DIANE'S NGN NCLEX 2026 STUDY SERIES · ONCOLOGY · WOMEN'S HEALTH

Breast Cancer

Diagnostics · Surgical & Medical Management · Nursing Care · Patient Teaching

ONCOLOGY | WOMEN'S HEALTH | SURGICAL / PHARM

1 Definition & Overview

- **Malignant proliferation of epithelial cells** in the ducts (most common ~80%) or lobules of the breast.
- **Most common cancer in women** — lifetime risk ≈ 1 in 8. Second leading cause of cancer death in women (lung is #1).
- Can occur in **men (~1%)** — present later, worse prognosis.
- Most often found in the **upper outer quadrant** (where most glandular tissue lives — extends to axilla = "Tail of Spence").

🎯 Key Risk Factors (NCLEX High-Yield)

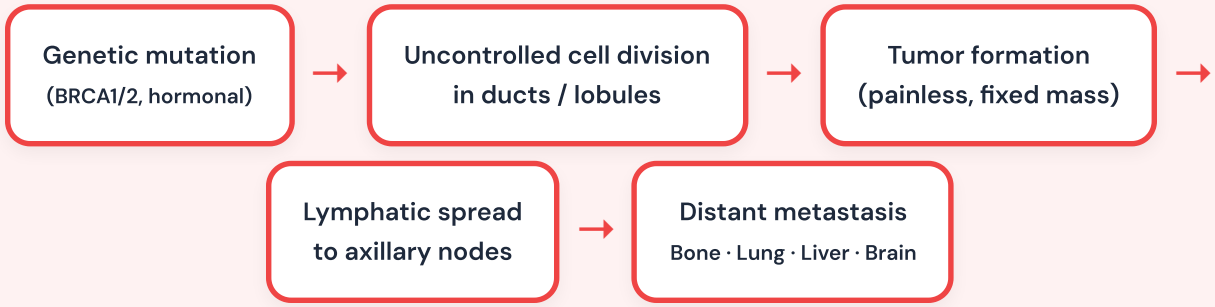
Non-Modifiable

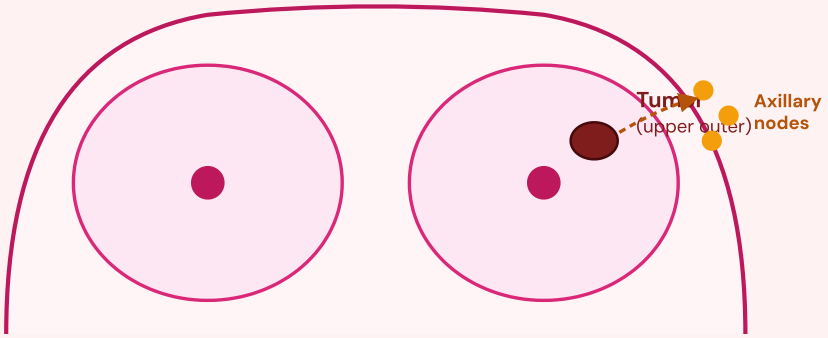
- Female sex; age > 50
- **BRCA1 / BRCA2 mutation**
- Family history (1st-degree)
- Personal history of breast / ovarian Ca
- Early menarche (<12), late menopause (>55)
- Dense breast tissue

Modifiable

- Hormone replacement therapy (HRT)
- Nulliparity or 1st child after age 30
- Obesity (postmenopausal)
- Alcohol use (≥1 drink/day)
- Sedentary lifestyle
- Prior chest radiation

2 Pathophysiology (Simplified)





Most tumors arise in the upper outer quadrant → spread first to axillary lymph nodes

Receptor Status Drives Treatment

Type	What it Means	Treatment Implication
ER+ / PR+	Tumor grows in response to estrogen / progesterone	Hormone therapy (Tamoxifen, Aromatase inhibitors)
HER2+	Overexpression of HER2 protein → aggressive growth	Targeted therapy (Trastuzumab/Herceptin)
Triple-Negative	ER-, PR-, HER2- → most aggressive	Chemo only; poorer prognosis

3 Signs & Symptoms

Early

- **Painless**, hard, irregular, fixed lump
- Usually in **upper outer quadrant**
- Skin **dimpling** ("orange peel" / peau d'orange)
- **Nipple retraction or inversion** (new)
- Breast asymmetry
- Often discovered on routine mammogram or BSE

Late / Advanced

- Visible mass with skin changes
- Enlarged, hard **axillary lymph nodes**
- Bone pain (bone mets)
- Dyspnea, cough (lung mets)
- Jaundice, abdominal pain (liver mets)
- Headache, neuro changes (brain mets)
- Weight loss, fatigue

