



## Educational video

## Surgical anatomy of the ligamentous mesometrium and robotically assisted ICG-guided resection in cervical cancer



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## ABSTRACT

The ligamentous mesometrium is a 3-dimensional structure consisting of a rectouterine/-vaginal part with attachment to the anterior lateral mesorectum and a sacrouterine part surrounding the mesorectum attached to the pelvic fascia and the mesorectum dorsolaterally. The lymphatic network draining the posterior cervix connected caudally ventrally to the deep venous lymph network of the vascular mesometrium is running at the lateral surface of the sacrouterine part and dorsomedially of the inferior hypogastric plexus; it drains to the deep internal iliac, prespinal and preischialic nodes.

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Immediately prior to surgery indocyanine green has been injected into the cervix at 2, 5, 7, and 10 o'clock (Kimmig et al., 2016). Ligamentous mesometrium has been previously defined (Höckel et al., 2009) with respect to morphogenetic fields of embryological development (Höckel, 2015) and corresponds anatomically to the rectouterine/-vaginal and sacrouterine ligaments.

To prepare the ligamentous mesometrium, first the rectovaginal space is opened medially. The rectal fat is dissected from the vagina and the rectovaginal and rectouterine ligament to either side. Second, laterally the ureter and the inferior hypogastric plexus have to be detached from the peritoneum and the lateral surface of the ligamentous mesometrium. Third, ligamentous mesometrium is exposed and attachments to the mesorectum medially and pelvic fascia laterally are dissected. Finally, connections to the vascular mesometrium will be preserved.

The video demonstrates the technique step by step using ICG lymphatic mapping as a guide.

With this technique, it should be possible safely to dissect the entire ligamentous mesometrium without injuring the mesorectum and predominantly the rectal and vesical nerve supply.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.gore.2017.01.008>.

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