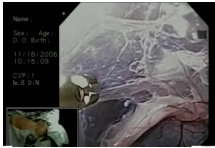


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By: Stefan Anitei, Science Editor



Inner image of the vaginal wall delivered by NOTES technology  
daveproject.org

## Kidney Removed Via Vagina

### *Transvaginal nephrectomy*

Female genitalia are polyvalent. It seems that the vagina is on the way to turn into the natural female orifice for getting rid of internal organs. After the removal of [appendixes](#), now a team of doctors at the Hospital Clínic de Barcelona have successfully removed a cancerous kidney via the vagina of a 66 year-old woman patient. It is a first in Europe and a second in the world. Transvaginal nephrectomy allows kidney removal with just two 1 cm (0.4 in) incisions in the abdomen, while no visible incision remains in the internal wall of the vagina, through which the kidney is passed. In this case, the tumor had turned the kidney into a mass 13 cm (5.2 in) high, 8 cm (3.2 in) wide and 5 cm (2 in) deep. This surgery shortens hospitalization (to less than 2 days) and causes less post-operational pain, behind the lack of visible abdominal scars. In the last 6 years, the best non-invasive method was laparoscopy, which still left two abdominal scars, 6 cm (2.4 cm) long. The new technique employs Olympus flexible optics of great precision. Instruments for cutting off the kidney were inserted through two small incisions in the vaginal wall. The new technique is part of NOTES program (Natural Orifice Transluminal Endoscopy Surgery), aiming to use the natural orifices of the body for surgeries. The team that made the kidney removal via vagina was led by Dr. Antonio Alcaraz, head of the Urology Unit; Dr. M<sup>a</sup> José Ribal, specialist in Urology and Dr. Alejandro Molina, resident physician of Urology. Two surgeries of this type, via mouth, have been made recently at Hospital Clínic de Barcelona, at the Service of Gastrointestinal Surgery, the first in Spain: the bile vesicle of one patient was extracted this way, while the other was operated for the gastroesophageal reflux. The hospitalization and subsequent pain were significantly reduced.