

Investigații **imagistice** folosite în ginecologie

Zorilă Lucian

Ce avem la indemana?

- ECOGRAFIE
- CT/RMN
- INVESTIGAREA TRACTULUI UTERO TUBAR
 - HISTEROSALPINGOGRAFIE
 - HISTEROSONOGRRAFIE CU SOLUTIE SALINA
 - HISTEROSONOGRRAFIE CU SOLUTIE DE CONTRAST

ULTRASONOGRAPHY

- ❖ Used almost in every examination
- ❖ Uses High-frequency broadband sound waves.
- ❖ Reflected by tissues upto varying degrees depending on the tissue content, type, consistency.
- ❖ Receiving echoes.
- ❖ Converting the echoes into electric signals.
- ❖ Interpreting and displaying those signals
- ❖ Can be **snapshot** or in **real time**.



ADVANTAGES

- NO RADIATION EXPOSURE
- NON INVASIVE
- FAST
- RELATIVELY INEXPENSIVE.



DISADVANTAGES



Ultrasound waves;

- Travels poorly through gas
- The piezoelectric crystals are quite delicate

PROBES



A Curved Array of Crystals



Will fit curved surfaces of the body

The density of scan decreases proportionally to the distance from the transducer



A Sector Array of Crystals

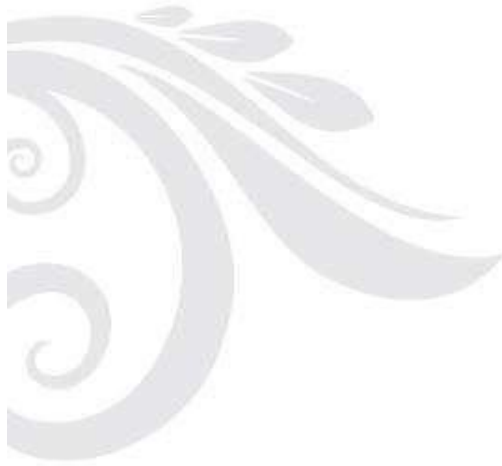


Used to scan by placing it within the vaginal opening.

More detailed view of the structures.

Special emphasis for follicular monitoring.





Ultrasound is NO SUBSTITUTE FOR A GOOD HISTORY & A THOROUGH CLINICAL EXAMINATION

Recomanded - ABDOMINAL SCAN BEFORE USING THE VAGINAL PROBE.

The trick is to build up a 3-DIMENSIONAL PICTURE IN YOUR MIND USING REAL-TIME IMAGING

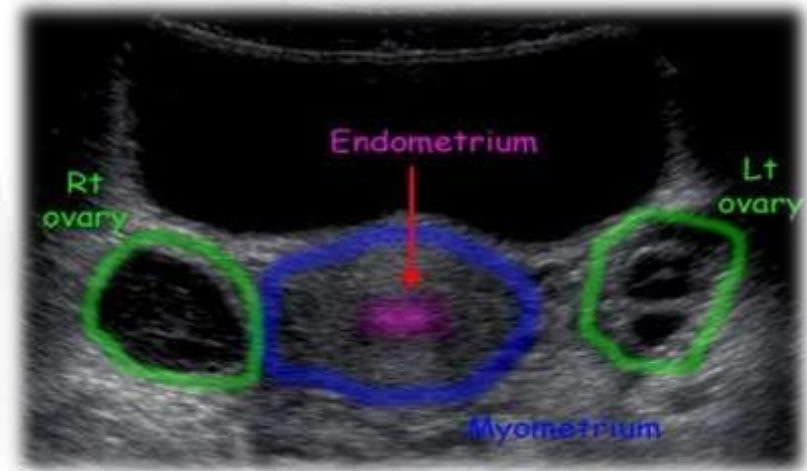
TRANS ABDOMINAL

- ✓ Full bladder
- ✓ Panoramic view
- ✓ For large masses
- ✓ Abdominal organs
- ✓ Lymphnodes

TRANS VAGINAL

- ❖ Empty bladder
- ❖ In gynecology diseases
- ❖ Uterus , ovaries, follicles
- ❖ Pouch of Douglas

