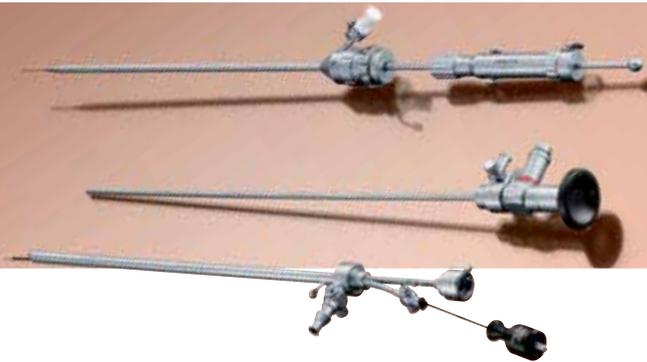


## Transvaginal Endoscopy TVE



The best views are  
**UNDERWATER**



# **TRANSVAGINAL ENDOSCOPY**

**Leuven Institute for Fertility and Embryology**  
Prof. Dr. S. Gordts, Dr. R. Campo, Dr. P. Puttemans, Prof. Em. Dr. I. Brosens



## Transvaginal Endoscopy

**Rationale:** Transvaginal endoscopy combines transvaginal laparoscopy with vagino-cervico hysteroscopy and is designed to explore the female genital tract in patients with infertility (Fig. 1).

### 1. Diagnostic hysteroscopy

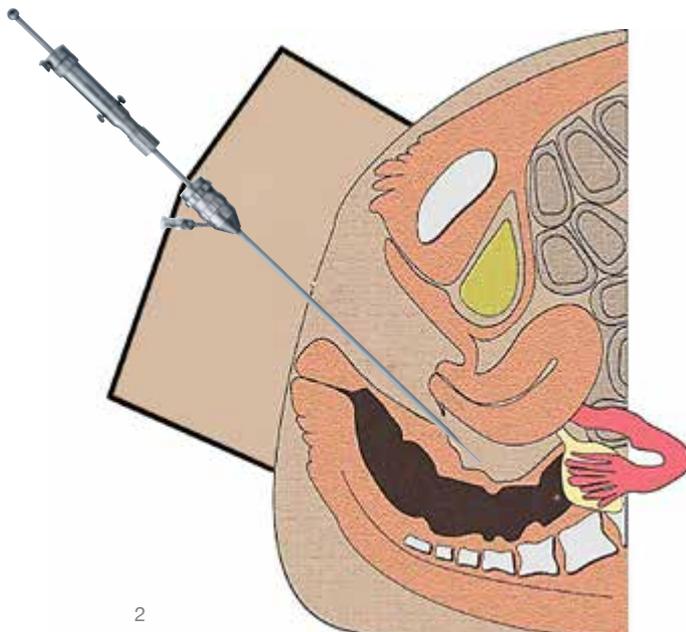
The 2.9 mm hysteroscope is inserted without speculum, and an infusion of prewarmed Ringer's lactate solution is started. The distension fluid dilates the cervical canal and the hysteroscope can be inserted painlessly and atraumatically to inspect the cavum.

### 2. Transvaginal laparoscopy including salpingoscopy

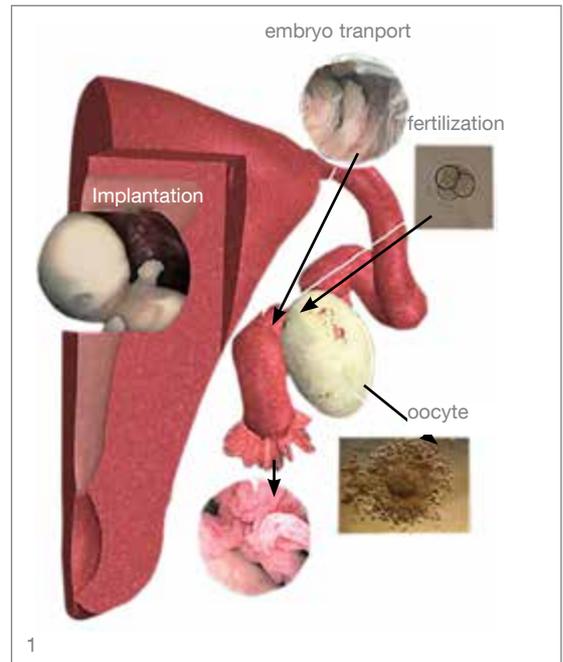
**Aim:** Endoscopic exploration of the posterior pelvis and the tubo-ovarian structures under sedation or local anaesthesia through a small needle puncture technique of the pouch of Douglas and using an aqueous solution (Ringer lactate solution) as distension medium.

