# Management of Early Breast Cancer for Primary Care: Guiding Patients While Awaiting Medical Oncology Consultation

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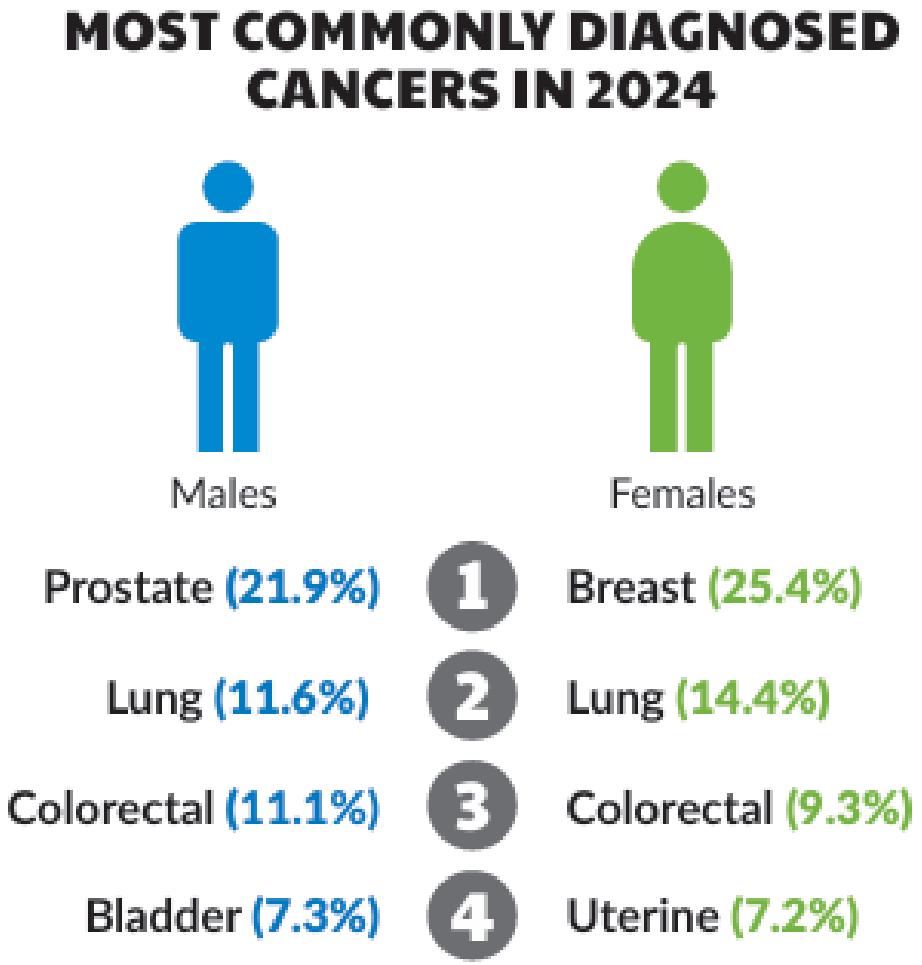
# Objectives

- Differentiate between neoadjuvant and adjuvant breast cancer therapy
- State the factors influencing the decision to start neoadjuvant therapy and help determine the appropriate neoadjuvant therapy option
- Cite factors influencing the decision to proceed with adjuvant therapy and factors that help determine the appropriate adjuvant therapy option.

No conflicts of interest

# Breast Cancer

- Most common cancer in women
- Estimated about 30, 500 diagnoses in 2024
- 1 in 8 women diagnosed in their lifetime
- 1 in 36 will die of breast cancer



