ONCOLOGY · REPRODUCTIVE · WOMEN'S HEALTH

Ovarian *Cancer*

The "silent killer" of gynecologic malignancies — vague early symptoms, late-stage diagnosis, and a high-stakes nursing role across surgery, chemotherapy, and supportive care. Built to the NGN NCLEX 2026 Clinical Judgment Measurement Model.

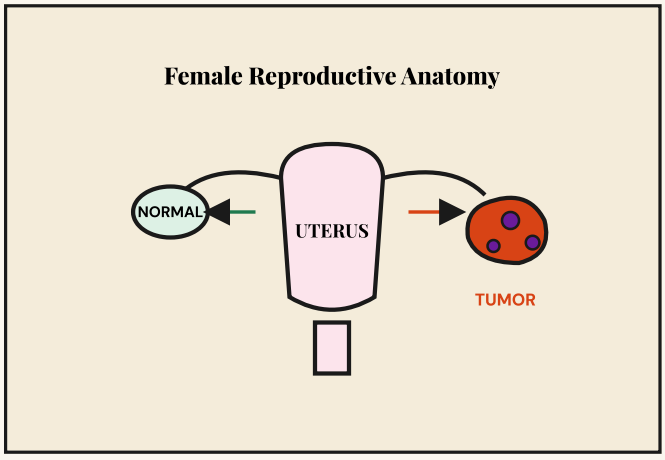
NGN NCLEX 2026 | ADULT HEALTH | ONCOLOGY | REPRODUCTIVE

📚 **Sourcing Note:** *Ovarian cancer is not yet covered in Diane's uploaded reference notes. Content here is drawn from standard NGN NCLEX 2026 references: Saunders Comprehensive Review, ATI Adult Medical-Surgical, Lippincott NCLEX-RN, NCCN Guidelines, and ACS clinical resources.*

1 Definition & Overview

WHAT IT IS · WHY IT MATTERS

- **Malignancy of the ovary** — abnormal cell growth originating in ovarian tissue (epithelial ~90%, germ cell, stromal subtypes).
- **"Silent killer"** — symptoms are vague and easily mistaken for GI or urinary issues, so ~70% are diagnosed at **Stage III or IV**.
- **Highest mortality** of any gynecologic cancer — 5-year survival is ~50% overall, but >90% if caught at Stage I.
- **No reliable screening test** exists for the general population — this is a key NCLEX point.



2 Pathophysiology

HOW THE DISEASE UNFOLDS

1. Genetic mutation (BRCA1/2, Lynch) or chronic ovulation injury
2. Uncontrolled epithelial cell division on ovarian surface
3. Tumor enlarges → invades capsule → sheds cells
4. Peritoneal seeding → omentum, bowel, diaphragm
5. Ascites, lymphatic spread, distant metastasis (liver, lungs)

🧬 Three Main Tumor Types

- **Epithelial (~90%)** — older women, surface of ovary
- **Germ cell** — younger women/teens, ovum-derived
- **Stromal** — hormone-secreting (estrogen/testosterone)

📍 Spread Pattern

- **#1: Peritoneal seeding** — cells "rain" onto abdominal organs
- Lymphatic → pelvic & para-aortic nodes
- Hematogenous (late) → liver, lungs
- Result: **ascites** from peritoneal irritation

3 Risk Factors

WHO IS MOST VULNERABLE

⬆️ INCREASES Risk

- **BRCA1/BRCA2** gene mutations (highest single risk factor)
- **Family hx** of ovarian, breast, or colon cancer
- **Lynch syndrome** (HNPCC)
- **Nulliparity** or infertility
- Early menarche / late menopause (more ovulations)
- Age **>50** (postmenopausal)
- Long-term hormone replacement therapy (estrogen-only)
- Endometriosis, obesity, talc exposure (perineal — historically)

⬇️ PROTECTIVE Factors

- **Pregnancy** (each one lowers risk)
- **Breastfeeding**
- **Oral contraceptives** ≥5 years (~50% risk reduction)
- **Tubal ligation**
- Hysterectomy with bilateral salpingo-oophorectomy
- Prophylactic oophorectomy for BRCA carriers

🧯 **Pattern: Anything that *reduces lifetime ovulations* is protective.**

4 Signs & Symptoms

EARLY (SUBTLE) VS LATE (RED FLAG)

