

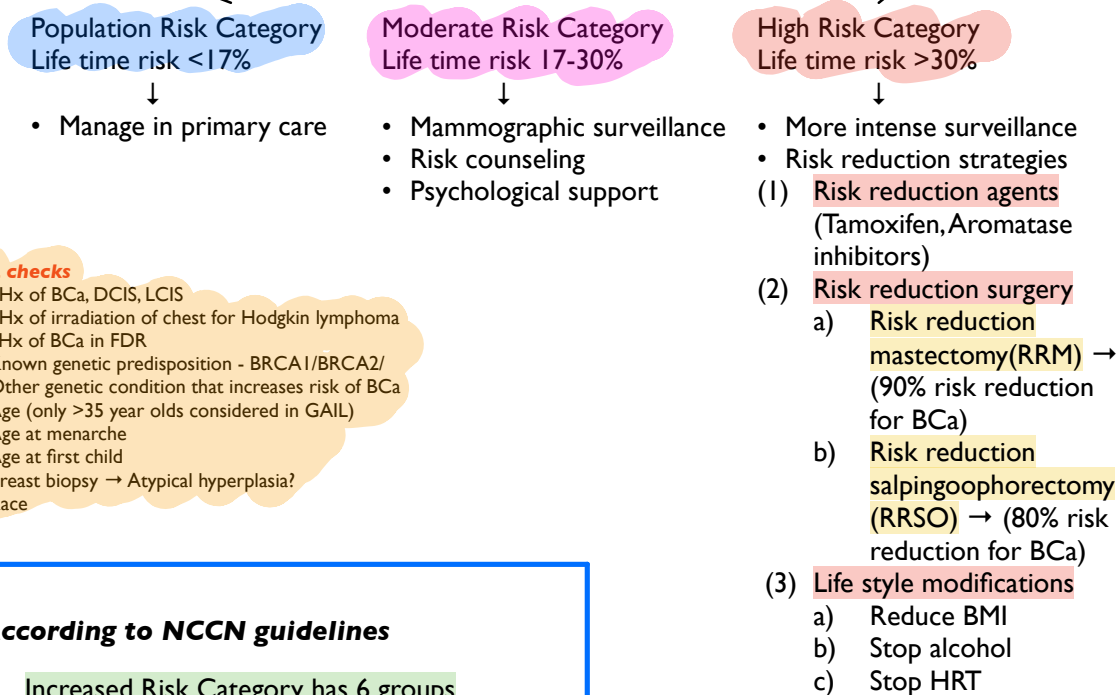
Screening in Breast cancer

1. Clinical breast examination
 - If abnormal finding → diagnostic testing
 - If no abnormality



2. Preliminary Risk Assessment → Those with family/genetic risk offered formal risk assessment

using models like
GAIL, Claus, BODICEA, BRCAPRO,
Tyrer Cuzick Model (this is the best!)



GAIL checks

1. PHx of BCa, DCIS, LCIS
2. PHx of irradiation of chest for Hodgkin lymphoma
3. FHx of BCa in FDR
4. Known genetic predisposition - BRCA1/BRCA2/
Other genetic condition that increases risk of BCa
5. Age (only >35 year olds considered in GAIL)
6. Age at menarche
7. Age at first child
8. Breast biopsy → Atypical hyperplasia?
9. Race

• According to NCCN guidelines

Increased Risk Category has 6 groups

1. PHx of breast cancer
 - Breast cancer surveillance
2. >35 year old with ≥1.7% risk of developing invasive BCa in 5 years according to GAIL model
 - Start screening after 35
 - CBE 6-12 months
 - Annual screening mammography
 - Risk reduction strategies
 - Breast awareness
3. BODICEA, BRCAPRO models assess FHx (GAIL assesses patient's history) → if life time risk is >20%
 - Start screening from 30
 - CBE 6-12 months
 - Annual screening mammography
 - Risk reduction strategies
 - Breast awareness
 - Consider annual MRI

Average Risk Category

1. If age 25-40 years
 - Clinical breast examination (CBE) 1-3 years
 - Breast awareness
2. If age >40 years
 - CBE annually
 - Annual screening mammography
 - Breast awareness

4. Those who have had therapeutic thoracic radiation between ages 10-30 years have a risk of malignancy after 8-10 years
- If patient's current age is <25 years
 - ▶ CBE annually
 - ▶ Risk reduction counseling
 - ▶ Breast awareness
 - If patient's current age is ≥25
 - ▶ CBE 6-12 months
 - ▶ Annual screening mammography
 - ▶ Risk reduction strategies
 - ▶ Breast awareness
 - ▶ Annual MRI
5. LCIS - classic
- Start screening from the point of diagnosis
 - ▶ CBE 6-12 months
 - ▶ Annual screening mammography
 - ▶ Risk reduction strategies
 - ▶ Breast awareness
 - ▶ MRI annually is debatable as it only detects an additional 4% of malignancy in this case
6. Known genetic predisposition in patient or family member (e.g.: BRCA1, BRCA2)
- If woman → Start screening at 25
 - ▶ CBE 6-12 months
 - ▶ Annual screening mammography
 - ▶ Risk reduction strategies
 - BRCA1
 - Best risk reduction is by RRM at age 25 + RRSO at age 40
 - BRCA2 -
 - Best risk reduction is by the same as above
 - But RRSO at 40 coupled with continuous screening also reduces risk to a closer level
 - Benefit of risk reduction agents (Tamoxifen) is more in BRCA2
 - ▶ Breast awareness
 - ▶ Annual MRI individualized to patients (as MRI findings in BRCA patients tend to be more benign looking)
 - If man → Start screening at 35
 - ▶ CBE 6-12 months
 - ▶ Baseline mammogram at age 40
 - If that shows gynaecomastia or glandular density → annual mammo
- BRCA1
 - higher risk (younger patients, triple negative)
 - BCa risk 60%, OCa risk 40%
 - BRCA2
 - Less risk than BRCA1 (older patients, ER positive)
 - BCa risk 40%, OCa risk 15%