## Summary of projected number of cancer cases and deaths in British Columbia (BC) in 2024*

| Cancer | Males | | Females | | Both sexes | |
|---|---|---|---|---|---|---|
| | Cases | Deaths | Cases | Deaths | Cases | Deaths |
| **All cancers** | **16,700** | **6,500** | **15,100** | **5,200** | **31,800** | **11,700** |
| Bladder | 1,350 | 260 | 430 | 110 | 1,780 | 370 |
| Brain/CNS | 260 | 220 | 180 | 140 | 440 | 360 |
| Breast | 35 | 10 | 4,100 | 680 | 4,135 | 690 |
| Cervix | N/A | N/A | 220 | 60 | 220 | 60 |
| Colorectal | 1,650 | 650 | 1,350 | 470 | 3,000 | 1,120 |
| Esophagus | 370 | 310 | 110 | 100 | 480 | 410 |
| Head and neck | 860 | 240 | 280 | 90 | 1,140 | 330 |

# Risk Factors

- Age
- FHx
- PHx of breast cancer, precancerous lesions
- Nulliparity
- Early menarche
- Late menopause
- HRT
- Alcohol

# Case

- Tammy is a 48-year-old women. Had her first screening mammogram that showed right breast abnormality. Diagnostic MMG and ultrasound show a 2.4 cm right breast lesion Bi-RADS 4B. What will you do next?

# Polling Question

a) Repeat mammogram in 6 months
b) CT chest
c) Biopsy
d) Refer to medical oncology

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b) CT chest
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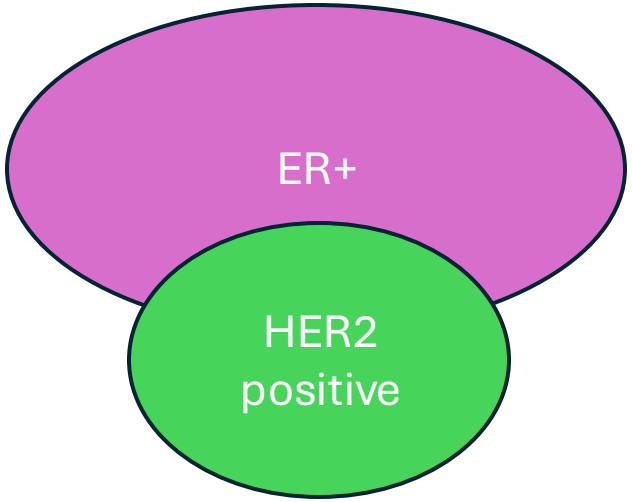
# Case

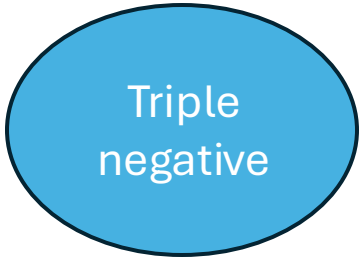
- Core biopsy of the breast lesion reveals invasive ductal carcinoma. ER neg, PR neg. HER2 neg. Refer to surgeon (if not already done so). Palpable right axillary lymph node on exam.
- Staging CT chest, abdomen and pelvis; bone scan. No metastatic disease.
- Referred to Medical Oncology

# Breast cancer molecular subtypes


**65-75%**

**20%**




**15%**

# Neoadjuvant vs adjuvant treatment

- Neoadjuvant: Preoperative systemic therapy
  - Chemotherapy
  - Anti-HER2
  - Endocrine therapy
  - Immunotherapy
- Adjuvant: Post-operative systemic therapy
  - Chemotherapy
  - Anti-HER2
  - Endocrine therapy
  - Immunotherapy
  - Antibody drug conjugates
  - CDK4/6i
  - PARPi
  - Bisphosphonates etc

# Neoadjuvant systemic therapy

- Downstaging tumor
- Breast conserving surgery
- Contraindications to surgery
- Adjuvant therapy implications

