

• ONCOLOGY · RESPIRATORY SYSTEM

Lung *Cancer*

The #1 cause of cancer death worldwide. A high-yield NGN NCLEX 2026 review aligned with the Clinical Judgment Measurement Model — covering SCLC vs NSCLC, red-flag symptoms, priority interventions, and paraneoplastic traps.

+ Test Plan: Physiological Adaptation

🕒 Priority Framework: ABCs

✓ NCJMM Applied

DEFINITION & OVERVIEW

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What Is Lung Cancer?

Lung cancer is the uncontrolled growth of abnormal cells in one or both lungs — most commonly arising from the **bronchial epithelium**.

It is classified into two major types based on cell appearance and behavior, which dictates treatment and prognosis.

Smoking causes 80–90% of all cases. Other risks include secondhand smoke, *radon*, *asbestos*, air pollution, and occupational carcinogens (arsenic, chromium, nickel).

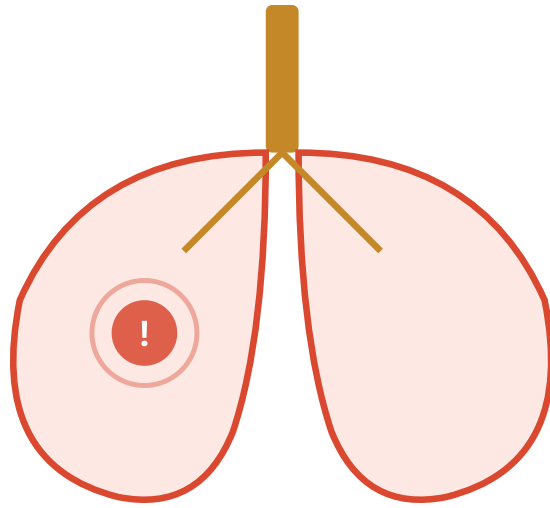
Two Main Types

15%
SCLC

Small Cell. Aggressive, central, fast-metastasizing. Almost always linked to smoking. Paraneoplastic syndromes (SIADH, Cushing's).

85%
NSCLC

Non-Small Cell. Adenocarcinoma, squamous cell, large cell. Slower growth; more treatment options (surgery, targeted therapy).



Tumor in bronchial epithelium

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PATHOPHYSIOLOGY (SIMPLIFIED)

How It Develops

1

Carcinogen Exposure

Tobacco smoke, radon,
asbestos damage airway
epithelium



2

DNA Mutation

Genetic damage to tumor
suppressor genes (p53, KRAS,
EGFR)



3

Uncontrolled Growth

Abnormal cells proliferate and
form tumor mass

4

Airway Obstruction

Tumor blocks bronchi →
atelectasis, post-obstructive
pneumonia



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Local Invasion

Invades pleura, chest wall,
lymph nodes, mediastinum



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Metastasis

Spreads to **brain, bone, liver,**
adrenals via blood/lymph

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SIGNS & SYMPTOMS

What to Assess For

Early Signs

OFTEN SUBTLE

- Persistent cough (new or changed in character)
- Hoarseness / voice change
- Mild shortness of breath on exertion
- Chest discomfort (dull, aching)
- Recurrent bronchitis or pneumonia
- Wheezing (unilateral = suspicious)
- *Many patients are asymptomatic until advanced*

Late Signs

ADVANCED

- **Hemoptysis** (coughing up blood) 🚨
- Unexplained weight loss & anorexia
- Worsening dyspnea at rest
- Persistent chest pain
- **Clubbing** of fingers
- Dysphagia (tumor pressing esophagus)
- Bone pain (metastasis)
- Neurologic changes (brain mets)



RED FLAG Syndromes — Report Immediately

Superior Vena Cava Syndrome

Facial/neck swelling, JVD, upper extremity edema, dyspnea. **Oncologic emergency.**

Horner's Syndrome (Pancoast Tumor)

Unilateral **ptosis, miosis, anhidrosis** + shoulder/arm pain. Apical tumor.

