Patient Case

PATIENT DOOR CHART and Learner Instructions

- Patient Name: John Smith
- Age: 74
- Legal Sex: Male
- Chief Complaint: Shortness of breath
- Clinical Setting: Outpatient clinic

Vital Signs:

- Blood Pressure Reading: 130/85 mmHg
- Pulse Rate: 88 bpm
- Respiratory Rate: 22 breaths/min
- Temperature(Celsius): 36.8°C
- SpO2: 94% on room airLearner Tasks:

Learner Tasks

1. Obtain an appropriately focused and detailed history based upon the chief complaint.
2. Perform a pertinent physical examination based upon the chief complaint.
3. Discuss your diagnostic impressions and next steps with the patient.
4. Place appropriate orders for the patient.
5. Review results with the patient and further next steps.
6. Answer any questions the patient may have to the best of your ability.

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Clinical Interview:

Doctor: Tell me what brings you in today.

Patient: I've been having some trouble breathing for the past four weeks. It started off mild, but it's been getting worse, especially when I'm doing any sort of physical activity. I'm really anxious about it because it's starting to interfere with my daily life. I don't have any chest pain or cough, but the shortness of breath is persistent and really concerning.

Doctor: I'm so sorry about that! Any fevers? Recent travel? Any other medical problems?

Patient: Thank you. No, I haven't had any fevers or recent travel. As for other medical problems, I have high blood pressure and high cholesterol. I've been taking Lisinopril and Atorvastatin for those. Other than that, I haven't had any major health issues recently.

Doctor: Are you waking at night short of breath? Any leg swelling?

Patient: No, I haven't been waking up at night short of breath, and I haven't noticed any swelling in my legs either. The shortness of breath is mostly during the day, especially when I'm active.

Doctor: Your oxygen level is at a safe level, but lower than ideal. We're going to get a CXR and some blood tests and then I'll review the results.

Patient: Okay, thank you. I appreciate you taking the time to check everything. I'm really worried about what's causing this, so I hope we can figure it out soon.

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Doctor: Thanks for your patience. The blood results are all reassuring. Your CXR has a hazy area we'd like to clarify further with a lung CT scan as a next step.

Patient: I understand. Thank you for letting me know. I'm a bit anxious about the hazy area, but I trust you're doing what's best. How soon can we get the CT scan done?

Doctor: You're at the right place. We'll get the CT now.

Patient: Thank you. I appreciate that. I'll do whatever is needed to get to the bottom of this.

Doctor: I'm back to discuss the CT scan results.

Patient: Alright. I'm a bit nervous, but I'm ready to hear what you found. What did the CT scan show?

Doctor: It showed the presence of a mass in the right lung. The most likely diagnosis is going to be a lung cancer. Unlike a few years ago, though, there are often very effective treatments. The very next steps, though, will be to admit you to the hospital since you're having this shortness of breath. That way, we can get a biopsy soon to make sure we know exactly what it is, and then we know the best next steps for you.

Patient: I see. This is a lot to take in. I'm really scared, but I appreciate your honesty and the plan to move forward. I'll do whatever is necessary. What should I expect once I'm admitted to the hospital?

Doctor: First, a new team will see you and we'll consult lung specialists and radiology specialists to

see the least invasive approach to obtain a small tissue sample to examine it under the microscope. That will help us know exactly the best next steps. Again, patients with lung cancer (which we suspect but don't know for sure), now do very well. So, please focus as you're doing just one step at a time as we learn more about what's best for your care.

Patient: Thank you for explaining everything. I understand that this is just the first step and that there are effective treatments available. I'll try to stay positive and take it one step at a time. I appreciate all your help and support.