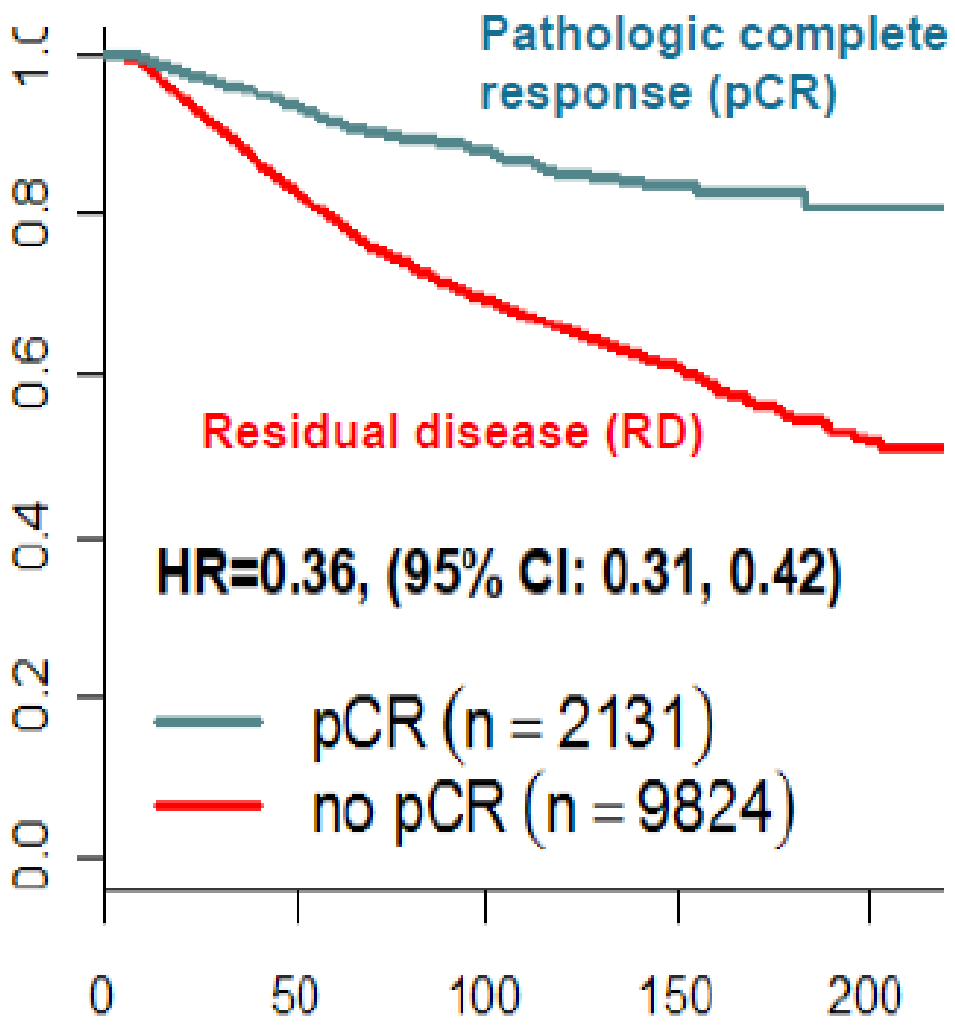
# Adjuvant therapy

- Treat micrometastatic disease
- Reduce risk of recurrence

# Triple negative breast cancer

# Neoadjuvant: TNBC (simplified)

- Size of tumor >2cm
- LN status +
- Choice of systemic therapy: chemotherapy plus/minus immunotherapy
- Systemic therapy can also be discussed in cases outside of above parameters