#### Technique of entry/access:

Access to the pouch of Douglas is obtained with a specially developed needle-trocar system consisting of three parts: a needle with a spring load system, a dilating device and an outer trocar. After assembling the three components, the spring-loaded needle is pre-set at a length of 1.0 cm – 1.5 cm (in obese patients 2.0 cm – 2.5 cm). The posterior cervical lip is grasped with an Allis clamp and the needle-trocar system is positioned at the posterior vaginal fornix on the midline at



2



about 1.5 cm under the cervix. The trocar system is gently pushed forward while the ALLIS clamp is used to stabilize the trocar position and exert a slight counter-pressure. The spring-load system is released only when the system is accurately positioned (Fig. 2). Subsequently, the dilating device is disconnected from the needle and together with the outer trocar is gently pushed forwards while slightly rotating the instrument. After removal of the needle and the dilating trocar, the 2.9 mm endoscope with outer sleeve connected with the camera system is inserted and the correct intra-abdominal position of the system is verified. The irrigation system is opened and approximately 100 ml of pre-warmed Ringer lactate solution in the pouch of Douglas is started.

**Technique of inspection:** The posterior side of the uterus, which is in the upper part of the image, is used as a landmark for identification of the right and left adnexa. By rotating the 30° angled endoscope around his axis, the ovarian surface, the distal end of the Fallopian tube, the fossa ovarica and the pouch of Douglas are explored without extra instrumental manipulation. Continuous irrigation is used during the whole procedure without exceeding 500 ml.

Without additional manipulation and by using the same endoscope, salpingoscopy is feasible in 50% of the patients.

The patency of the tubes can be tested by placing a 8 Fr. urinary balloon catheter in the uterus.

An operative trocar system giving access to 5 Fr. instruments is available for minor surgical procedures such as taking biopsies. After inserting the guiding probe, the diagnostic trocar is removed and replaced by the operative sheath. The probe is then replaced by the 2.9 mm telescope.

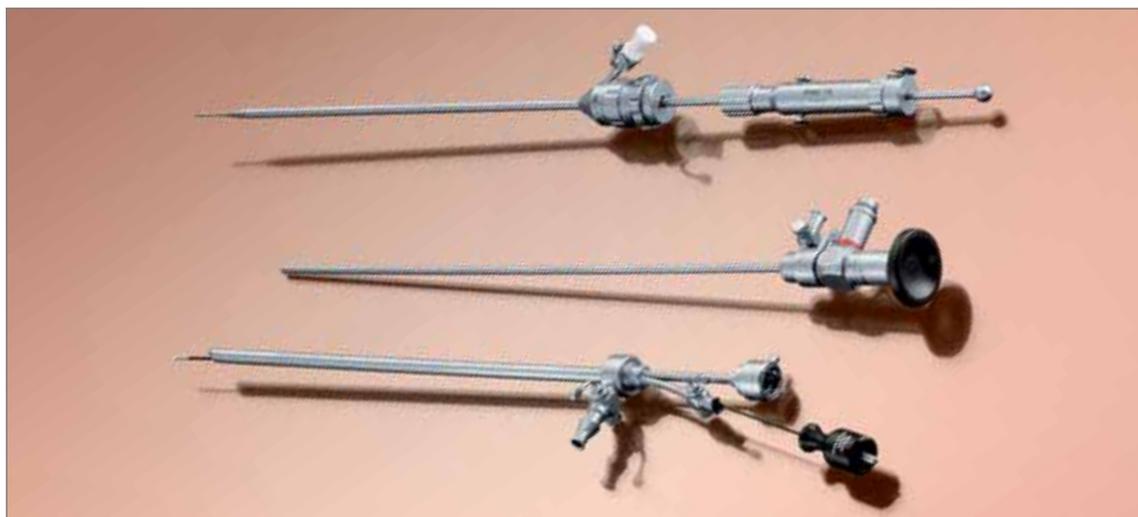
**Patient selection:** The procedure is routinely performed at an early stage of the fertility exploration in subfertile patients without obvious pelvic pathology i.e. normal findings during clinical vaginal examination and vaginal ultrasound.