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Orders:

lung CT scan

Date and Time of Request: 2024-05-25 09:31:38

Heart, lung, extremity physical exam

Date and Time of Request: 2024-05-25 09:29:53

CXR, CBC, TSH, CMP, d-dimer, BNP

Date and Time of Request: 2024-05-25 09:28:54

Results:

Lung CT Scan Report:

- Patient Name: John Smith
- Date and Time of Scan: 2024-05-25 09:41:38
- Indication: Progressive dyspnea; history of heavy smoking (1.5 packs/day for 50 years). Clinically suspected lung cancer.
- Technique: High-resolution CT scan of the chest, contrast-enhanced.
- Findings:

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Right Upper Lobe (RUL):

A spiculated mass measuring approximately 4.5 cm x 3.8 cm in the right upper lobe. The mass shows irregular margins and areas of necrosis.

Adjacent bronchial narrowing and slight lobar atelectasis observed.

No evidence of cavitation.

Increased opacity around the mass suggestive of local invasion.

Lymph Nodes:

Mediastinal lymphadenopathy: Right paratracheal (11 mm) and subcarinal (14 mm) lymph nodes are enlarged.

No evidence of supraclavicular lymph node enlargement.

Other Lobes:

No suspicious nodules or lesions in the left lung or remaining lobes of the right lung.

Pleura:

No pleural effusion.

No pleural thickening or plaques noted.

Cardiac:

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Heart size within normal limits.

No pericardial effusion.

Bones and Soft Tissues:

No rib lesions or bone pathology noted.

Soft tissues appear normal with no masses or significant abnormalities.

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- Impression:

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Associated local invasion and mediastinal lymphadenopathy suggestive of potential lymph node metastasis.

Recommend further evaluation with biopsy of the lung mass and possibly mediastinoscopy or endobronchial ultrasound (EBUS) to assess and biopsy mediastinal lymph nodes.

Correlation with PET scan may be beneficial for further staging.

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Updated Clinical Notes:

- New Information from the CT scan reveals a significant finding of a large mass in the right upper lung lobe, aligning with the clinical suspicion for lung cancer.
- A multi-disciplinary team consultation, including oncology and thoracic surgery, is advised to discuss the next steps in diagnostic workup and management.

Plan:

- Schedule an urgent biopsy of the right upper lung mass.
- Refer to oncology for further management considerations.
- Ensure a follow-up appointment to discuss biopsy results and potential treatment options.

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These results should guide clinical decisions and bolster educational insights into managing cases of suspected lung cancer in patients with chronic smoking history and progressive respiratory symptoms.

Physical Exam Findings:

- Inspection: No visible abnormalities such as chest deformity, precordial bulges, or scars.
- Palpation: No parasternal heave, no palpable thrills or abnormal pulsations.
- Auscultation: Normal S1 and S2 heart sounds. No murmurs, rubs, or gallops detected.

- Inspection: Mild dyspnea noted at rest, use of accessory muscles of respiration not evident.
- Palpation: Symmetrical chest expansion, no tenderness on palpation.
- Percussion: Dullness to percussion noted in the right upper lung field.
- Auscultation: Decreased breath sounds in the right upper lung field, no adventitious sounds such as wheezing or crackles. Breath sounds over other areas are vesicular and normal.

- Inspection: No peripheral cyanosis, clubbing, or edema present.
- Palpation: Pulses are palpable and symmetrical in all extremities (radial, brachial, femoral, popliteal, posterior tibial, dorsalis pedis).
- Capillary Refill: Less than 2 seconds, indicating normal peripheral perfusion.
- Musculoskeletal: No deformities, tenderness, or swelling noted in the joints and muscles of the arms and legs.

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Additional Diagnostic Findings:

- Vital Signs (Rechecked):

Blood Pressure: 130/85 mmHg

Pulse Rate: 88 bpm

Respiratory Rate: 22 breaths/min

Temperature: 36.8°C

SpO2: 94% on room air

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These results align with the patient's current clinical scenario and reflect a careful consideration of his history and symptoms. If further actions or diagnostic tests are needed, please proceed accordingly.

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Lab Results:

Chest X-ray Findings:

- Inhomogeneous opacity in the right upper lung field, suggestive of a mass. No pleural effusion or obvious signs of infection.