🚨 RED FLAGS — Report Immediately

- **Bloody or serous nipple discharge** in non-lactating woman
- **Painless, fixed, hard mass** with irregular borders
- **Peau d'orange** (orange-peel skin) → inflammatory breast cancer (aggressive)
- Sudden nipple inversion in adult breast
- Hard, immobile axillary or supraclavicular nodes

4 Diagnostics & Staging

🔬 Screening & Imaging

- **BSE** — monthly, 7–10 days *after* menses (when breasts are least lumpy)
- **Clinical Breast Exam (CBE)** — annually after age 40
- **Mammography** — primary screening; baseline at 40, every 1–2 years (per ACS); finds tumors before palpable
- **Ultrasound** — distinguishes solid mass vs cyst
- **MRI** — high-risk patients (BRCA+)

🧪 Definitive Diagnosis

- **Biopsy is the only way to confirm** (FNA, core needle, excisional)
- Tumor sent for **ER / PR / HER2** receptor testing
- **Sentinel Lymph Node Biopsy (SLNB)** — checks if cancer has spread to nodes
- BRCA1/2 genetic testing for high-risk patients
- Staging workup: CT, bone scan, PET, tumor markers (CA 15-3, CA 27-29)

TNM Staging — The Big Picture

Stage	Description	5-year Survival
0	DCIS (in situ) — non-invasive	~99%
I	Tumor ≤ 2 cm, no node involvement	~99%
II	Tumor 2–5 cm ± limited node involvement	~93%
III	Locally advanced; multiple nodes	~72%
IV	Distant metastasis (bone, lung, liver, brain)	~30%

5 Treatment Options

🔪 Surgery

- **Lumpectomy** — breast-conserving; removes tumor + margin
- **Simple mastectomy** — breast tissue only
- **Modified radical** — breast + axillary nodes (most common)
- **SLNB** — checks first node (preferred over full ALND when possible)

☢️ Radiation

- External beam — after lumpectomy
- Brachytherapy — internal seeds
- Skin care: **no metals, no powder, no soap** — plain water only
- Don't wash off radiation markings

💊 Systemic

- **Chemo** — adjuvant (after surgery) or neoadjuvant (before)
- **Hormone therapy** — ER+ tumors (5–10 yrs)
- **Targeted** — Trastuzumab for HER2+
- **Immunotherapy** — triple-negative

6 Priority Nursing Interventions

🩺 Pre-Operative Care

- **Assess** understanding of procedure and expected outcomes
- Provide **emotional support** — body image, fear of dying, sexuality concerns
- Discuss **reconstruction options** (immediate vs delayed)
- Connect with **support resources** (Reach to Recovery, social work)

🛏️ Post-Op Mastectomy / Lumpectomy — ABCs First

Position & Assess

- **Semi-Fowler's** with affected arm **elevated on pillow** above heart level → reduces edema
- Assess **circulation, sensation, movement** of affected arm Q hour
- Assess dressing for bleeding (mark drainage on dressing with date/time)
- Monitor for **hematoma** (swelling, firmness under dressing)

Drains & Wound Care

- Maintain **Jackson-Pratt (JP)** drain → empty Q shift, recompress for suction
- Record drainage color, amount; report bright red > 100 mL/hr
- Drain typically removed when output < 25–30 mL/24 hr
- Assess incision for infection (redness, warmth, odor, fever)

🚨 AFFECTED ARM PRECAUTIONS — LIFELONG

After axillary node dissection, the arm on the surgical side is at risk for lymphedema permanently. NEVER do the following on the affected arm:

- ❌ **NO blood pressure** measurement
- ❌ **NO IV starts** or injections
- ❌ **NO blood draws** / venipunctures
- ❌ NO tight clothing or jewelry
- ❌ NO heavy lifting (> 5–10 lbs initially)
- ❌ NO carrying purse or bag on that side
- ✅ Wear gloves for gardening/dishes
- ✅ Use sunscreen; treat cuts immediately

💪 Arm Exercises (Restoring ROM)

- **Begin within 24 hours**: hand squeezes (squeeze rolled washcloth/ball), wrist & elbow flexion
- **Days 1–7**: gradual progression — comb hair, brush teeth with affected arm
- **After drains removed**: wall climbing, pendulum swings, rope-turning
- Goal: full ROM in 4–6 weeks; **avoid abduction beyond shoulder until cleared**

