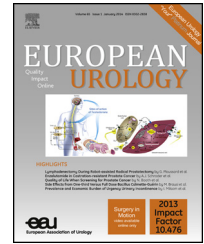


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Surgery in Motion

Results of the European Basic Laparoscopic Urological Skills Examination

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Abstract

Background: In 2011, the European Basic Laparoscopic Urological Skills (E-BLUS) examination was introduced as a pilot for the examination of final-year urologic residents. **Objective:** In this study, we aimed to answer the following research questions: What level of laparoscopic skills do final-year residents in urology have in Europe, and do the participants of the E-BLUS pass the examination according to the validated criteria?

Design, setting, and participants: Participants of the examination were final-year urology residents from different European countries taking part in the European Urology Residents Education Program in 2011 and 2012.

Surgical procedure: The E-BLUS exam consists of five tasks validated for the training of basic urologic laparoscopic skills.

Outcome measurements and statistical analysis: Performances of the tasks were recorded on DVD and analysed by an objective rater. Time and number of errors made in tasks 1–4 were noted. Furthermore, all expert laparoscopic urologists were asked to score participants on a global rating scale (1–5) based on three items: depth perception, bimanual dexterity, and efficiency. Participants were asked to complete a questionnaire on prior training and laparoscopic experience.

Results and limitations: Seventy DVD recordings were analysed. Most participants did not pass the time criteria on task 4 (90%), task 2 (85.7%), task 1 (74.3%), and task 5 (71.4%). Task 3 was passed by 84.3%. The overall quality score was passed by 64%. When combining time and quality, only three participants (4.2%) passed the examination according to the validated criteria. According to the questionnaire, 61% did not have the opportunity to train in laparoscopic skills.

Conclusions: The results of the E-BLUS examination show that the level of basic laparoscopic skills among European residents is low. Although quality of performance is good, most residents do not pass the validated time criteria. Regular laparoscopic training or a dedicated fellowship should improve the laparoscopic level of residents in urology.

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1. Introduction

Despite the growing popularity of robot-assisted laparoscopy in urology, conventional laparoscopic surgery is still the

established technique for several indications [1] throughout Europe. Many of the laparoscopic procedures have a lengthy learning curve, because laparoscopy requires other skills than open surgery and robot-assisted laparoscopy, such as

counterintuitive movements of the instruments and an indirect view of the operating site [2,3]. There is a recognised need for a more formalised laparoscopic training framework within urology to overcome the difficulties of this technique and to shift the first part of the learning curve from the patient to the skills laboratory. Therefore, simulator-based skills training has been widely accepted and implemented [4].

However, the qualification and certification of laparoscopic skills performance are still in a preliminary phase within urology. In response to urgent calls from the government and the public for well-defined proficiency standards to safeguard the quality of care, we developed the program for laparoscopic urologic skills (PLUS) [5,6]. The PLUS has been validated by a cohort of laparoscopic experts, intermediates, and novices in the Netherlands, and its face, content, and construct validity have been proven. The PLUS examination offers quality criteria and time criteria for the completion of basic laparoscopic tasks and a certification standard for residents based on the generalized examinee-centred method. The pass/fail criteria for time and quality of performance per task were set on the novice/intermediate boundaries [6]. In the Netherlands, PLUS has recently been implemented at the national level as a “basic laparoscopy examination.”

In 2011, the PLUS was introduced at the European level as a pilot for the examination of final-year urologic residents. It is called the European Basic Laparoscopic Urologic Skills (E-BLUS) examination.

In this study, we aimed to answer the following research questions: What level of laparoscopic skills do final-year residents in urology in Europe have, and do participants of the E-BLUS pass the examination according to the previously validated criteria?

2. Method

2.1. Setting

The E-BLUS examination was conducted during the laparoscopic hands-on training (HOT) section of the European Urologic Residents Education Programme (EUREP) meetings in 2011 and 2012. EUREP is organised annually by the European School of Urology (ESU) in collaboration with the European Board of Urology and has been developed exclusively for European residents. Participation in the E-BLUS examination was facilitated by prior online registration on a voluntary basis. All participants were advised to attend an HOT session prior to the examination in which they could familiarise themselves with the exercises.

2.2. Materials

The E-BLUS examination consists of five tasks (Fig. 1). With these tasks, the examination assesses bimanual dexterity, hand-eye coordination, spatial awareness, suture technique, and clipping and cutting skills. All participants in the study used identical boxes, tasks, suture material (Polysorb 3-0, Tyco Healthcare, Mansfield, MA, USA), Hem-o-lok appliers (Teleflex Medical, Research Triangle Park, Durham, NC, USA), and laparoscopic instruments (Olympus, Hamburg, Germany). The five tasks shown in Figure 1 have been previously described in the validation study

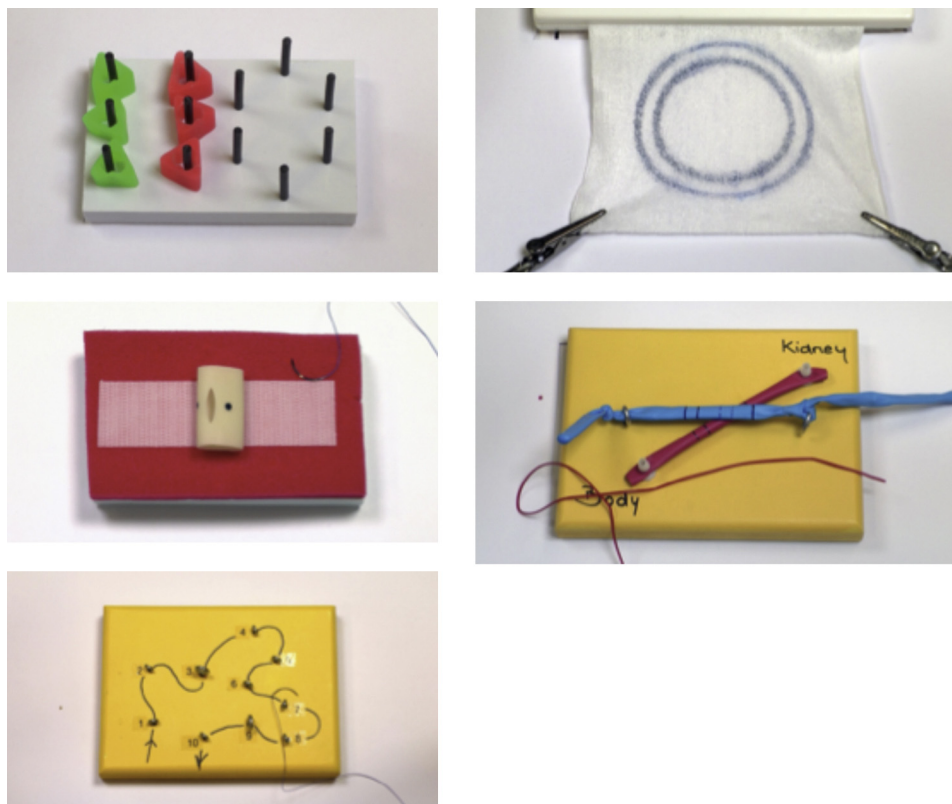


Fig. 1 – The European Basic Laparoscopic Urological Skills tasks. The examination consists of five basic laparoscopic tasks in a box trainer with a fixed camera position.

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