Case 1

- A 41 yo G1P0 at 28 weeks gestation who presents after her OB/GYN palpates a mass on routine physical exam

- Breast ultrasound identifies a 1.8cm mass that, upon biopsy, is ER 94% PR 92% HER2 2+/FISH positive.

- Axillary nodes appear normal.

Questions to consider

- Breast imaging during pregnancy
  - What is the optimal study in pregnancy?
  - What, if any, are the risks of various imaging modalities in pregnancy?

- Surgery during pregnancy
  - Timing of surgery
  - Sentinel node biopsy
  - Lumpectomy vs. mastectomy
  - Intraoperative fetal monitoring and contingency planning for urgent delivery

- Timing of delivery

- Optimal systemic therapy strategies for HER2+ breast cancer diagnosed during pregnancy
Case 2

• A 31 yo G1P0 at 22 weeks gestation palpates an abnormal axillary node.

• Mammogram/ultrasound identifies a 3.2cm breast mass and at least two abnormal axillary nodes.

• The breast mass is biopsied and is consistent with invasive ductal carcinoma that is ER 54% PR 22% HER2 1+/FISH negative, Ki67 33%. Axillary node biopsy is positive for metastatic disease.

Questions to consider

• Neoadjuvant chemotherapy
  • Timing of chemo administration during pregnancy
  • Dose-dense vs traditional chemotherapy schedule
  • Safety of chemotherapy agents and growth factor

• Breastfeeding considerations
  • Implications for surgery and radiation
  • Proximity to chemotherapy administration

• Future pregnancy for patients with ER+ breast cancer
  • Results of the POSITIVE trial
Case 3

- 35 yo G2P2 presents with a palpable mass in her left breast
- Mammogram/ultrasound reveal a 4.2cm mass and at least two abnormal-appearing nodes, measuring 1.8cm and 1.2cm
- Biopsy of the mass and of one axillary node reveal grade 3 invasive ductal carcinoma, ER 0% PR 0% HER2 IHC 0, Ki67 48%.
- She undergoes genetic testing and is found to carry a BRCA1 mutation
- She and her husband have two children and have been trying to conceive their third child. She has missed a period. Pregnancy test is positive, and ultrasound reveals an 8-week intrauterine gestation

Questions to consider

- Staging work-up in pregnancy
- Strategies when the optimal treatment cannot be given during pregnancy
- Counseling regarding abortion to protect maternal health