7 Pharmacology

Drug / Class	Mechanism	Key Side Effects	Nursing Considerations
Tamoxifen SERM	Blocks estrogen receptors on tumor cells (premenopausal)	Hot flashes, ↑ **DVT/PE risk**, ↑ **endometrial cancer risk**, vaginal bleeding	Report leg pain, swelling, abnormal vaginal bleeding. Annual pelvic exam. Used for 5–10 years.
Anastrozole · Letrozole · Exemestane Aromatase Inhibitors	Block conversion of androgens → estrogen (postmenopausal only)	**Bone loss / osteoporosis**, joint/muscle pain, hot flashes	Baseline DEXA scan, calcium + vitamin D supplements, weight-bearing exercise.
Trastuzumab (Herceptin) HER2 Targeted	Monoclonal antibody binds HER2 receptor → blocks growth signal	🚨 **CARDIOTOXICITY** (heart failure), infusion reactions, flu-like symptoms	**Baseline echo / MUGA scan** for LVEF; reassess Q3 months. Report dyspnea, edema, fatigue.
Doxorubicin (Adriamycin) Anthracycline Chemo	Disrupts DNA replication in cancer cells	**Cardiotoxicity**, bone marrow suppression, alopecia, red-orange urine, vesicant	Lifetime cumulative dose limit. Central line preferred (vesicant). Monitor CBC, LVEF.
Cyclophosphamide Alkylating Chemo	Damages DNA in rapidly dividing cells	**Hemorrhagic cystitis**, BM suppression, alopecia	Push **fluids 2–3 L/day**, void Q2h. Mesna may be given to prevent cystitis.
Paclitaxel (Taxol) Taxane Chemo	Stabilizes microtubules → arrests mitosis	Peripheral neuropathy, hypersensitivity, BM suppression, alopecia	Premedicate with steroids/antihistamines. Assess for numbness/tingling.

🚨 Top Pharm Pearls

- **Trastuzumab + Doxorubicin** = additive cardiotoxicity → never give together; monitor LVEF closely.

- **Tamoxifen + estrogen-blocking** = DVT risk → teach signs of clot; avoid in pregnancy (Category D).
- **Aromatase inhibitors only work after menopause** — useless premenopausally.
- **Cyclophosphamide** → check urine; **red-orange urine with Doxorubicin** is harmless (not bleeding).

8 NCLEX Test Traps ⚠️

❌ TRAP	✅ CORRECT
Take BP on the affected arm only when "necessary."	**NEVER** take BP, do venipuncture, or start IVs on the affected arm. **Lifelong precaution.**
BSE should be done at the same time every day.	BSE done **monthly, 7–10 days AFTER menses** when breast tissue is least lumpy/tender. Postmenopausal: same date each month.
A painful breast lump is the typical presentation.	Breast cancer mass is classically **PAINLESS**, hard, fixed, irregular. Painful = think benign cyst or fibrocystic disease.
Position arm flat at side after mastectomy to avoid pulling on incision.	**Elevate affected arm on pillow** above heart level to reduce edema and promote lymph drainage.
Tamoxifen prevents all cancers because it blocks estrogen.	Tamoxifen **increases** risk of **endometrial cancer and DVT/PE**. Monitor closely. Report leg pain, abnormal bleeding.
Apply lotion to skin during radiation for comfort.	**NO lotions, powders, deodorants, or metals** on radiated skin. Plain water only; pat dry. Don't wash off ink markings.
After mastectomy, encourage immediate full ROM exercises.	Start with **hand/wrist exercises within 24 hr**. Progress gradually. **No abduction past shoulder** until provider clears it.

9 Patient & Family Education

🔍 Self-Detection

- **BSE monthly**, 7–10 days after menses
- Report ANY new lump, dimpling, nipple discharge, skin changes
- Use pads of 3 fingers in circular motion (light → medium → firm)
- Inspect in mirror with arms at side, raised, hands on hips
- Annual mammogram per provider guidelines

💪 Lymphedema Prevention

- Wear **medical alert bracelet** on affected side
- Keep arm elevated when possible
- Wear gloves when gardening, washing dishes
- Use sunscreen; avoid burns, scratches, cuts
- Compression sleeve if prescribed (especially for travel)
- Report swelling, redness, warmth, heaviness immediately

🧠 Body Image & Coping

- Discuss reconstruction options openly
- Refer to **Reach to Recovery** peer support
- Address sexuality and relationship concerns
- Consider counseling for grief, fear, depression
- Family/partner involvement encouraged

📅 Follow-Up

- Provider visits Q3 mo × 2 yr, then Q6 mo × 3 yr, then yearly
- Annual mammogram on remaining breast
- Take hormone therapy as prescribed (5–10 years)
- Healthy diet, exercise, limit alcohol, maintain healthy weight
- Genetic counseling for family if BRCA+

