NGN NCLEX 2026 • ONCOLOGY

Cancer Prevention & Screening

Primary, Secondary & Tertiary Prevention for the Nursing Student

A comprehensive, exam-ready guide to cancer risk reduction, evidence-based screening guidelines (ACS & USPSTF), warning signs, and nursing interventions anchored in the NCJMM clinical judgment framework.

Health Promotion | Risk Reduction | Early Detection | Patient Education

1 Definition & Overview

Why cancer prevention and screening matter in nursing practice

Primary Prevention

Stops cancer **before** it starts. Focus: lifestyle, vaccines (HPV, HBV), carcinogen avoidance, sun protection.

Secondary Prevention

Early detection through screening (mammograms, colonoscopy, Pap, PSA, LDCT). Catches cancer when most treatable.

Tertiary Prevention

Reduces complications and prevents **recurrence** after diagnosis — surveillance, rehab, survivorship planning.

2 Pathophysiology — How Cancer Develops

Carcinogenesis is a stepwise process. Prevention interrupts the chain.

1

Initiation

Carcinogen damages DNA of a normal cell (tobacco, UV, virus, chemicals)

2

Promotion

Mutated cell proliferates → reversible stage; lifestyle changes can stop it

3

Progression

Cells become malignant with uncontrolled growth & angiogenesis

4

Invasion

Tumor penetrates basement membrane → local tissue invasion

5

Metastasis

Spread via blood/lymph → distant sites (lung, liver, bone, brain)

3 Warning Signs & Risk Factors

Early recognition = better outcomes. These are RED-FLAG findings for NCLEX.

🚨 The 7 Warning Signs: *CAUTION*

- **C** — **Change** in bowel or bladder habits
- **A** — **A sore** that does not heal
- **U** — **Unusual** bleeding or discharge
- **T** — **Thickening** or lump in breast/elsewhere
- **I** — **Indigestion** or difficulty swallowing
- **O** — **Obvious** change in wart or mole
- **N** — **Nagging** cough or hoarseness

Major Modifiable & Non-Modifiable Risks

- **Tobacco** — lung, oral, bladder, pancreas
- **Alcohol** — liver, breast, esophagus
- **Obesity** — colon, breast, endometrium
- **UV Exposure** — melanoma, skin CA
- **HPV** — cervix, anal, oropharyngeal
- **HBV / HCV** — hepatocellular
- **Family Hx** — BRCA1/2, Lynch
- **Age > 50** — most cancers
- **Radon / Asbestos** — lung, mesothelioma
- **Processed Meat** — colorectal

🚨 **Other high-yield red flags:** Unexplained weight loss > 10 lbs, persistent fatigue, night sweats, bone pain, palpable lymph nodes, new persistent headache, post-menopausal bleeding.

4 Priority Nursing Interventions — Primary Prevention

Assess → Educate → Promote lifestyle & immunization

Lifestyle Modifications

- **Smoking cessation** — single most important intervention
- Limit alcohol (≤1 drink/day women, ≤2 drinks/day men)
- Maintain healthy BMI (18.5–24.9)
- 150 min/week moderate exercise
- Plant-based diet; limit red & processed meats
- Adequate fiber (25–35 g/day) — colorectal protection

Environmental & Sun Safety

- Broad-spectrum SPF 30+, reapply every 2 hours
- Avoid peak UV (10 am – 4 pm); NO tanning beds
- Protective clothing, wide-brim hats, sunglasses
- Test home for **radon** (leading cause of lung CA in non-smokers)
- Use PPE with occupational carcinogens
- Safe sex practices (↓ HPV & HBV exposure)

💉 Cancer-Preventing Vaccines (HIGH YIELD):

HPV (Gardasil 9): Routine ages 11–12 (can start at 9); catch-up through 26. Prevents cervical, anal, oropharyngeal, vulvar, vaginal cancers & genital warts. • **Hepatitis B:** Birth, 1–2 mo, 6–18 mo. Prevents chronic HBV → hepatocellular carcinoma.