🌤️ EARLY (Often Missed)

- **Abdominal bloating** / distension
- **Pelvic or abdominal pain** (vague, persistent)
- **Early satiety** — feeling full after small meals
- Difficulty eating, loss of appetite
- Urinary urgency or frequency
- Fatigue
- Change in bowel habits (constipation)

⏱️ *Key teaching point: symptoms lasting >2 weeks warrant evaluation.*

🌩️ LATE / ADVANCED

- **Ascites** 🚨 — abdominal distension, fluid wave
- **Palpable pelvic/abdominal mass** 🚨
- Unexplained **weight loss** + cachexia
- **Bowel obstruction** 🚨 (peritoneal spread)
- Pleural effusion → dyspnea
- Postmenopausal vaginal bleeding
- Lower extremity edema (lymphatic obstruction)
- Sister Mary Joseph nodule (umbilical mass — metastasis)

🚨 **Postmenopausal woman + abdominal bloating + early satiety = think ovarian cancer until proven otherwise.**

5 Diagnostics

HOW IT'S CONFIRMED AND STAGED

TEST	PURPOSE	NURSING PEARL
Pelvic exam	Detect adnexal mass	Often the first abnormal finding; low sensitivity early
Transvaginal ultrasound	Initial imaging — visualize ovaries	Best initial test; no contrast; client empties bladder
CA-125	Tumor marker (glycoprotein)	⚠️ **NOT diagnostic alone** — also ↑ in endometriosis, fibroids, pregnancy, PID. Best for *monitoring* response to treatment.
HE4	Newer tumor marker	More specific than CA-125; used with ROMA score
CT / MRI / PET	Staging, metastasis	Hold metformin per protocol if contrast used
Exploratory laparotomy + biopsy	Definitive diagnosis & staging	Surgical staging is gold standard; debulking often combined
BRCA1/2 genetic testing	Risk stratification, treatment selection	Offer genetic counseling; results affect family members
Paracentesis	Ascites fluid analysis	Empty bladder pre-procedure; monitor BP for hypovolemia post

6 Priority Nursing Interventions

ABC · SAFETY · PRIORITIZATION

🔵 PRE-OP

- **Assess** bowel obstruction (sounds, distension, last BM)
- **Monitor** nutritional status — albumin, weight
- **Initiate** bowel prep if ordered
- **Provide** emotional support & education
- **Verify** consent for TAH/BSO + debulking

🟢 POST-OP

- **A**irway — high abdominal incision impairs breathing; encourage IS, splint cough
- **B**reathing — auscultate; ↑ HOB
- **C**irculation — monitor for hemorrhage, hypotension, ↓ Hgb
- **Ambulate early** — DVT prevention (high risk)
- **Monitor** I&O, drains, foley
- **Pain** management — PCA, multimodal

🟣 CHEMO / RADIATION

- **Monitor CBC** — neutropenia, anemia, thrombocytopenia
- **Neutropenic precautions** (ANC <1000)
- **Pre-medicate** for hypersensitivity (paclitaxel)
- **Hydrate** pre/post cisplatin (renal protection)
- **Assess** peripheral neuropathy each visit
- **Antiemetics** scheduled, not PRN

🚨 **TOP NCLEX PRIORITY:** Post-op ovarian cancer client with sudden ↓ BP, ↑ HR, abdominal distension → **hemorrhage.** Notify HCP, raise HOB only if not contraindicated, prepare for transfusion.

