

## Transrectal ultrasound and prostate biopsy - procedure

Procedure adapted from Skills for Health PB2 2008 Performance criteria [\*]

This procedure and its component actions should be performed in accordance with national and local policies and guidelines.

Environmental preparation	Rationale
<ol style="list-style-type: none"> <li>1. Check the environment, equipment and medication; that everything is present for the procedure, including access to relevant personnel and emergency equipment.</li> <li>2. Prepare the ultrasound machine by ensuring it is clean and prepare the probe by inserting some ultrasound gel into the end of the condom, then roll the condom over the probe and carefully attach the needle guide without splitting the condom.</li> <li>3. Prepare a trolley/work surface with the rest of the equipment required.</li> <li>4. Ensure that competent staff are present to enable the procedure to be undertaken safely.</li> </ol>	<p>Items 1-4</p> <p>To ensure that the procedure takes place without delay for the patient and that safety of the patient is addressed.</p>
<ol style="list-style-type: none"> <li>5. Read the patient's record, referral letter and results of any relevant investigations, and identify any special instructions, investigations or items for which you need to seek advice or clarification.</li> </ol>	<p>To ensure correct identification of the patient and identify details that might necessitate adaptation of the procedure.</p>
Patient preparation	Rationale
<ol style="list-style-type: none"> <li>6. Greet and accurately identify the patient and introduce yourself and any colleagues present.</li> </ol>	<p>To reduce patient anxiety and ensure correct identification of the patient.</p>
<ol style="list-style-type: none"> <li>7. If not already done, take a comprehensive health history including presenting complaint, health history, medication, and family and social history.</li> <li>8. Determine the need for the biopsy and decide whether or not to proceed.</li> <li>9. Assess the patient's fitness for the procedure and local anaesthesia, including previous allergies to local anaesthetics. Identify any risk factors (see above) for which special precautions may be required.</li> </ol>	<p>Items 7-9</p> <p>To identify any patient-related risk factors that might necessitate adaptation of the procedure to ensure its safety.</p>
<ol style="list-style-type: none"> <li>10. Explain the procedure, potential complications, potential outcomes and discomfort to the patient and answer any questions at a level and pace that is appropriate to the patient's understanding, culture and background, preferred way of communicating and needs.</li> <li>11. Ensure that informed consent has been obtained, or obtain it.</li> <li>12. Ensure that pre-procedural criteria have been met such as stopping relevant medications, and administration of prophylactic antibiotics.</li> </ol>	<p>Items 10-12</p> <p>To ensure safety of the patient and staff, to promote patient's comfort and reduce anxiety.</p>
<ol style="list-style-type: none"> <li>13. Apply local procedure-specific infection control guidelines.</li> <li>14. Position the patient correctly for the procedure (left lateral with legs abducted, or lithotomic position) and ensure their comfort within the constraints of the procedure.</li> <li>15. Take appropriate action to protect the patient's privacy and dignity throughout.</li> <li>16. Maintain communications with the patient and respond to any questions or needs throughout.</li> </ol>	<p>Items 13-16</p> <p>To ensure safety of the patient and staff, to promote patient's comfort and reduce anxiety.</p>

Ultrasound procedure	Rationale
17. Undertake a digital examination of the prostate to identify the size and shape of the prostate and any abnormalities that may influence the procedure; ensure that the rectum is not full of faeces and decide whether or not to proceed.	To provide initial digital findings. This may necessitate additional biopsies to the standard biopsy protocol that is used.
18. Check the local anaesthetic agent to be used then draw it into a syringe and attach an appropriate needle for administration.	To ensure patient safety.
19. Apply lubricating gel to the transrectal ultrasound probe and insert the probe gently into the patient's rectum, while monitoring progress on the ultrasound image.	To promote patient comfort and enhance the quality of the scan.
20. Scan and identify the prostate gland, seminal vesicles and surrounding structures, locating the apex and base of the prostate on the ultrasound image.	To orientate the operator and identify areas for biopsy.
21. Take volume measurements and either print images or store them on the ultrasound machine for future reference. Make note of any abnormalities detected on ultrasound and print or store images as required.	To provide information that may be useful when discussing treatment options with the patient in the future.