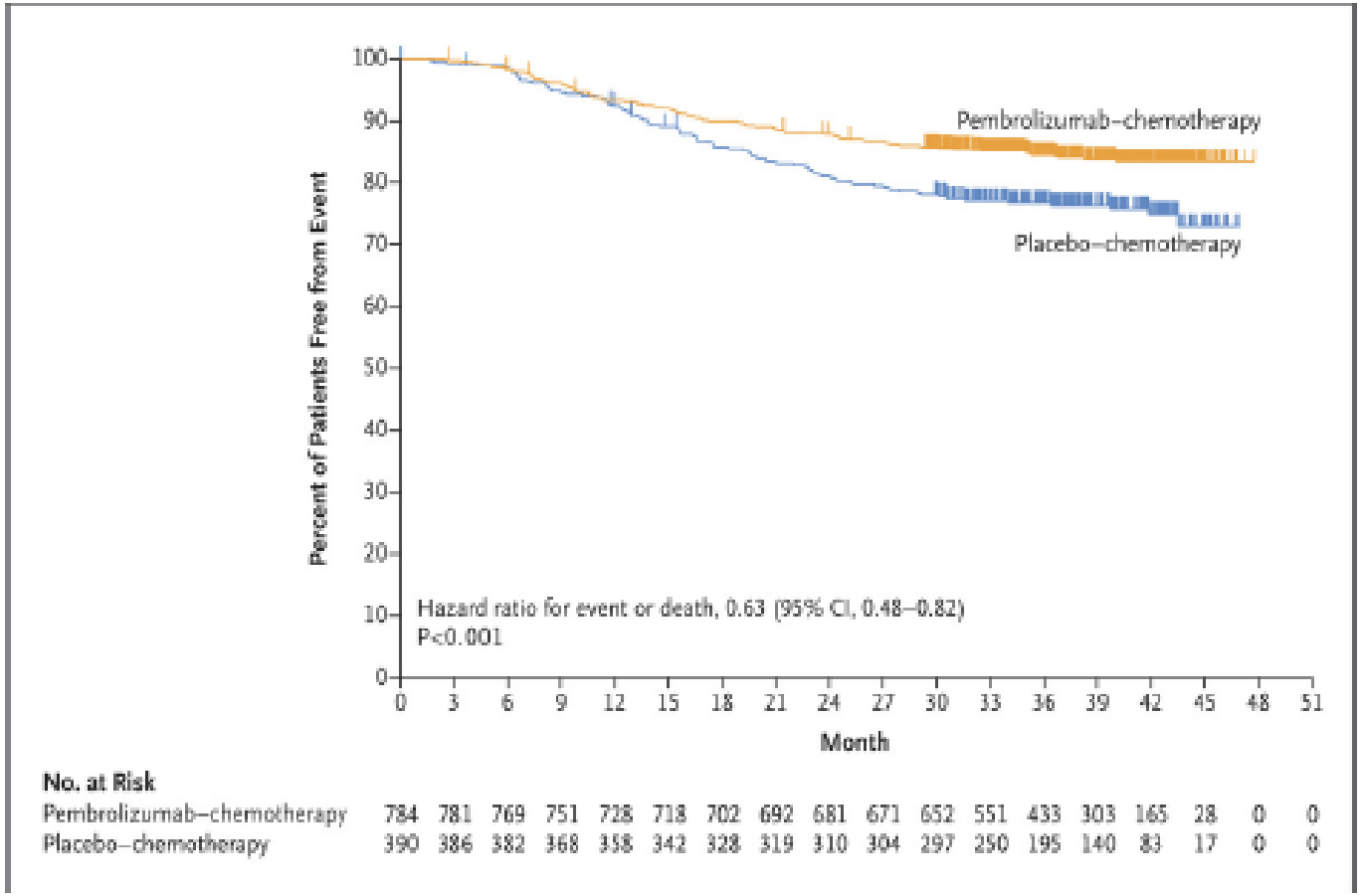

Pathologic complete response (pCR)
Residual disease (RD)
HR=0.36, (95% CI: 0.31, 0.42)
pCR (n = 2131)
no pCR (n = 9824)
0.0
0.2
0.4
0.6
0.8
1.0
0
50
100
150
200

# Adjuvant: TNBC

- Chemotherapy
  - If high risk and no neoadjuvant chemotherapy
  - Residual disease after neoadjuvant chemotherapy
- Immunotherapy
  - If started in neoadjuvant setting, to be continued in adjuvant setting x 1yr
- PARPi
  - Depends on BRCA status, LN+, T stage and pCR

