

Standardized Prompt for AI Model Comparison Study

Focused Lung Ultrasound Training Instructions

PROMPT TO BE USED WITH ALL AI MODELS:

You are tasked with creating comprehensive written instructions for teaching focused lung ultrasound (FLUS) to novice healthcare practitioners who have no prior ultrasound experience. These learners include medical students, nursing students, and junior residents.

Please provide detailed, educational content covering the following 10 topics. Your instructions should be written at an appropriate level for beginners, emphasize safety and accuracy, and include practical guidance that learners can apply during hands-on training sessions.

Format your response as a structured educational document with clear headings for each topic.

REQUIRED TOPICS (address each topic with substantial detail):

1. **Basic Ultrasound Physics for Lung Imaging**
 - Explain the fundamental physics principles relevant to lung ultrasound
 - Include why lungs appear different from other organs on ultrasound
 - Cover acoustic impedance, reflection, and artifact generation
2. **Probe Selection and Positioning**
 - Recommend appropriate ultrasound probes and frequencies
 - Describe optimal probe positioning techniques
 - Explain standard anatomical landmarks and scanning positions
3. **Normal Lung Ultrasound Appearance**
 - Describe what normal lung ultrasound looks like
 - Explain key anatomical landmarks (pleural line, rib shadows)
 - Define normal artifacts and their significance
4. **Identifying Pleural Sliding**
 - Explain what pleural sliding is and why it's important
 - Describe how to recognize pleural sliding visually
 - Include confirmation techniques and troubleshooting tips
5. **Recognizing B-Lines and Their Significance**

- Define B-lines and their ultrasound appearance
 - Explain how to identify and quantify B-lines
 - Describe the clinical significance of B-lines in different conditions
- 6. Detecting Pneumothorax**
- List the ultrasound signs of pneumothorax
 - Explain the scanning technique for pneumothorax detection
 - Include confirmatory signs and clinical pearls
- 7. Assessing Pleural Effusion**
- Describe the ultrasound appearance of pleural effusion
 - Explain optimal scanning techniques and patient positioning
 - Include methods for quantifying effusion size
- 8. Lung Consolidation Patterns**
- Define consolidation and its ultrasound characteristics
 - Explain different types of consolidation patterns
 - Describe associated findings like air bronchograms
- 9. Common Artifacts and Troubleshooting**
- Identify common artifacts that can confuse beginners
 - Provide troubleshooting guidance for technical problems
 - Include tips for optimizing image quality
- 10. Clinical Integration and Decision-Making**
- Explain how to integrate lung ultrasound findings with clinical assessment
 - Provide guidance on when to use lung ultrasound
 - Include safety considerations and limitations

SPECIFIC REQUIREMENTS:

- **Target audience:** Complete beginners with no ultrasound experience
- **Length:** Provide comprehensive coverage - aim for substantial detail in each section
- **Tone:** Educational, clear, and supportive for novice learners
- **Safety emphasis:** Include relevant safety considerations and limitations
- **Practical focus:** Emphasize actionable guidance that can be applied during training
- **Evidence-based:** Base recommendations on current best practices and guidelines
- **Structure:** Use clear headings, subheadings, and organized formatting
- **Learning support:** Include memory aids, clinical pearls, or teaching tips where appropriate

DO NOT:

- Assume prior ultrasound knowledge
- Use overly technical language without explanation
- Omit safety considerations
- Provide incomplete coverage of any topic
- Include information that contradicts established medical guidelines

Generate comprehensive educational instructions that would serve as a complete reference for novice practitioners learning focused lung ultrasound.

STANDARDIZATION NOTES FOR RESEARCHERS:

Model Testing Instructions:

1. Copy the prompt exactly as written above
2. Paste into each AI model interface without modification
3. Record the complete response from each model
4. Save responses with coded identifiers (e.g., Model_A, Model_B, etc.)
5. Do not provide follow-up questions or clarifications to maintain standardization

Quality Control Checklist:

- Prompt used exactly as written
- Complete response captured
- Model identifier removed/coded
- Response saved in designated format
- No additional prompts or clarifications provided

Expected Response Characteristics:

- Length: Approximately 3,000-6,000 words
- Structure: 10 clearly defined sections
- Format: Educational document with headers
- Content: Comprehensive coverage of each topic
- Level: Appropriate for complete beginners

Randomization Protocol:

- Randomize order of model testing to avoid bias
- Use same computer/interface conditions when possible
- Test all models within same time period
- Document any technical issues or response anomalies