7 Pharmacology

KEY CHEMO AGENTS & SUPPORTIVE DRUGS

DRUG / CLASS	MECHANISM	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Carboplatin / Cisplatin PLATINUM AGENT	Cross-links DNA strands → cell death	Nephrotoxicity, ototoxicity, peripheral neuropathy, severe N/V, myelosuppression	**Hydrate aggressively** pre & post. Monitor BUN/Cr, hearing, K^+/Mg^{2+}. Cisplatin = more toxic.
Paclitaxel (Taxol) TAXANE	Stabilizes microtubules → halts mitosis	**Hypersensitivity reaction** (first 10 min), neuropathy, alopecia, neutropenia, bradycardia	**Pre-medicate:** diphenhydramine + dexamethasone + H2 blocker. Stay at bedside first 15 min. Use non-PVC tubing.
Bevacizumab (Avastin) VEGF INHIBITOR	Blocks angiogenesis	HTN, bleeding, **GI perforation**, impaired wound healing, proteinuria	Hold pre-op (4 wk before/after surgery). Monitor BP, urine protein, surgical wounds.
Olaparib (Lynparza) PARP INHIBITOR	Blocks DNA repair in BRCA+ cells	Anemia, fatigue, N/V, ↑ creatinine	Oral; for BRCA-mutated maintenance therapy. Avoid grapefruit.
Doxorubicin (Adriamycin) ANTHRACYCLINE	DNA intercalation, topoisomerase II inhibition	**Cardiotoxicity** (CHF), red urine, alopecia, vesicant extravasation	Baseline & serial echocardiogram. Lifetime dose limit. Central line preferred.
Ondansetron (Zofran) ANTIEMETIC	$5\text{-}HT_3$ receptor antagonist	HA, constipation, QT prolongation	Schedule **before** chemo, not after onset of N/V.
Filgrastim (Neupogen) G-CSF	Stimulates neutrophil production	Bone pain (sternum, pelvis), splenomegaly	SubQ; monitor ANC. Bone pain = expected (NSAIDs help).

8 NCLEX Test Traps ⚠

WRONG-VS-RIGHT THINKING

✕ WRONG THINKING	✓ CORRECT
"An elevated CA-125 means the client has ovarian cancer."	CA-125 is a **monitoring marker**, not diagnostic. Also elevated in endometriosis, fibroids, pregnancy, PID, menstruation, liver disease.
✕ WRONG	✓ CORRECT
"Annual Pap smears screen for ovarian cancer."	Pap detects **cervical** cancer, not ovarian. There is **no recommended screening** for ovarian cancer in average-risk women.
✕ WRONG	✓ CORRECT
"Stop the paclitaxel infusion if the client reports mild flushing 30 minutes in."	**Most hypersensitivity occurs in the first 10–15 minutes.** Stop infusion immediately, give NS, notify HCP, administer rescue meds.
✕ WRONG	✓ CORRECT
"Encourage the post-op client to splint their incision and cough only when fully alert at 24h."	**Splinted cough, IS, and early ambulation start ASAP** to prevent atelectasis/pneumonia after extensive abdominal surgery.
✕ WRONG	✓ CORRECT
"BRCA-positive = client will develop ovarian cancer."	BRCA1 confers ~40–60% lifetime ovarian cancer risk, BRCA2 ~15–20%. **Elevated risk ≠ certainty.** Discuss surveillance & prophylactic options.
✕ WRONG	✓ CORRECT
"Bloating for 3 weeks in a 60-year-old is just menopause-related."	Persistent bloating + early satiety + pelvic pain >2 weeks in postmenopausal woman = **red flag for ovarian cancer** — refer for evaluation.

9 Patient & Family Education

WHAT TO TEACH BEFORE DISCHARGE

📣 Report These Symptoms

- Bloating, pelvic pain, or early satiety lasting **>2 weeks**
- Fever **>100.4°F (38°C)** during chemo
- Bleeding, bruising, petechiae
- Numbness/tingling in hands or feet
- Sudden severe abdominal pain (perforation risk on bevacizumab)
- SOB, swelling in one leg (DVT/PE)

🍽️ Nutrition & Lifestyle

- High-protein, high-calorie, **small frequent meals**
- Cold/bland foods if N/V; avoid strong odors
- Adequate hydration — especially with cisplatin
- Avoid crowds & raw foods if neutropenic
- Soft toothbrush, electric razor when platelets low

💜 Emotional & Sexual Health

- Surgical menopause after BSO — discuss vasomotor symptoms, vaginal dryness
- **HRT often contraindicated** — explore non-hormonal options
- Body image, intimacy concerns are normal — open dialogue
- Refer to support groups (Ovarian Cancer Research Alliance, NOCC)
- Discuss palliative care / advance directives early, not as "giving up"

🧬 Family & Genetics

- If BRCA+, first-degree relatives should consider genetic counseling
- Encourage daughters/sisters to discuss screening MRI, mammography
- OCPs ≥5 years can lower risk for at-risk relatives
- Risk-reducing salpingo-oophorectomy after childbearing in BRCA+

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Memory Boosters

MNEMONICS · PATTERN RECOGNITION

🏖️ B·E·A·C·H — Early Warning Signs

If symptoms persist >2 weeks in a woman >50, send her for evaluation.