**Contraindications:**

- Obliterated pouch of Douglas
- Prolapsed tumour in the pouch of Douglas
- Recto-vaginal endometriosis
- Fixed retroverted uterus
- Acute pelvic pathology: bleeding, infection
- Narrow vagina

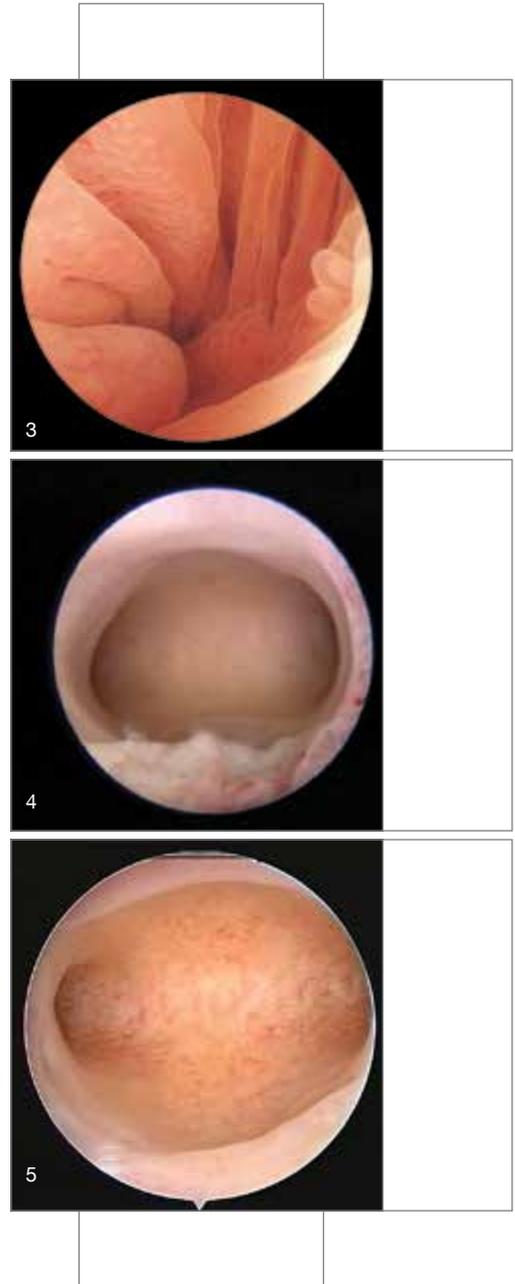
**Conclusion**

Transvaginal endoscopy offers the possibility of a complete endoscopy-based exploration of the subfertile female and, in combination with hysteroscopy, creates the possibility of a “One Stop Fertility Clinic”. It is performed on an outpatient basis or at the doctor’s office at an early state of the infertility exploration. Consequently, this prevents a delay in accurate diagnosis and an appropriate treatment plan can be proposed to the well-informed patient.



## Diagnostic Hysteroscopy

- Fig. 3  
Passage through the cervical canal
- Fig. 4  
Entry from the cervical canal into the  
uterine cavity
- Fig. 5  
Inside view of a normal uterine  
cavity using ringer lactate as  
distension medium.



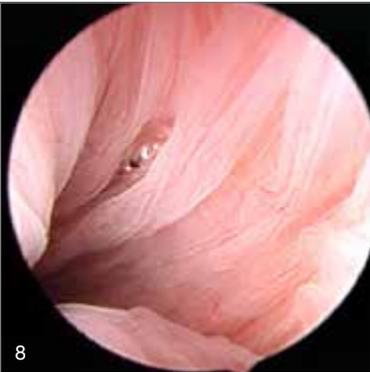
## Transvaginal Laparoscopy



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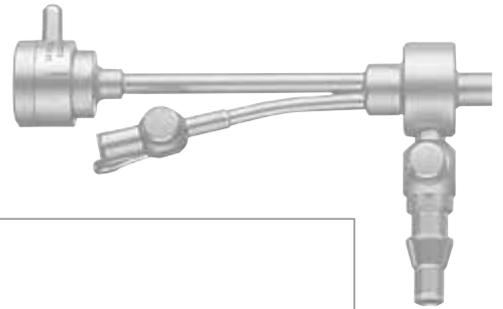


Fig. 6  
Overview - visualization of normal  
tubo-ovarian structures

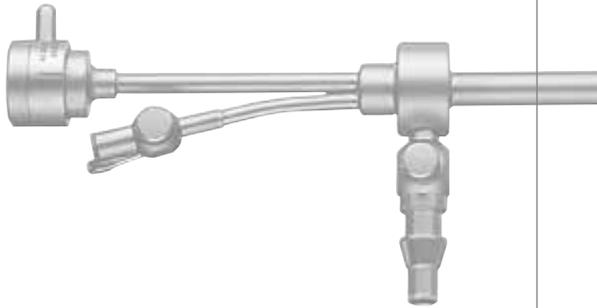
Fig. 7  
Fimbrioscapy: normal mucosal pattern

