidence shows inconsistent benefit of pre- vs. postoperative administration, and there is no procedure-specific evidence – *NMDA antagonists* ○ **Dextromethorphan** (Grade B) due to limited procedure-specific evidence ○ **Magnesium for analgesia** (Grade B) due to transferable evidence showing a lack of analgesic effects – **Paracetamol (except in short breast surgery procedures)** (Grade D) as there is no procedure-specific or transferable evidence to show whether pre-operative administration has any analgesic benefit compared with postoperative administration – **Strong opioids** (Grade D) due to no procedure-specific evidence of an analgesic benefit of pre- vs. postincisional administration – **Paravertebral block** (Grade D) because of the risk of complications – **Thoracic epidural analgesia** (Grade D) due to the risk of complications – **Electro-acupoint stimulation** (Grade D) due to limited procedure-specific and transferable evidence
Intra-operative not recommended	– **Corticosteroids for analgesia** (Grade D) due to insufficient	– **Corticosteroids for analgesia** (Grade D) due to insufficient

	procedure-specific evidence – **Adenosine** (Grade D) because of limited procedure-specific and transferable evidence – **Intercostal block** (Grade D) because of insufficient procedure-specific evidence – **High concentrations of oxygen** (Grade B) due to negative procedure-specific evidence – **Electro-acupoint stimulation** (Grade D) due to limited procedure-specific and transferable evidence	procedure-specific evidence – **Adenosine** (Grade D) because of limited procedure-specific and transferable evidence – **Intercostal block** (Grade D) because of insufficient procedure-specific evidence – **High concentrations of oxygen** (Grade B) due to negative procedure-specific evidence – **Electro-acupoint stimulation** (Grade D) due to limited procedure-specific and transferable evidence
Postoperative not recommended	– **Mexiletine** (Grade D) because of limited and conflicting procedure-specific evidence – **Paracetamol alone for high intensity pain** (Grade B) due to insufficient analgesic efficacy – **Strong opioids for low-moderate pain** (Grade B) because of a risk of emetic and other side-effects – **IM administration of strong opioids** (Grade B) because of transferable evidence showing unfavourable pharmacokinetics, injection-associated pain, and patient dissatisfaction – **Antibiotics for analgesia (**Grade D) due to limited procedure-specific evidence showing inconsistent results – **Continuous paravertebral block** (Grade D) due to limited procedure-specific evidence – **Thoracic epidural analgesia** (Grade D) due to the risk of complications – **Topical administration of local anaesthetics** (Grade D) due to inconsistent procedure-specific evidence – **Wound application of conventional NSAID via drain** (Grade B) because of procedure-specific and transferable evidence showing a lack of analgesic benefit – **High concentrations of oxygen** (Grade B) due to negative procedure-specific evidence	– **Gabapentinoids** (Grade B) because pain intensity is commonly not severe enough to justify an adjuvant to the usual analgesic agents – **Mexiletine** (Grade D) because of limited and conflicting procedure-specific evidence – **Paracetamol alone for high intensity pain** (Grade B) due to insufficient analgesic efficacy – **Strong opioids for low-moderate pain** (Grade B) because of a risk of emetic and other side-effects – **IM administration of strong opioids** (Grade B) because of transferable evidence showing unfavourable pharmacokinetics, injection-associated pain, and patient dissatisfaction – **Antibiotics for analgesia (**Grade D) due to limited procedure-specific evidence showing inconsistent results – **Continuous paravertebral block** (Grade D) because of the risk of complications – **Thoracic epidural analgesia** (Grade D) due to the risk of complications – **Topical administration of local anaesthetics** (Grade D) due to inconsistent procedure-specific data – **Wound application of conventional NSAID via drain** (Grade B) because of procedure-specific and transferable evidence showing a lack of analgesic benefit – **High concentrations of oxygen** (Grade B) due to negative procedure-specific evidence