# Immunotherapy in TNBC: KN-522

- Estimated overall survival 86.6% vs 81.7% at 60 months



# TNBC Summary

| | Neoadjuvant | Adjuvant |
|---|---|---|
| Stage I | No tx OR chemotherapy | No tx OR chemotherapy |
| Stage II/III | Chemotherapy plus immunotherapy | Chemo: if no neoadjuvant tx<br>Immuno: if neoadjuvant tx and pCR<br>(If residual disease and neoadjuvant chemo+immuno, beyond this presentation) |

# Back to the case

- 48F with 2.4cm, palpable LN invasive ductal carcinoma on biopsy. ER/PR negative, HER2 negative. How to treat?
  a) Proceed to surgery and adjuvant chemotherapy after
  b) Neoadjuvant chemotherapy
  c) Neoadjuvant chemotherapy plus immunotherapy
  d) No systemic treatment

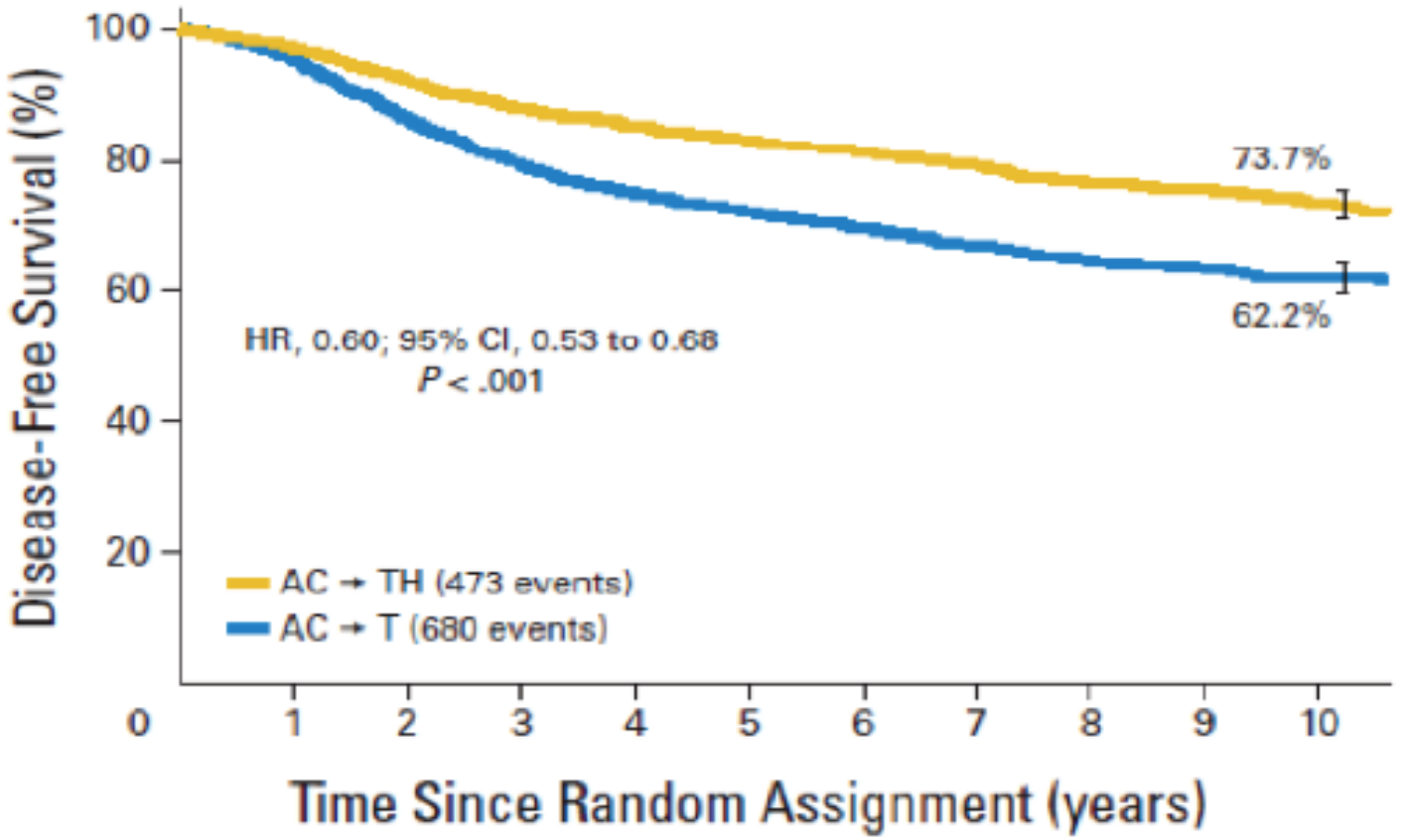
# HER2+ breast cancer

# Neoadjuvant: HER2+

- T stage >2cm
- LN positive
- Choice of systemic therapy: chemotherapy plus anti-HER2 (role for dual anti-HER treatment)

# Adjuvant therapy: HER2+

- If no neoadjuvant therapy
  - Most HER2+
  - Factors to review T and N stage
  - Choice of systemic therapy: Chemotherapy plus anti-HER2
- If neoadjuvant therapy
  - No residual disease: anti-HER2
  - Residual disease: Antibody drug conjugates




No. at risk

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AC → TH | 2,028 | 1,959 | 1,848 | 1,747 | 1,675 | 1,611 | 1,514 | 1,293 | 910 | 619 | 350 |
| AC → T | 2,018 | 1,887 | 1,689 | 1,529 | 1,423 | 1,329 | 1,232 | 1,027 | 705 | 449 | 255 |

# HER2+ summary

| | Neoadjuvant | Adjuvant |
|---|---|---|
| Stage I | | Surgery then adjuvant chemo + anti-HER2 |
| Stage II | Chemo + antiHER2 | Anti-HER2 OR ADC (dependant on pCR status) |
| Stage III | Chemo + antiHER2 | Same as above (other nuances as well, depending on ER status) |

# Back to the case

- 48F with 2.4cm, palpable LN invasive ductal carcinoma on biopsy. ER/PR negative, HER2 positive. How to treat?
