Busch J.F., Eden C.

1Vivantes Klinikum Am Urban, Dept. of Urology, Berlin, Germany, 2The Royal Surrey Hospital, Dept. of Urology, Guildford, United Kingdom

Introduction & Objectives:
Bleeding is an inevitable consequence of surgery and in most cases can be controlled without any adverse consequences. However, excessive bleeding at a surgical site is associated with an increased risk of post-operative infection, transfusion and re-operation, in addition to increased hospital length of stay and costs. Hemostatic powders (HP) are a relatively new technology that are potentially not well known by the broader surgical community, as such no specific guidelines currently exist regarding their optimal use. The objective of this modified Delphi consensus was to define a set of recommendations for the use of HP in surgical practice based on an international consensus of surgeons in five specific fields of surgery.

Materials & Methods: A steering group of multidisciplinary European surgeons identified 5 key topics concerning the use of HP. The topics were chosen based on analysis of literature and the personal experience of the group members. The agreed topics were: when to use HP, the evidence for use, benefits of use, safety remarks, and considerations in various surgical specialties. The steering group agreed a set of statements for testing amongst a wider group of peers. An online survey was sent to 128 high-volume surgeons working in breast surgery, gynaecological and obstetric surgery, general and emergency surgery, thoracic surgery, and urological surgery to assess agreement (consensus) with these statements. Consensus was defined as high if ≥75% and very high if ≥90% of respondents agreed with a statement. Due to the differences in surgical specialty, respondents were restricted in the final topic to statements relevant to their specialty.

Results: A total of 109 responses were received, 79 of which satisfied the requirement of experience with HP (use of HP at least once a month). Consensus among the surgical experts was very high in 27 (73%) statements, high in 8 (22%) statements and was not achieved in 2 (5%) statements. 13 of the responses were from urological surgeons. Due to the high-levels of agreement achieved in the first round of survey, the steering group agreed that further rounds were not required and elected to work with the results as they stand.

Conclusions: Based on the consensus scores, the steering group produced 12 key recommendations to improve patient outcomes by reducing post-operative bleeding and complications using HP. Specific to urological practice, HP should be considered:
For use on the rough surfaces that remain after organ removal. In prostatectomy involving neurovascular bundle preservation where there is risk of oozing from the neurovascular bundles or following lymph node dissection on the pelvic side wall. Where there is a risk of oozing from renal hilum dissection, tumour excision site, or from kidney reconstruction following partial nephrectomy.