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Introduction & Objectives: To develop a method to elucidate the association between surgical skills and outcome using video analysis of Robot Assisted Radical Prostatectomy (RARP).

Materials & Methods: A Delphi process was performed in order to develop an assessment method which could be used to assess surgical skills in surgical video's, in order to investigate the link between surgical skill and adverse postoperative outcome. A group of 18 Dutch urologists specialized in Robot assisted radical prostatectomy were invited to participate in the 2-round online Delphi-survey and Delphi meeting. First, two consecutive online surveys were sent to the participants. The second step consisted of a consensus group meeting involving a panel of the same Dutch urologists with a specialization in the field of RARP.

Results: Twelve of the 18 (67%) invited experts participated in the online survey. In the second round 9 of the 18 invited experts participated. During the Delphi meeting 5 of the 18 (27%) invited experts participated. Seven surgical steps with a possible association to postoperative outcome were identified by the respondents of the Delphi panel. The expert opinion was there could be an association between adverse postoperative outcome and the number of times the camera was removed, the number of stitches during the surgery, the duration of bleeding during surgery, and the duration of coagulation during the surgery. These factors were incorporated into the PROTEST assessment method.

Conclusions: With this study, we show that it is possible to invite experts in the field of RARP to discuss certain surgical steps and aspects of the RARP procedure as a potential cause of an adverse postoperative outcome. The results of this meeting were used in order to develop an assessment method which could be used to investigate the link between surgical skills and adverse postoperative outcome. Whether these aspects are indeed related to adverse postoperative outcome is a matter of further research.