NORMAL APPEARANCES



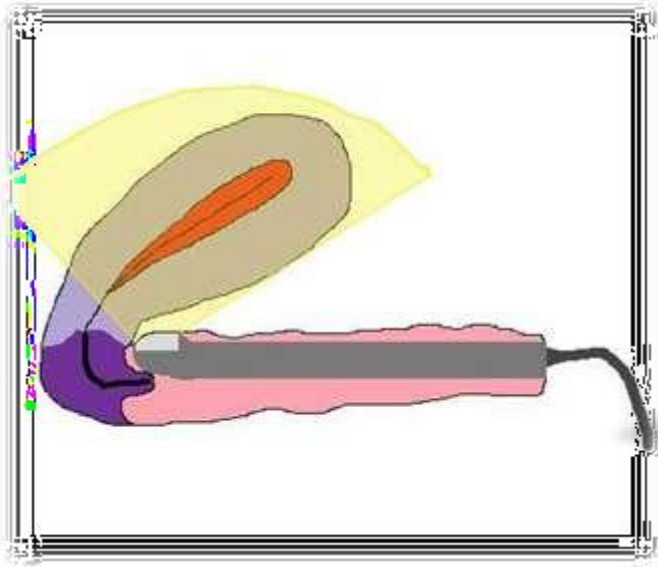
**TRANSVERSE SECTION OF
THE STRUCTURES, JUST
ABOVE THE PUBIC
SYMPHYSIS.**

**(OVARIES SEEN CLEARLY
AS HERE, MAY NOT BE
POSSIBLE IN ALL CASES)**

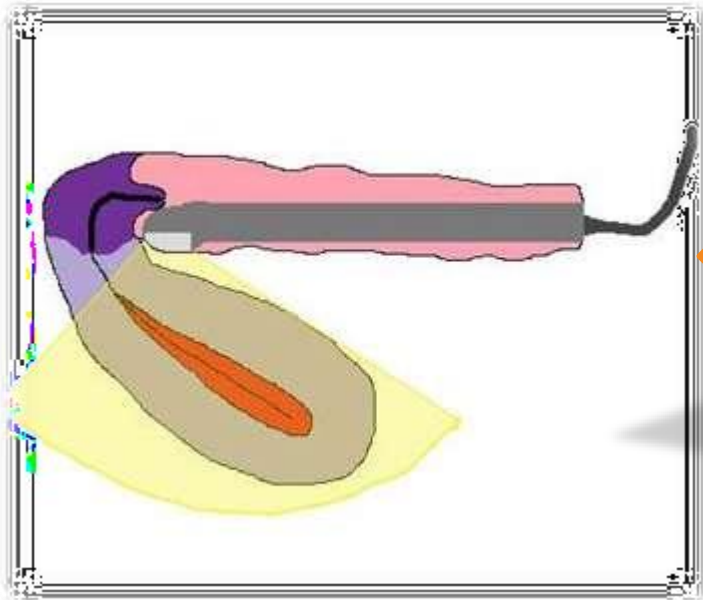




TRANS VAGINAL SCANNING



ANTEVERTED UTERUS:- Fundus faces the same direction as bladder

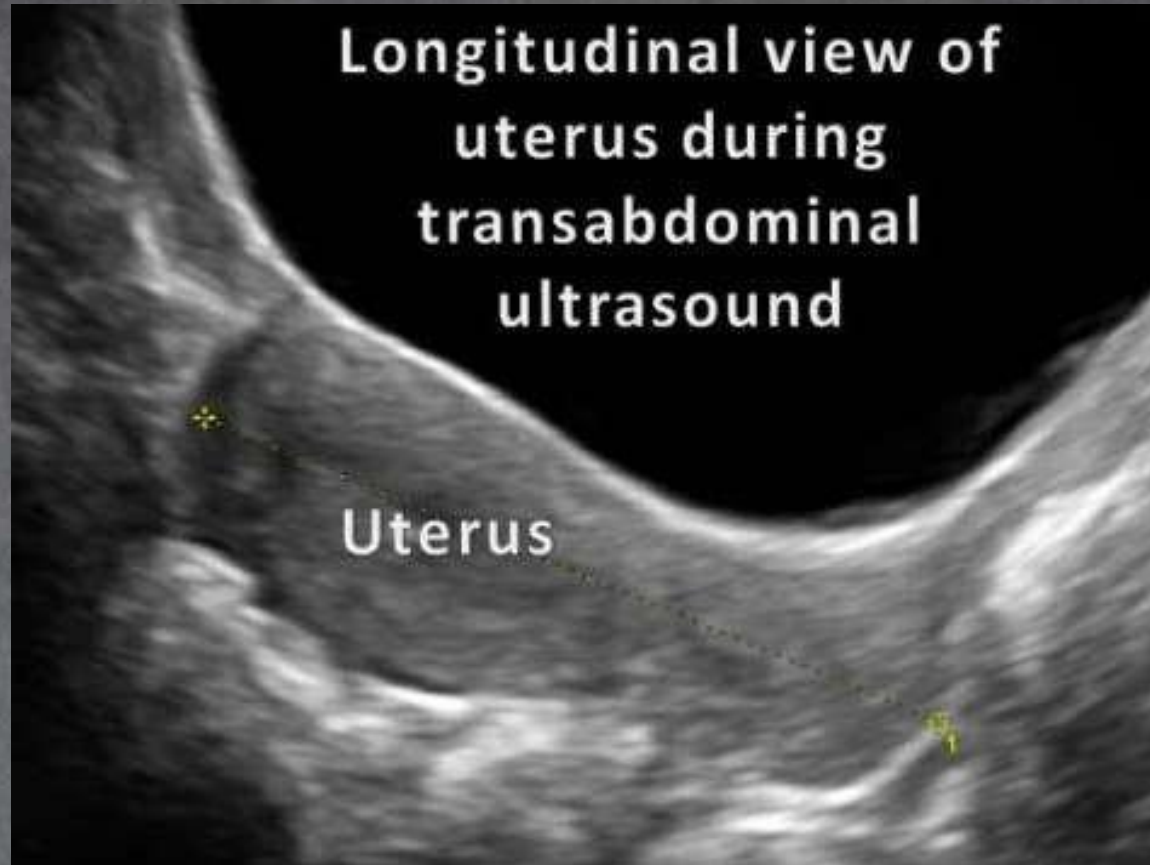


RETROVERTED UTERUS:- Fundus faces the opposite direction as bladder





ULTRASOUND IN GYNAECOLOGY



THE UTERUS

Normal Appearance

NORMAL MEASUREMENTS

Size - 7.5 x 5.0 x 2.5cm

Length - Fundus to Cervix(7.5-8.0cm)

Depth - Antero-posterior(4.5-5.0cm)

Width - Coronal view (2.5-3.0cm)

Myometrium -

Homogenous

Hypoechogenic

Endometrium-

Changes during menstrual cycle

1-4 mm after menses

8-10 mm at ovulation(tri laminar)



