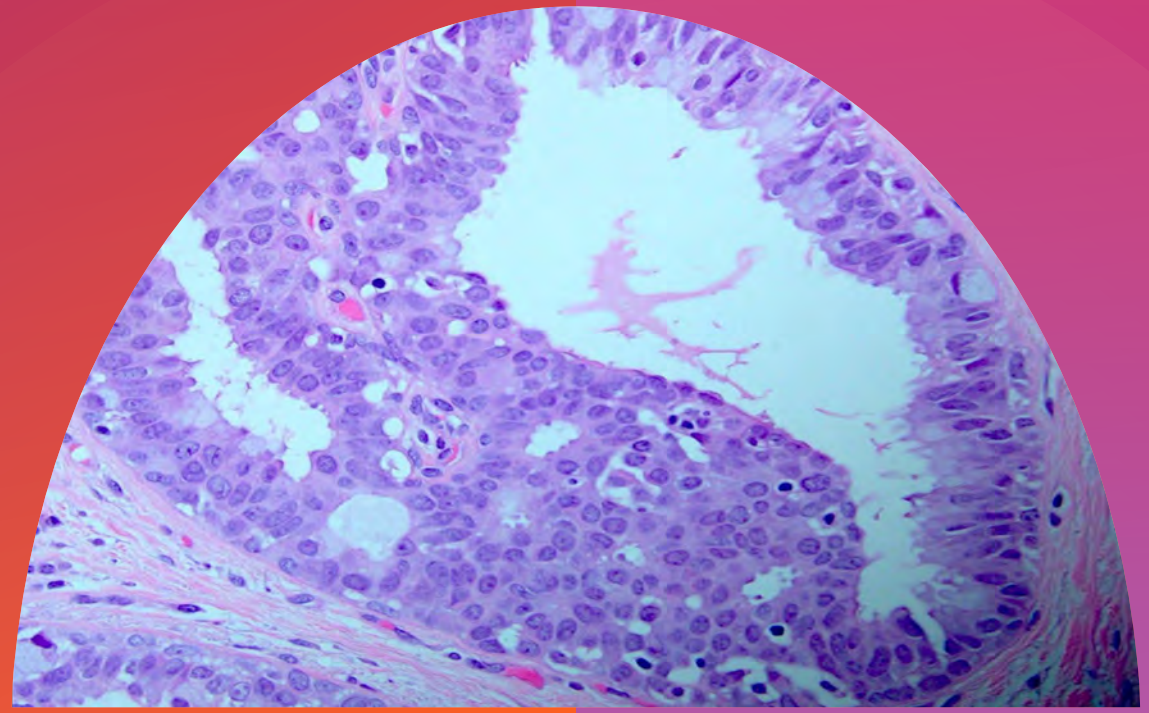
MANAGEMENT OF HIGH-RISK BREAST LESIONS

Jessica Maxwell MD MS FRCSC FACS

Associate Professor, University of Nebraska Medical Center

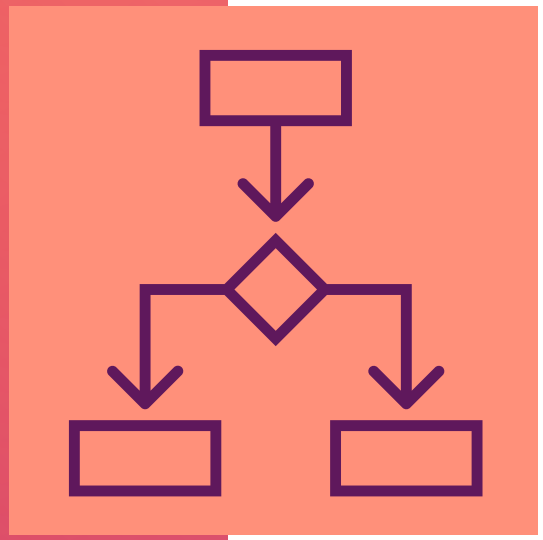


DISCLOSURES:

CONSULTANT: STRYKER

EXPERT WITNESS: BOEHRINGER INGELHEIM, KING & SPALDING LAW

OBJECTIVES

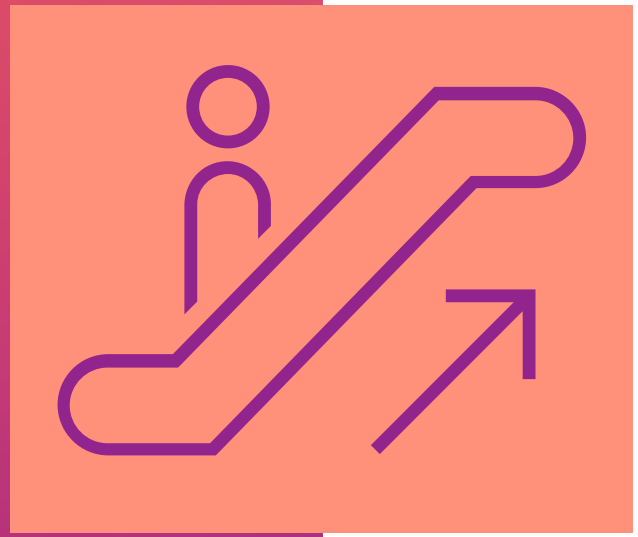


1. Define high risk benign breast lesions
2. Review cancer risk associated with these lesions
3. Discuss management of different high risk benign breast lesions

THE BASICS:
WHAT DOES "HIGH RISK" MEAN?

- Average lifetime risk = 12-13%
- Increased lifetime risk = >20%
  - Family history
  - Breast density
  - Genetic mutation
  - Personal history of benign high risk breast lesions
- Multiple risk calculators available
  - Tyrer-Cuzick

WHAT TYPES OF RISK EXIST?



- Upgrade risk:
  - Risk of finding DCIS or invasive disease on excision
- Precursor lesions:
  - Risk of lesion evolving into DCIS or invasive disease over time
- Indicators of overall risk:
  - Risk of future breast cancers

CLINICAL CONSIDERATIONS

Presentation	• Mass • Nipple discharge
Imaging	• Mass • Calcifications
Biopsy Method	• Needle size • Number of cores
Other	• Concordance • Pathology expertise

NOT ALL "HIGH RISK" LESIONS ARE CREATED EQUAL

Lower Risk

- Papilloma
- Complex sclerosing lesion (CSL) or radial scar
- Flat Epithelial Atypia (FEA)

Higher Risk

- Atypical Ductal Hyperplasia (ADH)
- Atypical Lobular Hyperplasia (ALH)

Lobular Carcinoma In Situ (LCIS)

- Classic LCIS
- Florid LCIS
- Pleomorphic LCIS

LOWER RISK LESIONS

Intraductal Papilloma

- Consider observation with q6month imaging if low risk features
- *Excise if:*
  - >50 yo
  - Bloody nipple discharge
  - Palpable mass
  - >1cm size
  - Return to annual screening post excision pending pathology

Flat Epithelial Atypia

- Observation reasonable for most patients
- *Excise if:*
  - ADH on core
  - Concerning imaging findings
  - Concern for sampling error due to large area of calcifications (or consider additional biopsy

Complex Sclerosing Lesion

- If no atypia on core needle biopsy, observe with annual screening
- *Excise if:*
  - ADH on core
  - Concerning imaging features such as large area of distortion or mass

HIGHER RISK LESIONS

Atypical Ductal Hyperplasia

- Precursor lesion to low grade DCIS
- *Most patients require excision* due to high risk of upgrade to DCIS or invasive disease
- Marker for increased future breast cancer risk EVEN WITH EXCISION
- Patients eligible for high-risk screening and consideration of medical or surgical risk reduction

Atypical Lobular Hyperplasia

- NOT a precursor lesion
- Low upgrade risk therefore *excision not routinely recommended*
- Marker for increased future breast cancer risk
- Patients eligible for high-risk screening and consideration of medical or surgical risk reduction

LOBULAR CARCINOMA IN SITU

Classic LCIS

- Low risk for upgrade therefore *excision not routinely recommended*
- Marker for increased future breast cancer risk (7-11x increased risk)
- Patients eligible for high-risk screening, medial or surgical risk reduction

Florid LCIS

- Significant risk for upgrade to invasive disease
- *Excision recommended with negative margins*
- Patients eligible for high-risk screening, medial or surgical risk reduction

