Breast Cancer in Pregnancy

This reference guide is endorsed by **Mummy's Star**, a charity providing cancer support in or around pregnancy, birth, loss and beyond

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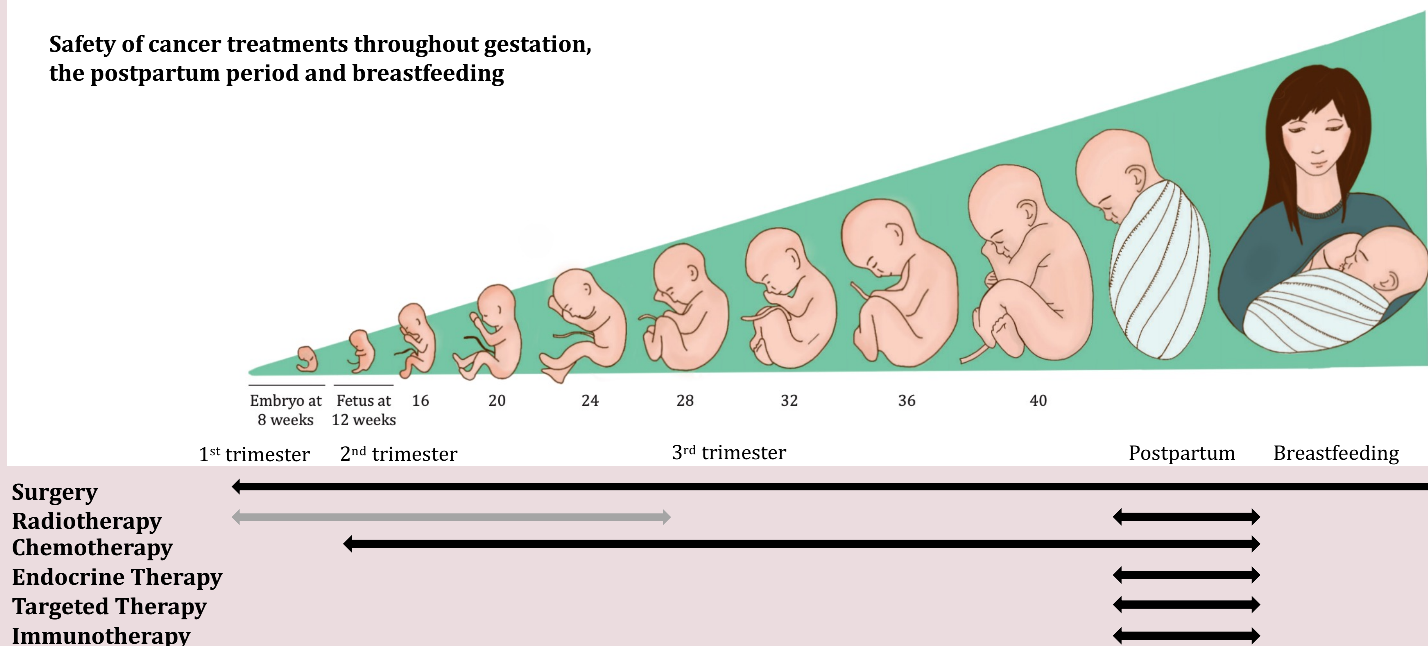
CANCER SUPPORT IN & AROUND
PREGNANCY | BIRTH | LOSS | BEYOND

Management of Breast Cancer in Pregnancy

- Management decisions can be challenging for both the patient and the healthcare professionals looking after them
- Increasing numbers of therapeutic options are available to clinicians and their use requires careful consideration of therapeutic benefit vs safety in pregnancy
- All decisions should be made with the patient at the center, the support of the multidisciplinary team and input from specialists in the field- a low threshold for seeking further expertise should exist

Safety of cancer treatments throughout gestation, the postpartum period and breastfeeding



1st trimester · 2nd trimester · 3rd trimester · Postpartum · Breastfeeding

Surgery
Radiotherapy
Chemotherapy
Endocrine Therapy
Targeted Therapy
Immunotherapy

Surgery:
- Considered safe throughout pregnancy but if possible preferred prior to 24 weeks gestation
- Most anesthetic drugs are safe throughout gestation; suggest liaising with obstetric anesthetist if any concerns
- Fetal viability should be checked pre- and post- procedure
- Immediate breast reconstruction using tissue expander can be performed after mastectomy, however, due to the physiological changes to the breast, delayed reconstruction should be considered

Radiotherapy (RT):
- Emergency RT may be considered in the 1st/2nd trimester - if beam can be angled distant to the pelvis (e.g. brain/ upper body bony metastasis) but only after discussion with a specialist
- In all other cases RT should be postponed until after delivery, because of potential teratogenic and even lethal effects on the developing fetus. Breast-feeding should be avoided during RT, suckling may be difficult from the irradiated breast

Chemotherapy:
- Cytotoxic agents are teratogenic in the 1st trimester and thus contraindicated during this period
- Anthracyclines, cyclophosphamide, and taxane-based (weekly paclitaxel) regimens can be used after the 1st trimester. There are also reports to support the addition of carboplatin-based regimens if required
- Chemotherapy doses should be calculated using current as opposed to pre-pregnancy weight
- Use published standard dose protocols (neither decrease/increase dose, do not increase treatment intervals)
- A port-a-cath and other central venous access devices/peripherally inserted central catheter lines can be fitted as outside of pregnancy (using local anaesthetic, X-RAY and USS where indicated)
- If possible, stop 3 weeks prior to delivery to allow the bone marrow to recover and prevent hematological complications during delivery. Leave a 14-day interval between last chemotherapy session and start of breastfeeding, if chemotherapy restarted stop breastfeeding

Endocrine Therapy, Targeted Therapies, Immunotherapy:
- Endocrine therapies are contraindicated in pregnancy (risk of malformation) and should be reserved for the postpartum period
- Anti-HER2 agents, CDK4/6 inhibitors and anti-PD-(L)1 inhibitors are all contraindicated during pregnancy and should also be reserved for the postpartum period

Supportive therapies:
- Antiemetics (including ondansetron and metoclopramide) and proton pump inhibitors can safely be used throughout all gestations
- Methylprednisolone, hydrocortisone and prednisolone are favored over dexamethasone
- Neurokinin-1 inhibitors are contraindicated
- G-CSFs should not be withheld if required

Recommended contraception for those under investigation/ postpartum:

Copper coil	✓
Nexplanon	X
POP	X
Mirena ®	X

Obstetric Considerations:
- Decisions regarding termination should be individualized with MDT input
- Interpret 1st trimester screening with caution. Women with confirmed metastatic disease may have high serum β-hCG and should not have noninvasive prenatal testing (NIPT) as results can't be accurately interpreted
- If exposed to preconception/1st trimester chemotherapy patient should have fetal medicine specialist scan
- Vaginal delivery is not contraindicated
- Discuss timing of delivery with MDT (aim 38-39 weeks)