10 Memory Boosters & Mnemonics

"BREAST" — Warning Signs

- **B** Breast lump (hard, painless, fixed)
- **R** Retraction of nipple
- **E** Edema / peau d'orange skin
- **A** Asymmetry of breasts
- **S** Skin dimpling or color changes
- **T** Tender / hard axillary nodes; bloody discharge

"NO BIVS" — Affected Arm Rule

After axillary node dissection, on the affected arm, NO BIVS:

- **B** Blood pressure
- **I** Injections
- **V** Venipuncture / blood draws
- **S** Starts (IV) — anything that pierces the skin

Drug Toxicity Memory Anchors

- **Tamoxifen** = "Tamper with estrogen" → blocks ER; risk of **DVT + endometrial Ca**
- **Herceptin (Trastuzumab)** → "**HER**t" = **HEART**: cardiotoxicity (echo/MUGA)
- **Adriamycin (Doxorubicin)** → "**Adria**" → "**Heart**": cardiotoxic + red-orange urine (harmless)
- **Cytoxan (Cyclophosphamide)** → "**Cysti**tis" → push fluids 2–3L/day

Quick Recall

- **Most common location:** Upper Outer Quadrant (most glandular tissue)
- **Most common spread:** Axillary lymph nodes
- **Most common mets:** Bone > Lung > Liver > Brain ("**BLLB**" or "**Bones Love Liver Brain**")
- **BSE timing:** 7–10 days after menses (B = Bleeding ends, then Breast exam)
- **Mammogram:** Don't wear deodorant or lotion (mimics calcifications on film)

- **Trastuzumab + Doxorubicin = Double Heart Hit ⚠️**

11 NCJMM Clinical Judgment Scenario

SCENARIO: *A 58-year-old woman is post-op day 2 from a right modified radical mastectomy with axillary lymph node dissection. She has a Jackson-Pratt drain in place. The nursing assistant reports the patient's vital signs and asks the RN to verify the BP reading of 168/96 taken on the right arm. The patient also reports tingling in her right hand and her dressing has a quarter-sized area of bright red drainage that has not enlarged in 30 minutes.*

1 Recognize Cues

- BP **taken on the right (affected) arm** ⚠️
- BP elevated: 168/96
- Patient reports **tingling in right hand**
- Bright red drainage on dressing — not enlarging
- Post-op day 2, axillary node dissection performed

2 Analyze Cues

- **Critical safety violation:** BP on affected arm risks lymphedema and damages compromised lymphatic drainage
- Tingling may indicate **nerve compression or early lymphedema**
- Quarter-sized stable drainage = expected post-op finding (not actively bleeding)
- Elevated BP may be from pain, anxiety, or pre-existing HTN — but reading is unreliable on this arm

3 Prioritize Hypotheses

- PRIORITY 1 Affected-arm precaution violation (immediate safety)
- PRIORITY 2 Possible early lymphedema / nerve issue (tingling)
- PRIORITY 3 Re-assess BP on unaffected arm
- LOWER PRIORITY Stable drainage — continue to monitor

4 Generate Solutions

- Place **"NO BP / NO IV / NO BLOOD DRAW — RIGHT ARM"** sign at HOB and on chart

- Educate UAP about lifelong affected-arm precautions
- Re-take BP on left (unaffected) arm
- Assess right arm: circulation, sensation, movement, edema, capillary refill
- Elevate affected arm on pillow above heart level
- Mark and date the dressing drainage; reassess in 30 minutes
- Notify HCP if drainage enlarges, BP remains elevated, or arm symptoms worsen

5 Take Action

- Immediately place identification signage above bed and on chart
- Re-take BP on left arm: result 138/82
- Assess right arm: pulse +2, sensation intact (tingling resolves with elevation), no swelling
- Elevate right arm on pillow; encourage hand-pumping exercises
- Educate patient and family on lifelong affected-arm precautions
- Document findings, intervention, and patient teaching

6 Evaluate Outcomes

- ✅ BP normalized on unaffected arm; pain controlled
- ✅ Tingling resolved with elevation
- ✅ Patient verbalizes "NO BIVS" rule on right arm
- ✅ All staff aware of affected-arm precautions; signage posted
- ✅ Drainage remains stable; no signs of lymphedema or hematoma
- **Continued monitoring:** reassess every 4 hours; reinforce teaching before discharge

Compiled from standard NGN NCLEX 2026 nursing references (Saunders, ATI, Lippincott). For exam prep — verify with current clinical guidelines.