SIADH (Classic SCLC)

Hyponatremia, concentrated urine, confusion, seizures. Fluid restrict.

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PRIORITY NURSING INTERVENTIONS

ABCs First — Always

A Airway

Suction, position upright, monitor for obstruction

B Breathing

SpO₂, lung sounds, O₂ as prescribed, RR pattern

C Circulation

Monitor for hemoptysis, anemia, SVCS

Position Semi- to High-Fowler's

Maximizes lung expansion and reduces work of breathing.

Administer O₂ as Ordered

Titrate to maintain SpO₂ ≥ 90%. Humidify for comfort and mucous membrane protection.

Monitor for Hemoptysis

Note amount, frequency, and color. Massive hemoptysis (>600 mL/24h) is an emergency.

Assess Pain & Medicate

Opioids are appropriate for cancer pain — do not withhold out of fear of dependence.

Nutritional Support

Small, frequent, high-calorie / high-protein meals. Weigh daily.

Energy Conservation

Cluster care, allow rest periods between activities to reduce oxygen demand.

Infection Prevention

Neutropenic precautions if on chemo. Avoid crowds, monitor temp, check WBC.

Emotional & Spiritual Support

Palliative/hospice referral when appropriate. Support advance directives conversation.

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PHARMACOLOGY

Key Treatment Agents

Cisplatin / Carboplatin

PLATINUM-BASED CHEMOTHERAPY

Mechanism: Cross-links DNA to prevent cell division

Side Effects: Nephrotoxicity, ototoxicity, peripheral neuropathy, N/V

Etoposide

TOPOISOMERASE INHIBITOR (SCLC)

Mechanism: Inhibits DNA re-ligation → cell death

Side Effects: Myelosuppression, hypotension, alopecia

Nursing: Monitor BUN/creatinine, hearing; aggressive hydration

Paclitaxel / Docetaxel

TAXANE CHEMOTHERAPY (NSCLC)

Mechanism: Stabilizes microtubules → arrests mitosis

Side Effects: Neuropathy, hypersensitivity, neutropenia

Nursing: Pre-medicate with steroids/antihistamines

Nursing: Infuse slowly; monitor BP; check CBC

Erlotinib / Osimertinib

EGFR-TKI TARGETED THERAPY

Mechanism: Blocks EGFR mutation signaling in NSCLC

Side Effects: Rash (acneiform), diarrhea, pneumonitis

Nursing: Take on empty stomach; report new dyspnea

Pembrolizumab / Nivolumab

IMMUNOTHERAPY (PD-1 INHIBITOR)

Mechanism: Unblocks T-cells to attack cancer

Side Effects: Immune-mediated colitis, pneumonitis, thyroiditis

Nursing: Monitor for new-onset inflammation in any organ

Morphine / Opioids

SYMPTOM / PAIN MANAGEMENT

Mechanism: Opioid receptor binding → analgesia & dyspnea relief

Side Effects: Sedation, constipation, respiratory depression

Nursing: Start bowel regimen early; titrate for comfort

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NCLEX TEST TRAPS

Where Students Lose Points



Hemoptysis is LATE, not early

Don't select hemoptysis as the "early sign." The earliest sign is usually a **persistent cough** or a cough that has changed in character.

Early: Cough

Late: Blood



SIADH is the SCLC clue

If the question gives you **low sodium + concentrated urine** in a lung cancer patient, think SCLC paraneoplastic SIADH. Intervention: **fluid restriction** — not more fluids.

↓ Na⁺

↑ Urine osm



Airway before everything



SVC Syndrome = emergency

When the question lists multiple findings, always pick the **airway/breathing problem first**. Stridor, massive hemoptysis, or severe dyspnea beats pain every time.

Airway > Pain

ABC rule

Facial swelling, JVD, and upper-body edema are **not allergies** — this is **Superior Vena Cava Syndrome**. Elevate HOB and notify HCP immediately.

