ICC-STAT

Intercostal Catheter Skills and Tasks Assessment Tool

Clinical research/validated assessment tool with instructions, quiz and quiz answers applicable to an international audience of health care providers.
Scoring Recommendations for ICC-STAT

The goal of the Intercostal Catheter Skills and Tasks Assessment Tool (ICC-STAT©) is to monitor progress along the learning curve from novice (Score <60) to competent (Score=100). By observing the learner’s performance several times each year, instructors are be able to ascertain that each of the TEN elements of the tool are addressed satisfactorily*.

Please note that items 1, 2 and 3, as well as items 8, 9, and 10 should be assessed regardless of the kind of chest tube being inserted. If assessing chest tube insertion skill using the blunt insertion technique, items 4 and 5 should be also be assessed (and items 6 and 7 may be ignored). To assess chest tube insertion skill using the Seldinger technique, items 6 and 7 should be assessed (and items 4 and 5 may be ignored).

The ICC-STAT Quiz© contains one single open question (ICC-STAT© item 10) that requires 20 separate answers. The ICC-STAT Quiz is the same regardless of which chest tube insertion technique is being tested. Its value is scored 20 points.

While instructors and training programs may choose their own achievement scores to determine minimum acceptable levels of competency, we recommend that a final PASS grade be achieved only with a score of 100. This recommendation is consistent with mastery learning educational methodologies for competency-based assessments.

ICC-STAT© is designed for a global audience. Users may modify instructional and testing techniques based on regional needs and variations in practice.

* ICC-STAT© has been validated and results published previously (previously referred to as TUBE-iCOMPT, by M. Salamonsen et al., published in Thorax, March 2014). Elements of the assessment tool were restructured to assure uniformity with other assessments designed and distributed by Bronchoscopy International® faculty. ICC-STAT can also be used in conjunction with The Chest Ultrasound-Guided Thoracentesis assessment tool (UG-STAT) available from www.Bronchoscopy.org.

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### INTERCOSTAL CATHETER SKILLS AND TASK ASSESSMENT TOOL

**Student ___________________________ Training Year _______________**

**Faculty ___________________________ Date _________________________**

- [ ] Simulation Workshop
- [ ] Patient-based Scenario

**Method of insertion:**
- [ ] Seldinger technique
- [ ] Blunt dissection technique

#### Educational Item*

<table>
<thead>
<tr>
<th>Item</th>
<th>Score/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient positioning and site selection (2 points each)</td>
<td>[ ] Time out (patient identification and informed consent) ☐ Patient positioned appropriately ☐ Identifies triangle of safety using anatomical landmarks ☐ Describes the benefits of using ultrasound</td>
</tr>
<tr>
<td>2. Local anesthetic technique (2 points each)</td>
<td>☐ Aseptic technique ☐ Adequate volume ☐ Knows maximum dose ☐ Needle inserted over superior border of rib ☐ Needle perpendicular to skin aiming for axial center of chest ☐ Pleural space aspirated ☐ Specifically infiltrates parietal pleura and skin ☐ Notes depth to pleural space</td>
</tr>
<tr>
<td>3. Local anesthetic: Overall fluidity of movement and skill</td>
<td></td>
</tr>
<tr>
<td>4. Blunt Dissection Technique (3 points each)**</td>
<td>☐ Remove trocar from chest tube ☐ Skin incision ☐ Blunt dissection through chest wall ☐ Uses nondominant hand to control forceps at skin ☐ Punctures pleura ☐ Assures adequate track size for tube ☐ Inserts ICC with forceps without excessive force ☐ Assures all catheter side holes are within pleural cavity and confirms drainage of pleural contents</td>
</tr>
<tr>
<td>5. Blunt dissection: Overall fluidity of movement and skill**</td>
<td></td>
</tr>
<tr>
<td>6. Seldinger Technique (2 points each)***</td>
<td>☐ Introducer needle over rib ☐ Pleural space aspirated ☐ Insertion of guidewire ☐ Confirms guidewire moves freely ☐ Guidewire not kinked or contaminated ☐ Knows to start again if guidewire resistance is felt ☐ Skin incision pre-dilatation ☐ Needle track dilated making sure instruments are inserted in same plane ☐ Dilators not passed greater than 1 cm past pleura ☐ Chest tube inserted over wire without excessive force ☐ Ensures all side-holes of chest tube within pleural cavity ☐ Confirms drainage of pleural contents</td>
</tr>
</tbody>
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7. Seldinger technique: Overall fluidity of movement and skill***

<table>
<thead>
<tr>
<th>Unsatisfactory</th>
<th>Below average</th>
<th>Satisfactory</th>
<th>Above average</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Yes / No
Score ____/8

8. Drain connection, Suturing, and Dressing techniques
- Attaches tube to drain or clamps/turns off 3-way tap
- Uses non-absorbable suture
- Secures and anchors chest tube
- Chest tube not compressed
- Sutures are tight (chest tube does not loosen with movement)
- Applies appropriate dressing to tube insertion site
- Secures or tapes junction of ICC to drain tube
- Applies tape to secure chest tube/drain tube to patient

Yes / No
Score ____/8

9. Post-procedure Checks (2 points each)
- Confirms pleural placement (fluid fluctuation/swing in drainage device)
- Examines drainage device for fluid or air leak
- Orders chest x-ray
- Considers ongoing analgesia

Yes / No
Score ____/8

10. ICC-STAT Quiz

Yes / No
Score ____/20

* Each of the 10 items contains elements required by ACGME (patient care, medical knowledge, practice-based learning and improvement, interpersonal communication skills, professionalism, and systems-based practice).

** Use items 4 and 5 if assessing Blunt insertion technique (ignore items 6 and 7).

*** Use items 6 and 7 if assessing Seldinger technique (ignore items 4 and 5).

FINAL GRADE    PASS_____    FAIL_____    SCORE     ______/100
ICC-STAT Quiz (20 points)

INSTRUCTIONS: Please list TWENTY major items that should be reviewed during the “time out” prior to inserting an intercostal catheter.

1. ______________________  11. ______________________
2. ______________________  12. ______________________
3. ______________________  13. ______________________
4. ______________________  14. ______________________
5. ______________________  15. ______________________
6. ______________________  16. ______________________
7. ______________________  17. ______________________
8. ______________________  18. ______________________
9. ______________________  19. ______________________
10. ______________________  20. ______________________

SCORE (# OF CORRECT ANSWERS) _____________/20
ICC-STAT Quiz Answers (20 points)

The following TWENTY major items (listed here in alphabetical order) should be reviewed during a “time out” prior to inserting an intercostal catheter.

1. Assure equipment is available in case of complications
2. Assure intravenous access
3. Assure that oximetry is available
4. Assure that sharps precautions are adequate
5. Assure that systemic blood pressure monitoring is available
6. Assure that universal precautions are respected
7. Confirm correct patient (chart, self-declared name, name badge)
8. Confirm correct place
9. Confirm correct procedure
10. Confirm correct time
11. Confirm that a procedural assistant is present
12. Confirm that informed consent was obtained
13. Confirm pleural ultrasound results (if applicable)
14. Confirm the chest tube insertion site (side and anatomical location)
15. Review chest radiographic studies
16. Review coagulation studies
17. Review the patient’s medication list
18. Review premedication/sedation plan for the procedure
19. Review chest tube insertion, drainage, and sampling procedural plan
20. Review results of clinical examination and note any changes

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