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National Quality Improvement Program in Transurethral Resection of Bladder Tumor: A Model for the Rest of Us, Even if We Cannot Share All Results

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It is increasingly clear that variability in practice patterns and quality improvement efforts affect survival outcomes in bladder cancer. In this issue of *European Urology*, Mariappan et al [1] present the first part of their comprehensive quality improvement program for bladder cancer, impressively implemented at a national level in Scotland. This first publication deals with quality in transurethral resection of bladder tumor (TURBT) procedures.

The authors evaluated 1860 new patients with non–muscle-invasive bladder cancer (NMIBC) for 3 yr after implementation of a quality improvement program in terms of compliance with quality metrics (eg, use of a bladder diagram for documenting lesions, inclusion of detrusor muscle in the TURBT specimen, and use of post-TURBT mitomycin C) and oncologic outcomes. The study is limited by the absence of a control group before implementation of the quality program, lack of central pathology review, and lack of demonstrable standardized access to enhanced technology for TURBT (eg, blue light endoscopy). In addition, Scotland is a relatively small country, which could make implementation easier than in larger and more heterogeneous places. However, this real-world study reflects a tremendous effort and national commitment to quality and represents the kinds of steps to standardize and improve care that all urologists should emulate. The tangible benefits of lower recurrence rates, less residual disease at repeat TURBT, and more accurate staging are important to patients.

Underlying this study is a fundamental question: what constitutes high-quality TURBT? Oncologic outcomes speak most definitively to the quality of TURBT (less recurrence/progression is better), but these events occur years after the procedure and are therefore not measurable at the time of an operation. Endpoints such as those proposed by the International Bladder Cancer Group can take too long to occur in order to be useful for quality improvement in real time [2,3]. Proxy outcomes such as those used in this study (recurrence at first cystoscopy and residual disease at repeat TURBT) allow providers and systems to optimize care with more agility. In an effort to shift assessment of quality to an even earlier point, it may be appropriate to define quality in part as compliance with guideline-based practice, especially given the body of knowledge we have regarding specific clinical factors that improve outcomes. For example, we have clear data on reduction of recurrence rates with immediate postoperative intravesical chemotherapy, enhanced accuracy of staging with detrusor muscle in the pathology specimen, and upstaging rates with repeat TURBT for high-risk NMIBC. In addition, multiple studies have demonstrated the benefits of appropriate documentation of lesion location with diagrams and checklists at the time of TURBT [4]. However, the factors of experience and technique that affect outcomes remain, and it is less clear how to evaluate these. It would have been nice if variations in outcomes between patients were modeled at the patient level (tumor size, stage, grade, multifocality), physician level (age, annual volume, TUR technique), and hospital level (annual volume, resource availability) to determine where variability in outcomes occurs. Clearly, the doctor cannot be blamed for everything.

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Once quality is defined and benchmarks are established, the critical step in improving quality of care is determining how to facilitate standardization across sites and improve. Regular reports shared with participants can help providers and institutions understand their performance relative to their peers and take corrective actions. However, those who have developed quality programs are acutely aware that findings cannot always be shared publicly owing to agreements about surgeon- and hospital-level confidentiality, which are fundamental to building the quality program in the first place [1,5]. Quality programs may reveal findings regarding specific providers or centers who performed poorly on certain metrics relative to their peers because they treat higher-risk patients.

Does the public have a right to know that a particular medical center has worse or better outcomes? Or should individual providers' and institutions' data be anonymous, as is the case with the American College of Surgeons National Surgical Quality Improvement Program (NSQIP)? The assumption here is that analysis of quality metrics should be accurate, which can never be said with 100% certainty. Moreover, institutional composition is fluid. When a high-volume provider moves, does he leave behind an institution that can continue to deliver the same quality of care?

Should compensation take into account individual providers' or institutions' quality metrics? This is a controversial topic, especially in non-nationalized health systems, due in part to the ethical considerations raised by the possibility that patients' access to quality care will be partly driven by socioeconomic factors. Supporters of value-based care note successful application of such approaches in primary care and non–fee-for-service health systems without definitively adverse effects on access to care [6,7]. At the end of the day, money clearly talks.

If quality metrics highlight significant variation in care, should resources be devoted to mitigating the effects of such variation at each site, or should care be centralized in centers of excellence? The answer probably depends on what the drivers of the outcome variation are. For example, the case mix at an inner city medical center serving a patient population with low socioeconomic status will always have different outcomes to a boutique "fly in" center for the rich. If the issue is access to better technology to facilitate optimal resection, then health system resource allocation needs adjustment. However, if the driver has more to do with expertise or surgeon comfort, centralization of care offers the opportunity to minimize variation of care and positively impact oncologic outcomes, provided that patients can still get care [8]. Some patients will not accept a 6-h journey for cystoscopy and TURBT. Much work is required to better understand what the consequences are for patient-reported outcomes and access to care [9].

Mariappan et al [1] have demonstrated the utility of a highly structured quality program in optimizing outcomes of TURBT and provide an example of how we urologists need to organize in order to improve. We look forward to seeing the rest of the bladder cancer quality improvement data from this program to learn how participating surgeons adjust their own behavior based on these preliminary findings.

Conflicts of interest: Brant A. Inman is a consultant/advisor for Fergene, Genentech, and Combat Medical, and an investigator for Genentech, QED Therapeutics, Dendreon, Combat Medical, FKD Therapies, Taris Biomedical, and Nucleix. Ankeet Shah and Wei Phin Tan have nothing to disclose.

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