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Editorial

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Evaluating robotic surgical courses: structured training matters

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> ► See the article "Implementation and evaluation of a novel subspecialty society fellows robotic surgical course: the SGO minimally invasive academy surgical curriculum" in volume 32, e26.

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Surgical training has progressed dramatically the past decades. What used to be an informal master-apprentice learning pathway has gradually been replaced by formal and structured educational syllabi. Today, many professional societies have developed educational curricula that typically incorporates modular training and various kind of simulator training. Key components normally include validated assessment tools and eventually certification of the trainees, based on competence rather than volume. Surely, the impact of structured training cannot be underestimated and the development of surgical curricula is certainly well invested time and resources. The adoption of minimally invasive surgery (MIS) and especially robot-assisted laparoscopy has increased substantially the past years and the widespread adoption raised concerns regarding patient safety. In 2010, a report from the Dutch Health Care Inspectorate expressed sincere concerns regarding endoscopy in The Netherlands and efforts were made to improve training [1]. Similarly, a commentary from 2011 discussed the medicolegal aspects of novel technologies and inadequate training of robotic surgeons [2]. Recent data suggest that training not only improves perioperative morbidity but may in fact have an impact on survival after oncologic surgery. In patients with colon cancer treated by MIS, a clear association has been observed between surgical skill and long-term survival [3]. Baeten et al. [4] recently demonstrated a learning-curve effect on disease-free survival in women treated by robot-assisted laparoscopy for early-stage cervical cancer. The authors concluded that there is a need for validated training curricula to reduce the harmful effects of a prolonged learning curve. Indeed, the surprising results from the international Laparoscopic Approach to Cervical Cancer has spurred a discussion as to what extent the experience of the MIS surgeons may have affected the outcomes [5]. The growing notion that inadequate training may affect the outcomes in surgical trials further underscores the necessity of validated training programs and courses. Close monitoring of curriculum adherence and educational activities for the trainers appears to be critical for successful implementation. Indeed, the pilot curriculum drafted by Society of European Robotic Gynaecological Surgery revealed a need for improvement in several areas when applied in a fellowship program [6]. In the current study by Boitano et al. [7], the utility of a society-based robotic surgery training program was evaluated. A standardized Society of Gynecologic Oncology robotic course was evaluated by 70 participants using a five-point Likert scale before and after completing the course. The two-day course included didactic sessions with dry lab, wet lab and simulation. Analysis of the surveys demonstrated a significantly higher level of confidence for complex procedures, troubleshooting and management of complications. The outcomes of this study highlight the need for structured evaluation of any

component in a surgical training curriculum. The current study did not assess changes in actual skill acquisition but rather the increased confidence that the trainees gained after completing the course. Lack of surgical confidence has been identified among residents in several surgical disciplines and simulator training appears to be a critical instrument to increase a sense of trust in surgeons' abilities [8]. The study by Boitano et al. [7] reinforces the need for didactic training, structured feedback and validation of key components with emphasis on surgical courses. The ultimate goal with any structured training program is clearly to improve quality of care and minimize harm for our patients. The increasing awareness of the impact of validated training is a much welcome development in robotic surgery.

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