Pleomorphic LCIS

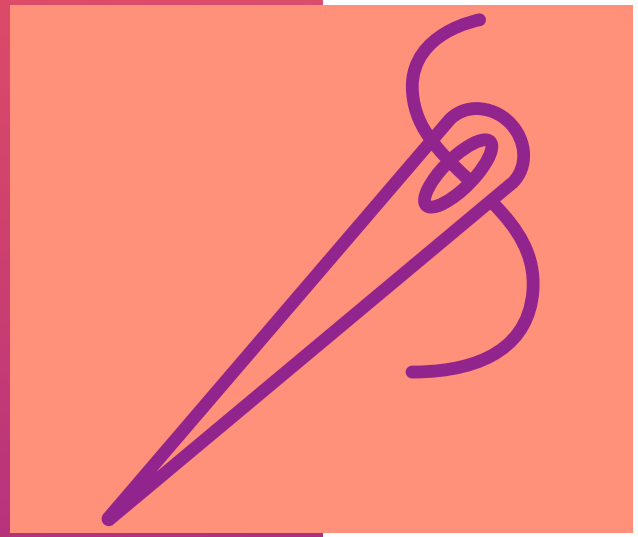
- Frequently associated with invasive disease
- *Excision recommended with negative margins*
- Current standard is to treat like DCIS:
  - Adjuvant radiation
  - Adjuvant endocrine therapy

OK...SO NOW WHAT?

- Calculating risk scores is easy and models are free to access
- Keep in mind that most risk models overestimate risk when atypia is present
- If risk is <20%:
  - Continue with annual screening mammograms
- If risk is >20%:
  - High-risk screening protocol with annual screening mammogram and MRI alternating q6 months
  - Consider medical or surgical risk reduction

MEDICAL RISK REDUCTION

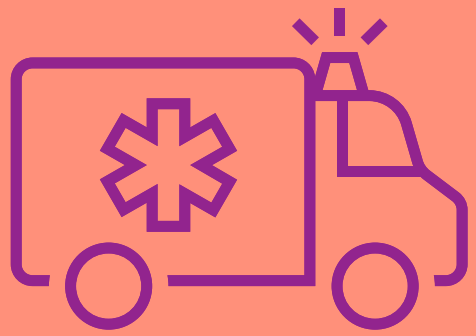
- Endocrine therapy with tamoxifen, raloxifene or aromatase inhibitor
- Overall underutilized and low compliance rates outside of trial
- Low dose tamoxifen proven effective
  - 5mg daily x 3 years
  - 42% breast cancer risk reduction
  - Lower side effects
  - Increased compliance



SURGICAL RISK REDUCTION

- Bilateral mastectomies
- No increase in cancer risk with reconstruction if desired by patient
- Breast cancer risk decreased to <10%
- Major surgery with associated physical risk
- Effects on body image, sexuality, quality of life

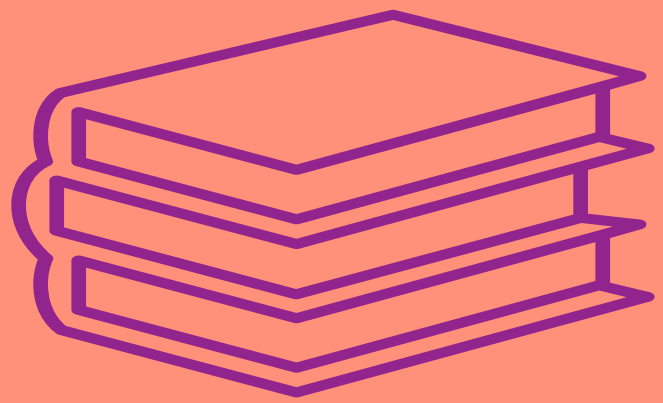
SUMMARY



Not all high-risk lesions are created equal.

Treatment plans and risk reduction strategies should be tailored to the individual patient.

Referral to Cancer Risk and Prevention Clinc or Breast Surgery is reasonable in all circumstances discussed today



REFERENCES

1. Zhang, X.et al. Ann Surg Oncol 28 (Suppl 3), 624–625 (2021)
2. Nakhlis, F. et al. (TBCRC 034). Ann Surg Oncol 28, 2573–2578 (2021)
3. Wahab RA, et al Radiol Imaging Cancer. 2021 Jan 22;3(1):e200116
4. Murray MP, et al Cancer. 2013;119(5):1073
5. Degnim AC, et al J Clin Oncol. 2007 Jul 1;25(19):2671-7
6. King TA et al J Clin Oncol. 2015 Nov 20;33(33):3945-52
7. Lazzeroni M, et al J Clin Oncol. 2023 Jun 10;41(17):3116-3121

THANK YOU

Jessica Maxwell MD MS

jessica.maxwell@unmc.edu