Reporting the Canadian robotic experience: The outcomes and how we report them

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Cite as: *Can Urol Assoc J* 2013;7(9-10):333-4. http://dx.doi.org/10.5489/cuaj.1689
Published online October 7, 2013.

With the expansion of robotic programs in Canada, robot-assisted radical prostatectomy (RARP) is being increasingly used for to treat localized prostate cancer. Worldwide, many surgeons have transitioned to RARP or have been solely trained in this technique rather than open radical prostatectomy (ORP). This change in surgical approach has led to controversy within our discipline[1,2] and confusion for the public. The latest and greatest technology must be better, right? Lawsuits involving robotic surgery are on the rise in the United States.[3] Some of this could be related to the marketing of the robot, public perception that technology equates lower risks, or perhaps poor preoperative consent discussions with patients.

Canadian reports of the outcomes for RARP and ORP are lacking, as noted by Al-Hathal and colleagues.[4] Metrics, such as wait times and margin rates, are being collected in several provincial jurisdictions, but many surgeons still do not know their own outcomes, including complication rates. These authors should be congratulated for systematically collecting their data and performing the analyses contained within their article. Having said this, the reader (especially a prostate cancer patient) must be cautious in interpreting the data.

First and foremost, a radical prostatectomy, by any approach, is a cancer operation. As such, we must try to adhere to the oncologic principles, but still balance the functional outcomes. Initially Bianco and colleagues promoted the idea of the "trifecta" for radical prostatectomy: cancer free, continent and potent.[5] Patel and colleagues took this one step further adding negative margins and complication free to these other outcome measures.[6] In this paper by Al-Hathal and colleagues, they report a positive margin rate of 25.7% for T2 disease and 43.3% for T3 disease, respectively. This is likely related to the "aggressive nerve sparing" in the patient population that was mostly in intermediate- and high-risk disease. Admittedly, they only performed 9 wide excisions and, as such, performed nerve sparing in men with high-risk disease regardless of potency status. Overall, these results are similar to population-based data from Ontario,[7] but again, we must continually strive for better results.[8] Preservation of potency at the expense of cancer control compromises the cancer operation.

The authors report a 95.3% potency recovery rate at 24 months. They provide a detailed explanation of the sexual functional recovery for a subset of their patients who were potent preoperatively, had nerve-sparing surgery and were offered postoperative rehabilitation with medications.[4] The reader must realize that the outstanding potency recovery rate involves this selected subset of patients, not all comers. Anecdotally, I've had a patient with poor preoperative erectile function ask when he would expect to see the improvement in his erections after RARP. It took a while to explain the reality to this patient: 90% potency does not mean that all patients undergoing the operation, especially those with several pre-existing erectile dysfunction, will get better. When performing an informed consent discussion with a patient, surgeons have a duty to review the common side effects and complications, while putting this into the context of their own outcomes and the individual patient's circumstances. Setting the appropriate expectations for recovery of continence and potency is critical for patients undergoing RARP (or ORP for that matter). While the 95.3% outcome is excellent in this subset of 77 patients, it is unclear how many patients comprise the 95.3% reported at the 24-month mark (i.e., is this 20 out of 21 patients?). In reality, a maximum 73 out of 250 patients were having successful penetration 2 years after surgery – that is 29.2% of the overall cohort. I recognize that this is not our standard way of reporting

potency following surgery, but it does make a point.

Overall, the authors have reported comprehensive data from their initial experience with RARP in Quebec, with results similar to higher volume centres. All surgeons should reflect on their outcomes and strive to provide the best care and information to their patients.

Competing interests: None declared.

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