

# Transperineal biopsy devices in people with suspected prostate cancer - a systematic review and economic evaluation

Inês Souto-Ribeiro, Lois Woods, Emma Maund,  
David Alexander Scott, Joanne Lord, Joanna Picot and  
Jonathan Shepherd\*

Southampton Health Technology Assessments Centre (SHTAC), University of  
Southampton, Southampton, UK

\*Corresponding author [jps@soton.ac.uk](mailto:jps@soton.ac.uk)

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## Plain language summary

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## Plain language summary

A prostate biopsy can help determine if a person has prostate cancer. The main ways of performing a prostate biopsy involve taking small samples of the prostate out through the rectum (back passage) or through the perineum – the skin area between the anus and the scrotum (testicles). Both methods use ultrasound images from a probe inserted into the rectum to help the clinician see what they are doing. Taking samples through the rectum is usually carried out under local anaesthetic, whereas taking samples through the perineum is usually carried out under general anaesthetic.

We wanted to find out if taking samples through the perineum under local anaesthetic (instead of general anaesthetic) would be equally effective at detecting prostate cancer as the other biopsy methods and whether there was any improvement or change in the sorts of side effects people may have. We also wanted to know if people found the biopsy painful or not. We carried out searches of computer research databases to find relevant clinical and cost-effectiveness studies and compared the effectiveness of the different biopsy methods they used. We read and summarised the results of the studies we found in our search.

Our findings showed that taking biopsy samples through the perineum under local anaesthetic had rates of detecting prostate cancer similar to those of the other biopsy methods. But if the clinician also used a freehand device that helps guide the biopsy needle as part of the procedure, then this may be a better method for detecting cancer. The studies we found agreed that performing this prostate biopsy under local anaesthetic was not too painful for most people. Our economic estimates suggest that using a freehand device for local anaesthetic perineal (through the skin of the perineum) biopsy may be a cost-effective use of National Health Service resources.

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