Biopsy procedure	Rationale
22. Inform the patient that the local anaesthetic is about to be administered.	To reduce patient anxiety.
23. Introduce the local anaesthetic needle through the biopsy channel of the ultrasound probe until the needle tip can be visualised on the screen in the peri-prostatic tissue. 24. Commence infiltration of the local anaesthetic, observing passage of the fluid throughout the peri-prostatic area. 25. Withdraw the needle and continue with the transrectal ultrasound guided biopsy of the prostate.	Items 23-25 To promote patient comfort.
26. Identify the appropriate locations for the biopsy samples 27. Introduce the biopsy needle until the needle tip can be visualised on the screen in the peri-prostatic tissue, adjacent to the target area.	Items 26 and 27 To ensure the correct areas are biopsied.
28. Inform the patient that the biopsy is about to be taken, warn them of the sound of the biopsy gun and commence taking tissue samples. 29. Assess the patient's tolerance throughout the procedure and ensure that they are happy to proceed.	Items 28 and 29 To ensure patient comfort and reduce anxiety.
30. Ensure that each biopsy sample is placed in the correct and accurately labelled sample container containing formal saline.	To ensure that the correct results go to the correct patient.
31. Ensure that the samples taken are adequate for histopathology by comparing the length of the core with the length of the needle notch. 32. Take additional samples.	Items 31 and 32 To assist the histopathologist to make an accurate diagnosis.
33. Remove the transrectal ultrasound probe from the patient's rectum.	To promote patient comfort.

Patient recovery	Rationale
<p>34. Assess the patient for any complications and take appropriate action as appropriate.</p> <p>35. Recognise the need for immediate management of acute emergencies associated with the procedure and respond appropriately.</p> <p>36. Assess the patient's needs following the procedure and offer support, if appropriate.</p>	<p>Items 34-36</p> <p>To ensure patient safety and comfort.</p>
<p>37. Ensure the patient has all required information and medication. Re-iterate the possible complications and how they should be managed.</p>	<p>To ensure patient safety and reduce the risk of serious side effects following the procedure.</p>
<p>38. Assess the patient's fitness for discharge, advise them of when they should leave the unit, and make appropriate arrangements for follow-up to discuss the histology results.</p>	<p>To ensure patient safety and that the patient will be followed up with the results.</p>

Completion of procedure	Rationale
<p>39. Ensure that single use items and sharps are disposed of and that non-disposable equipment is cleaned and/or sterilised.</p>	<p>To ensure the safety of staff and patients.</p>
<p>40. Complete the histopathology request form ensuring that it matches patient identity and includes all relevant clinical details, particularly relevant previous treatment, procedures and biopsies.</p>	<p>To ensure the correct results go to the correct patient.</p>
<p>41. Record the details of the procedure in the patient's record, including details of the local anaesthetic and any medication given.</p> <p>42. Ensure that steps are taken to inform any other relevant practitioners of the procedure and plan.</p>	<p>Items 41 and 42</p> <p>To ensure patient safety and accurate records for other practitioners who may see the patient.</p>
<p>43. Recognise when you need help and/or advice and seek this from appropriate sources.</p>	<p>To ensure patient safety.</p>
<p>44. Collect and maintain a record of procedures for audit to include reviews of histology reports.</p>	<p>To provide evidence of good practice and/or areas for improvement and development.</p>
<p>45. Ensure that you keep up to date with relevant clinical developments and changes to guidelines.</p>	<p>To ensure patients have access to the best treatments and techniques.</p>

This document is an appendix to the 2019 edition of the **Evidence-based Guidelines for Best Practice in Urological Health Care - Transrectal Ultrasound Guided Biopsy of the Prostate** of the European Association of Urology Nurses and is meant to support training and daily practice of transrectal ultrasound guided biopsy of the prostate.

**\* Adapted from:**

Skills for Health. PB2 - Undertake trans-rectal ultrasound guided biopsy of the prostate [Internet].  
Ski Heal 2010 [cited 2018 Oct 16]. p. 1-4.

**Available at:**

<https://tools.skillsforhealth.org.uk/competence/show/html/id/2008/>

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