First report on joint use of a Da Vinci® surgical system with transfer of surgical know-how between two public hospitals

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INTRODUCTION
The costs of a Da Vinci® device for robot-assisted surgery, in particular for robot-assisted radical prostatectomy (RARP), can be a considerable issue for hospitals with limited caseloads.

MATERIALS AND METHODS
Since January 2011 the cantonal hospitals of Lucerne and St. Gallen (Switzerland) have shared a four-arm Da Vinci® device, transferring the surgical know-how by a Lucerne teaching surgeon to a St. Gallen surgeon. Complete pre- and perioperative data, including 3-month surgical RARP outcomes, were prospectively documented. For statistical analysis, Wilcoxon, exact Poisson and χ² tests were used.

RESULTS
During the first year, the two hospitals (61 RARP patients in Lucerne, 19 RARP patients in St. Gallen) did not differ significantly in preoperative, perioperative or oncological and functional results except for prostate volume (median 33 [interquartile range 24-40] vs. 40 [interquartile range 33-57] ml; p = 0.02), operation time (mean 252 ± 49 vs. 351 ± 50 min; p = 0.0001), number of lymph nodes removed (median 16 [interquartile range 13-21] vs. 15 [interquartile range 8-16] nodes; p = 0.02), biopsy (p = 0.04) and specimen Gleason scores (p = 0.03), and length of hospital stay (median 8 [interquartile range 7-14] days; p < 0.01).

CONCLUSIONS
Da Vinci® device sharing with transfer of surgical know-how can reduce the costs of RARP without compromising surgical outcomes, even at the beginning of the learning curve.