5 Secondary Prevention — Screening Guidelines

Evidence-based schedules for average-risk adults (ACS / USPSTF 2024)

Cancer	Screening Test	Who	When / Frequency
Breast	Mammogram + clinical exam	**Women 40–74**	Annually age 40–54; Q1–2 yrs age 55+. High risk (BRCA) → add MRI, start earlier.
Cervical	Pap smear + HPV co-test	**Women 21–65**	Pap Q3 yrs (21–29); Pap + HPV co-test Q5 yrs *or* Pap alone Q3 yrs (30–65). **Stop at 65** if adequate prior screening.
Colorectal	Colonoscopy (gold standard)	**Adults 45–75**	**Colonoscopy Q10 yrs** • FIT annually • FOBT annually • Stool DNA (Cologuard) Q3 yrs • Flex sig Q5 yrs.
Prostate	PSA blood test + DRE	**Men 50+**	**Shared decision-making** at 50 (avg risk); 45 for African American or 1st-degree relative with prostate CA.
Lung	Low-Dose CT (LDCT)	**Age 50–80**	**Annually** IF: ≥ 20 pack-year history AND currently smoke OR quit within past 15 years.
Skin	Self-skin exam Dermatology exam	**All adults**	**Self-exam monthly**; professional exam annually (earlier if family hx melanoma or fair skin).
Testicular	Testicular self-exam	**Men 15–35**	**Monthly**, after warm shower. Report painless lump.

⭐ **BSE (Breast Self-Exam) timing:** 7–10 days *after* the start of menstruation (breasts least lumpy/tender). Postmenopausal → same calendar day each month.

6 Pharmacology — Chemoprevention & Vaccines

Medications and immunizations used to reduce cancer risk

Tamoxifen

SELECTIVE ESTROGEN RECEPTOR MODULATOR (SERM)

Use: Breast cancer chemoprevention in high-risk women; adjuvant therapy for ER+ breast CA.

Side effects: Hot flashes, DVT/PE risk, endometrial cancer risk, cataracts.

> **Nursing:** Monitor for leg pain/swelling (DVT), abnormal vaginal bleeding. Annual pelvic exam mandatory.

Raloxifene (Evista)

SERM — 2ND-GENERATION

Use: Breast CA prevention in postmenopausal women + osteoporosis treatment.

Side effects: Hot flashes, DVT risk, leg cramps.

> **Nursing:** Lower endometrial CA risk than tamoxifen. Stop 72 hr before prolonged immobility.

HPV Vaccine (Gardasil 9)

RECOMBINANT VACCINE

Use: Prevents 9 HPV types → cervical, anal, oropharyngeal, vulvar, vaginal cancers.

Side effects: Injection site pain, mild fever, syncope (teens).

> **Nursing:** 2-dose series if < 15; 3-dose if ≥ 15. Have patient sit 15 min post-injection.

Finasteride / Dutasteride

5-ALPHA REDUCTASE INHIBITORS

Use: May ↓ prostate cancer risk; treats BPH.

Side effects: Decreased libido, erectile dysfunction, gynecomastia.

> **Nursing: Pregnant women should not handle crushed tablets** (teratogenic). PSA values ↓ by ~50% — inform HCP.

7 NCLEX Test Traps & Commonly Missed Distinctions

Where students lose points — know these cold.

⚠ Colonoscopy starts at 45 — NOT 50

ACS & USPSTF updated the recommendation in 2021 due to rising young-onset CRC.

✓ **Correct:** Begin average-risk screening at age **45**.

⚠ Pap starts at 21 regardless of sexual activity

Students often pick "when she becomes sexually active" — WRONG.

✓ **Correct:** First Pap at age **21**, no earlier.

⚠ BSE timing is menstrual-cycle based

Tempting wrong answers: "first day of period," "monthly whenever convenient."

✓ **Correct:** 7–10 days **after** menses starts.

⚠ Prostate screening = shared decision-making

PSA is NOT automatic. Nurse discusses risks/benefits with patient.

✓ **Correct:** Discuss at 50 (avg), 45 (high risk).

⚠ Lung CA screening is SMOKER-specific

LDCT is NOT for everyone at age 50 — only for eligible smoking history.

✓ **Correct:** ≥ 20 pack-years AND current/recent (< 15 yr) smoker.

⚠ Sun protection ≠ "avoid midday sun only"

SPF must be **broad-spectrum**, SPF 30+, reapplied Q2 hr or after swim/sweat.

✓ **Correct:** Tanning beds are NEVER safe — Class 1 carcinogen.

⚠ HPV vaccine age cutoff

⚠ Tamoxifen & vaginal bleeding = REPORT

Students miss that catch-up goes to age 26 (shared decision to 45).

✓ **Correct:** Routine 11–12; start as young as **9**.

Hot flashes are expected; new vaginal bleeding is NOT — endometrial CA risk.

✓ **Correct:** Report leg swelling/pain and abnormal bleeding.