  - Proceed to surgery and adjuvant therapy after
  - Neoadjuvant chemotherapy
  - Neoadjuvant chemotherapy plus anti-HER2
  - Proceed to surgery and no systemic therapy at all

# Hormone positive

# Neoadjuvant: HR+ HER2 negative

- Less likely to respond to neoadjuvant chemotherapy
- Decision depends on size of tumor, LN status, proposed surgery
- Choice of therapy: chemotherapy, endocrine therapy

# Adjuvant: HR+ HER2 neg

- Menopausal status
- LN status
- Choice of systemic therapy: chemotherapy, endocrine therapy (aromatase inhibitors, tamoxifen)

# Adjuvant chemotherapy: HR+ HER2 neg

- Premenopausal plus LN+
- Postmenopausal LN 4+
- Genomic assay used (simplified)
  - Post-menopausal and 1-3 LN
  - Premenopausal and LN negative

# Adjuvant endocrine therapy: HR+

- Premenopausal
  - Tamoxifen
  - OFS and Aromatase inhibitors
- Postmenopausal
  - Aromatase inhibitors (preferred)
  - Tamoxifen

# Other adjuvant therapies: HR+ HER2 negative

- High risk patients
  - CDK4/6i
  - PARPi
  - Bisphosphonates

# How to assist while awaiting medical oncology consultation?

- Staging scans
  - If stage 2b or higher
  - If systemic symptoms

- If cardiac comorbidities and consideration for chemotherapy or anti-HER treatment
  - ECHO

# Summary

- Systemic therapy is given to improve survival
- Neoadjuvant is given pre-definitive surgery and adjuvant post-definitive surgery.
- Neoadjuvant therapies can improve pCR rates, downgrade tumors, and have implications in adjuvant settings
- Deciding factors include tumor size, lymph node status in most cases
- Choice of therapy depend on molecular subtypes
- Benefit vs harms of therapies should be weighed in all cases
- No staging studies for stage 1 without any clinical signs or symptoms

# THANK YOU

Questions and comments

# References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