Fig. 8  
Salpingoscopy: normal aspect of  
mucosal folds

Fig. 9  
Fimbrioscapy while performing a  
methylene blue test



## Pathologies



### **Endometriosis:**

Fig. 10  
Vesicular endometriotic implant on ovarian surface

Fig. 11  
Biopsy of vesicular endometriotic lesion

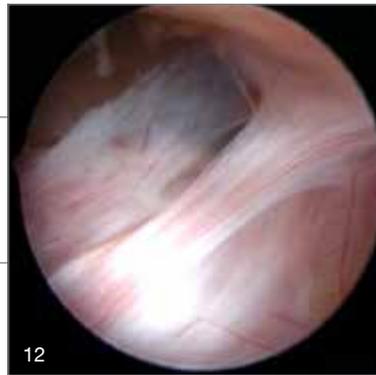
### **Adhesions:**

Fig. 12  
Fixed adhesion between ovarian surface and fossa ovarica

Fig. 13  
Free floating adhesion on ovarian surface

### **Hydrosalpinx:**

Fig. 14  
Thick-walled hydrosalpinx



## Transvaginal Endoscopy

26182 **Transvaginal Endoscopy Set**  
as recommended by Prof. GORDTS and Dr. CAMPO  
including:

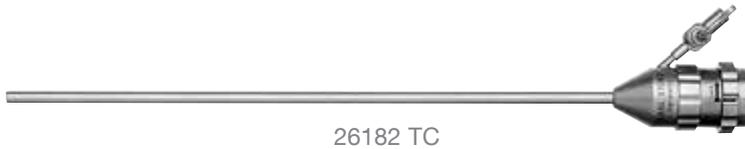


26182 TA **Puncture Needle**, with automatic spring mechanism,  
diameter 1.5 mm, length 30 cm

26182 TAA **Spare Needle**, for use with Puncture Needle 26182 TA,  
package of 6



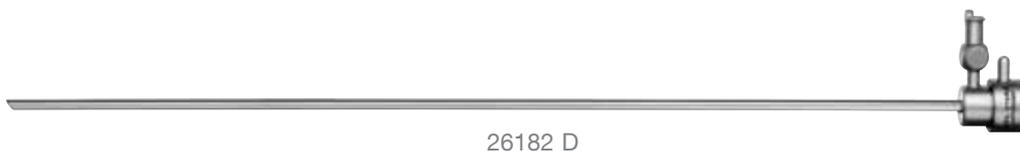
26182 TB **Dilation Sheath**, diameter 3.8 mm, length 30 cm,  
for use with Puncture Needle 26182 TA



26182 TC **Trocar Sheath**, with valve, with 1 stopcock, diameter 4.4 mm,  
length 20 cm, for use with Diagnostic Sheath 26182 D



26120 BA **HOPKINS® Forward Oblique Telescope 30°**,  
diameter 2.9 mm, length 30 cm, **autoclavable**,  
fiber optic light transmission incorporated,  
color code: red



26182 D **Diagnostic Sheath**, with stopcock, diameter 3.7 mm, length 29 cm,  
for use through Trocar Sheath 26182 TC



26182 TD **Changing Rod**, diameter 2.9 mm, length 36 cm,  
for use with Operating Sheath 26182 TG



26182 TG **Operating Sheath**, diameter 6.6 mm,  
length 29 cm, with channel for semirigid 5 Fr. operating instruments,  
with 1 stopcock and 1 LUER-Lock adaptor, with Obturator 26182 TH

39360 BK **Plastic Container** for Sterilization and Storage of Variable  
Instrument Sets

**Semi-Rigid Operating Instruments, 5 Fr.  
for use with 26182 TG**



26160 UHW **Biopsy and Grasping Forceps**,  
semirigid, double action jaws, 5 Fr., length 40 cm



26160 EHW **Scissors**, semirigid, blunt, single action jaws,  
5 Fr., length 40 cm



26160 SHW **Scissors**, semirigid, pointed, single action jaws,  
5 Fr., length 40 cm



26160 DHW **Punch**, semirigid, through-cutting, single action jaws,  
5 Fr., length 40 cm



26160 BHW **Biopsy Spoon Forceps**, semirigid, double action jaws,  
5 Fr., length 40 cm

**Electrode for HF Surgery, 5 Fr.  
for use with Operating Sheath 26182 TG**



26159 BE **Bipolar Dissection Electrode**,  
semirigid, 5 Fr., length 36 cm



26159 GC GORDTS/CAMPO **Bipolar Ball Electrode**, semirigid,  
5 Fr., length 36 cm







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