

New pain-free treatment for prostate cancer? Not quite

October 3 2013, by Mark Frydenberg



Credit: Nataliya Vaitkevich from Pexels

If you or someone close to you has lived with prostate cancer, you've probably come across dozens of emerging treatments in your hours of Googling. One such treatment, focal therapy, has been dubbed the "new

pain-free treatment for prostate cancer". But don't hold your breath; it's still in its [experimental phases](#).

So, what exactly is focal therapy? And what barriers do we need to overcome before it's made available?

Prostate cancer is the nation's second most common cancer, with around 19,000 new diagnoses each year. This type of cancer is multi-focal, meaning it's found in more than one location in the prostate at a time. The largest tumour – known as the [index lesion](#) – is the main cancer that can spread to other parts of the body and lead to a [reduced rate of survival](#).

Focal therapy targets and kills only the index cancer cells with either cryotherapy (freezing), high-intensity focused ultrasound (intense heating), laser-induced interstitial thermotherapy (intense heating) and irreversible electroporation (cell destruction). [The idea is that](#) by not treating the entire prostate, the untoward [side effects](#) from surgery or radiotherapy can be avoided.

But focal therapy works on the assumption that this index lesion is primarily responsible for cancer recurring, and that this lesion can reliably be imaged, biopsied and specifically treated.

It also assumes that targeting this lesion for focal [treatment](#) may lead to equivalent long-term cancer survivals compared with whole-gland therapies such as surgery or radiotherapy – with fewer side effects. And that if unsuccessful, these therapies can be introduced safely, without compounding side effects.

But to date, these assumptions are unproven.

Next steps for research

It's too early to routinely recommend focal therapy to treat [prostate cancer](#) because key questions remain about its safety and efficacy. More specifically, researchers are investigating the following key areas.

First is whether the index lesion can be accurately identified. While a type of magnetic resonance imaging technique called multi-parametric MRI may be able to improve cancer identification within the prostate, it also has the potential to [miss significant cancers](#).

Current technology does not allow for a lesion seen on MRI to be reliably seen on an ultrasound, which is technology currently used to perform the biopsy. This means there is the potential for error in both the diagnosis of a cancer (its size, position and how aggressive it is) and its subsequent focal treatment. After all, if you can't see it, how are you going to biopsy it, yet alone treat it accurately?

Second, cancer control rates following focal therapies are largely unknown compared with standard whole-gland therapies (such as surgery). Added to this, few focal therapy reports have [systematically reported](#) quality of life outcomes such as incontinence or erectile dysfunction using validated tools. As such, the side effects of these treatments are largely unknown.

Third, the feasibility, efficacy and safety of whole-gland therapies used to salvage failed focal therapy is unknown. And the impact of leaving the non-index lesions untreated is also unknown.

Finally, with [no no formal definition](#) as to what constitutes treatment failure, there are significant challenges in determining how to monitor patients following focal therapy.

What does this mean for me?

Focal therapy isn't a substitute for active surveillance and men with small, low-risk cancers should be reassured that their risk of cancer death over a 10- to 15-year time frame is extremely low. For these men, it's safe to monitor the situation and have treatment only if the tumour worsens. This avoids the side effects of unnecessary treatments.

The lack of clear evidence of the superiority of focal therapy (or even equivalence) to standard therapies in [cancer](#) outcomes, and the largely unknown spectrum and severity of side effects, should not be understated. So if you do need treatment, opt for one of the proven effective therapies such as surgery or radiotherapy.

If you do wish to undergo focal therapy, it's important you do so as part of a formal clinical trial, with appropriate ethics committee approval, consent process and with strict reporting requirements regarding outcomes and safety profile.

Is [focal therapy](#) worth studying scientifically? The answer is absolutely yes, but under formal clinical trial conditions. Is it ready for prime time? Not in 2013.

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