Not anaphylaxis

Oncologic emergency



Opioids are OK — even "a lot"

In end-stage cancer, **do not withhold opioids** over fear of addiction or respiratory depression. Comfort is the priority. Respiratory depression can be managed.

Comfort first

Addiction ≠ concern



Smoking cessation still helps

Even after a lung cancer diagnosis, quitting smoking improves **treatment response, surgical outcomes, and survival**. Never tell a patient "it's too late."

Never "too late"

Always teach

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PATIENT EDUCATION

What to Teach & Reinforce

1

Smoking Cessation

Stop smoking and avoid secondhand smoke. Benefits begin within hours. Refer to cessation programs, nicotine replacement, varenicline.

2

Nutrition Strategy

Small, frequent, high-calorie / high-protein meals. Nutritional supplements between meals. Weigh weekly.

3

Energy Conservation

Pace activities, rest between tasks, prioritize what matters most. Use mobility aids if needed.

4

Infection Prevention

Avoid crowds and sick contacts during chemo. Hand hygiene. Report fever $\geq 100.4^{\circ}\text{F}$ (38°C) immediately.

5

Symptoms to Report

New/worsening dyspnea, bleeding, severe pain, confusion, facial swelling, chest pain, or unrelieved nausea.

6

Advance Directives

Encourage early discussion of goals of care, DNR status, healthcare proxy, and palliative/hospice options.

7

Follow-Up & Screening

8

Oral & Skin Care

High-risk adults (50–80 y/o, 20 pack-year history) should have annual low-dose CT screening.

Soft toothbrush, alcohol-free rinses, moisturize skin; protect from sun during radiation and chemo.

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MEMORY BOOSTERS

Mnemonics & Patterns

"CHESS" — Lung Cancer Signs

C **H** **E** **S** **S**

Cough (persistent / changed)

Hemoptysis (late red flag)

Effusion (pleural) / Effortful breathing

Shortness of breath

Swallowing difficulty (dysphagia)

"CAUTION" — 7 Warning Signs of Cancer

C **A** **U** **T** **I** **O** **N**

Change in bowel/bladder habits

A sore that does not heal

Unusual bleeding or discharge

Thickening / lump

Indigestion or dysphagia

Obvious change in wart/mole

Nagging cough or hoarseness

SCLC vs NSCLC — Quick Pattern

SCLC = **S**moker, **S**mall, **S**peedy (rapid spread)

SCLC = **S**IADH, Cushing's (paraneoplastic)

NSCLC = **N**on-smokers can get it (adenocarcinoma)

NSCLC = **N**eedle (targeted therapy / surgery possible)

Metastasis Sites — "BBLA"

B **B** **L** **A**

Brain — confusion, HA, seizures

Bone — bone pain, fractures, ↑ Ca²⁺

Liver — jaundice, RUQ pain, ↑ LFTs

Adrenal glands — weakness, electrolyte shifts

9 NCJMM CLINICAL JUDGMENT Apply It: A Scenario

Scenario: A 68-year-old client with SCLC is admitted with confusion, nausea, and a serum sodium of 118 mEq/L. The client takes in 2,400 mL of fluid over 24 hours and has concentrated urine. What should the nurse do?

STEP 1

Recognize Cues

Low Na⁺ (118), confusion, concentrated urine, high fluid intake, SCLC diagnosis — pattern of **SIADH**.

STEP 2

Analyze Cues

SCLC is the classic tumor for paraneoplastic SIADH. Excess ADH → water retention → **dilutional hyponatremia** → neurologic symptoms.

STEP 3

Prioritize & Act

Restrict fluids (800–1,000 mL/day), initiate seizure precautions, notify HCP, anticipate hypertonic saline if severe, strict I&O, daily weights.

STEP 4

Evaluate Outcomes

Na⁺ trending up, LOC improving, urine output normalizing, no seizures, stable weight. Re-assess q4h.

NGN NCLEX 2026 · Lung Cancer Review · Clinical Judgment Measurement Model Applied

High-yield study reference — always verify against current facility protocols.