8 Patient & Family Education

Key teaching points organized by system

Breast Self-Awareness

- BSE 7–10 days post-menses
- Report lumps, dimpling, nipple discharge/retraction
- Know normal texture of YOUR breasts
- Don't skip mammograms — even if BSE is "normal"

Skin / ABCDE

- Full-body self-exam monthly
- Photograph concerning moles for comparison
- Use mirror for back & scalp checks
- Report any changing lesion ASAP

Testicular Self-Exam

- Monthly, during/after warm shower
- Roll each testicle between thumb & fingers
- Look for painless lump or heaviness
- Most common CA in men 15–35

Bowel Awareness

- Report change in stool caliber or blood

Family Hx & Genetics

- Document 1st & 2nd degree relatives' cancers

Lifestyle & Survivorship

- Tobacco cessation resources (quitline, NRT)

- New constipation/diarrhea > 2 weeks
- High-fiber diet, hydration, movement
- Don't skip scheduled colonoscopy prep

- Ask about BRCA1/2, Lynch syndrome
- Genetic counseling for strong family hx
- Early screening may be indicated

- Alcohol moderation
- 150 min/week exercise
- Stress management & sleep hygiene

ABCDE of Melanoma — Teach Every Patient

A	B	C	D	E
Asymmetry	**Border**	**Color**	**Diameter**	**Evolving**
One half ≠ the other	Irregular, ragged	Varied shades	> 6 mm (pencil eraser)	Changing size/shape/color

9 NCJMM Clinical Judgment Scenario

Applying Recognize → Analyze → Prioritize → Evaluate

Scenario: A 52-year-old African American man with a 30 pack-year smoking history (quit 3 years ago), father diagnosed with colon CA at age 60, comes to the clinic for a "routine check-up." BMI 31. Denies symptoms.

🎯 The Nurse's Task

"Which screening and prevention interventions are most appropriate for this patient at this visit?"

STEP 1 • RECOGNIZE CUES

What stands out?

Age 52 (overdue for colon & prostate screening), heavy smoking history (lung CA risk), African American (↑ prostate CA risk), obesity (↑ colon/prostate), 1st-degree relative with colon CA.

STEP 2 • ANALYZE CUES

Which risks matter most?

Meets **all 3** LDCT criteria (age 50–80, ≥20 pack-years, quit <15 yrs). Prostate screening discussion indicated earlier (45) due to race. Colon CA screening with 1st-degree relative: colonoscopy at 40 or 10 yrs before relative's dx.

STEP 3 • PRIORITIZE HYPOTHESES

What's most urgent?

1. LDCT referral (highest mortality cancer, meets criteria). **2.** Colonoscopy (overdue by family hx). **3.** Shared decision-making on PSA. **4.** Weight/lifestyle counseling.

STEP 4 • GENERATE SOLUTIONS

Plan of care

Order LDCT, refer to GI for colonoscopy, schedule PSA discussion appointment, offer smoking-cessation support (even post-quit relapse risk), nutrition/exercise referral, reinforce that quitting was the single best thing he did.

STEP 5 • TAKE ACTION

Implement

Educate patient on each screening's purpose & prep. Document family hx thoroughly. Provide written schedule. Confirm insurance coverage. Schedule follow-up in 2 weeks to review results & answer questions.

STEP 6 • EVALUATE OUTCOMES

Did it work?

LDCT completed and reviewed; colonoscopy scheduled within 60 days; patient verbalizes understanding of PSA pros/cons; lost 5 lb at 3-month follow-up; remains tobacco-free. Adjust plan based on findings.

10 Memory Boosters & Mnemonics

Quick-recall tools for exam day

Cancer Warning Signs

Melanoma Red Flags

The classic 7 warning signs of cancer spell out a single word — use it as a full-body head-to-toe screen.

> **CAUTION → Change, A sore, Unusual bleeding, Thickening, Indigestion, Obvious mole, Nagging cough**

Teach every patient to do a monthly skin check using this 5-letter system.

> **ABCDE → Asymmetry, Border, Color, Diameter (>6 mm), Evolving**

Screening Age Anchors

A few numbers carry a lot of NCLEX weight — memorize these cold.

> **21 Pap • 40 Mammo • 45 Colon • 50 PSA discussion • 50 LDCT (smokers)**

BSE Timing

Avoid menstrual breast tenderness and lumpiness — wait until after the period ends.

> **"7 to 10 after" → 7–10 days AFTER menses starts**

Primary Prevention Big 5

The five most impactful lifestyle changes the nurse teaches at every visit.

> **SAFES → Stop smoking, Alcohol limit, Food (plant-based), Exercise, Sunscreen**

Lung CA Screening "20/15/50–80"

Three numbers determine if LDCT is indicated for a patient.

> **20 pack-years + quit < 15 yrs + age 50–80 = LDCT annually**