B	E	A	C	H	!
BLOATING	EARLY SATIETY	ABDOMINAL PAIN	CHANGES IN URINATION	HARD TO IGNORE (>2 WKS)	REFER

🧪 P·E·N — Platinum Chemo Toxicities

Peripheral neuropathy	**E**ar (ototoxic — high-frequency hearing loss)	**N**ephrotoxic (hydrate, monitor BUN/Cr)

⚡ Pattern Cues

- **"Silent killer"** → ovarian cancer (vague early sx)
- **Ascites + pelvic mass + postmenopausal** → ovarian
- **Low back pain + transfusion** → hemolytic reaction (not ovarian — don't confuse!)
- **CA-125** → monitor, don't diagnose

- **Fewer ovulations = lower risk** (OCPs, pregnancy, breastfeeding)
- **BRCA** → think breast *and* ovary
- **Paclitaxel** → first 10 min reaction window
- **Cisplatin** → hydrate, hydrate, hydrate

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NCJMM Clinical Judgment Scenario

NEXT GENERATION NCLEX · 6-STEP MODEL

SCENARIO

*A 58-year-old postmenopausal woman presents to her primary care provider reporting **3 weeks of abdominal bloating, early satiety, vague pelvic pain, and a 12-lb unintentional weight loss**. She has a family history of breast cancer (mother, age 45). VS: BP 142/88, HR 96, RR 20, Temp 99.1°F. Abdomen is distended with a positive fluid wave. Pelvic exam reveals a firm right adnexal mass. CA-125 is 480 U/mL (normal <35).*

1

Recognize Cues

Relevant cues: Postmenopausal age, persistent bloating >2 weeks, early satiety, unintentional weight loss, family hx of breast cancer, ascites (fluid wave), adnexal mass, markedly elevated CA-125. **Irrelevant/expected:** Mildly elevated temp likely unrelated; mild HTN is chronic.

2

Analyze Cues

The cluster (B·E·A·C·H symptoms + adnexal mass + ascites + ↑↑ CA-125 + family hx) is classic for **advanced ovarian cancer**. Family hx of early-onset breast cancer suggests possible **BRCA1/2 mutation**. Ascites indicates peritoneal involvement (likely Stage III).

3

Prioritize Hypotheses

#1 (Highest): Epithelial ovarian cancer with peritoneal spread.
#2: Other gynecologic malignancy (uterine, fallopian tube).
#3 (Less likely): Benign ovarian cyst with ascites; GI cancer with ovarian metastasis (Krukenberg tumor).

4

Generate Solutions

Order **transvaginal ultrasound** + CT abdomen/pelvis for staging. Refer to **gynecologic oncology**. Plan **exploratory laparotomy with debulking + TAH/BSO**. Initiate **BRCA genetic testing**. Anticipate **platinum-taxane chemotherapy** (carboplatin + paclitaxel). Address nutrition, emotional support, and advance care planning.

5

Take Action

Priority actions: (1) Establish IV access, draw labs (CBC, CMP, coags, type & screen). (2) Educate on diagnostics & surgery; obtain informed consent. (3) Pre-op nutritional optimization (high-protein supplements). (4) Initiate DVT prophylaxis. (5) Engage social work, chaplaincy, genetic counseling. (6) Pre-medicate before paclitaxel: **diphenhydramine + dexamethasone + H2 blocker**; hydrate before carboplatin.

6

Evaluate Outcomes

Expected outcomes: Post-op — VS stable, ABCs intact, pain <4/10, ambulating by POD#1, no hemorrhage or DVT. Chemo cycles — ANC recovers between cycles, no hypersensitivity, neuropathy graded each visit, CA-125 trending *downward* (key indicator of treatment response). Client verbalizes understanding of red-flag symptoms and follows up with gyn-onc. **Unmet outcomes** → reassess and modify plan (e.g., dose reduction for severe neuropathy, switch agents for hypersensitivity, palliative care consult).