➤ **CONGENITAL ANOMALIES**

Bicornuate uterus

Septate uterus

Didelphous uterus

➤ **MYOMAS**

Irregular uterine contour

Hypo/iso/hyper echoic masses

Size, number, location

➤ **ADENOMYOSIS**

Enlarged uterus

Asymmetric thickening of
myometrium

Heterogeneous echotexture

INDICATIONS



Polyps
Submucosal fibroid

Endo thickness- >5mm needs evaluation

Myometrial invasion



Thick endometrium
Subendometrial stromal vacuolation

MISSING IUCD

Bright echogenic
Penetration to myometrium
Translocation to peritoneal cavity

ANOMALIES OF THE UTERUS

I Hypoplasia/agenesis



(a) Vaginal



(b) Cervical



(c) Fundal

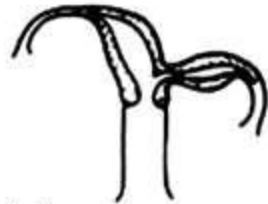


(d) Tubal



(e) Combined

II Unicornuate



(a) Communicating



(b) Non Communicating



(c) No cavity



(d) No horn

III Didelphus



IV Bicornuate



(a) Complete

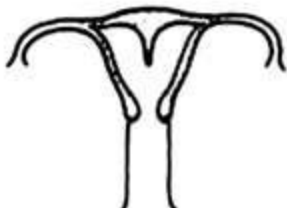


(b) Partial

V Septate



(a) Complete

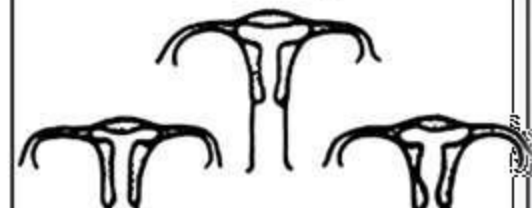


(b) Partial

VI Arcuate



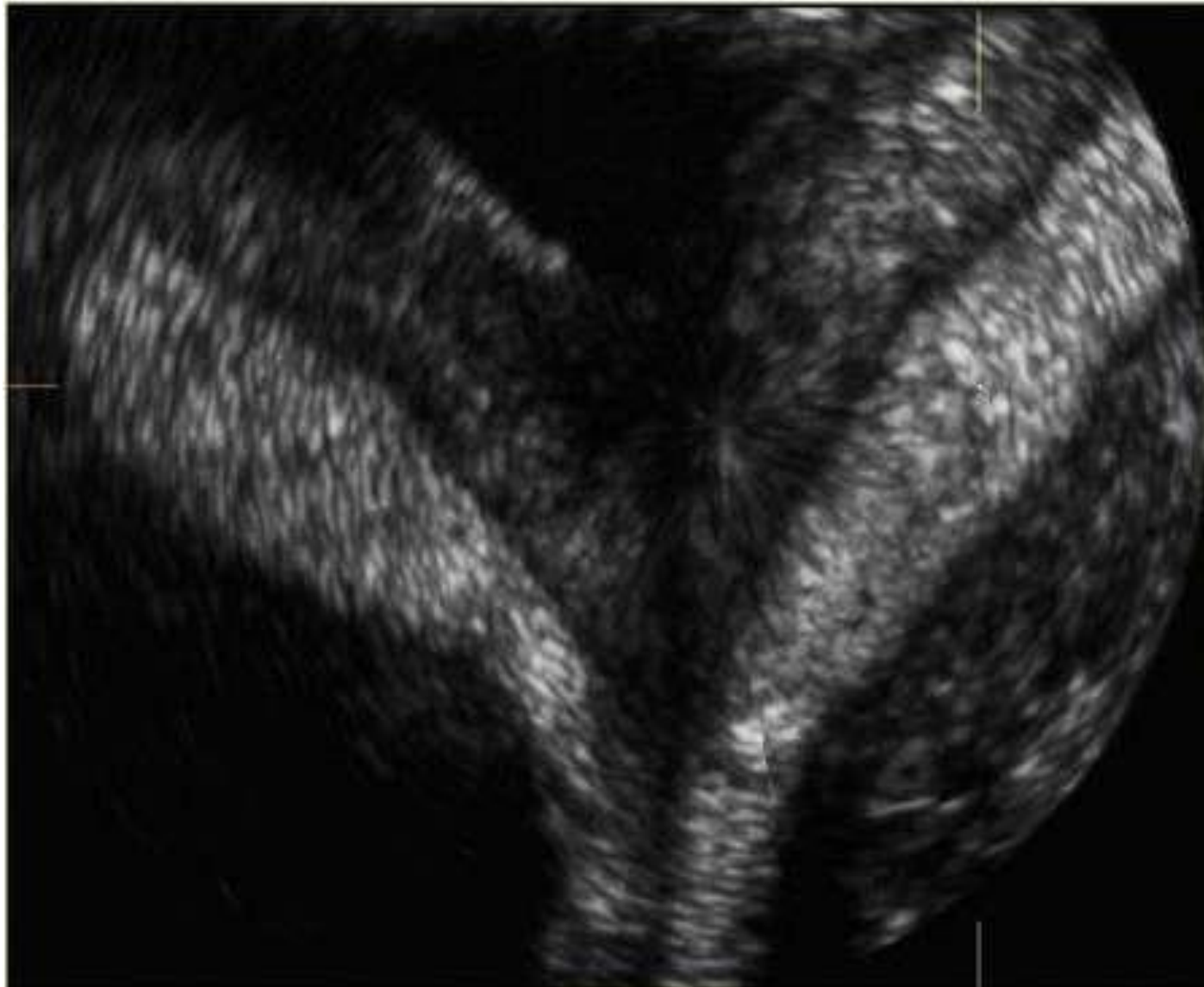
VII DES drug related



BICORNUATE UTERUS

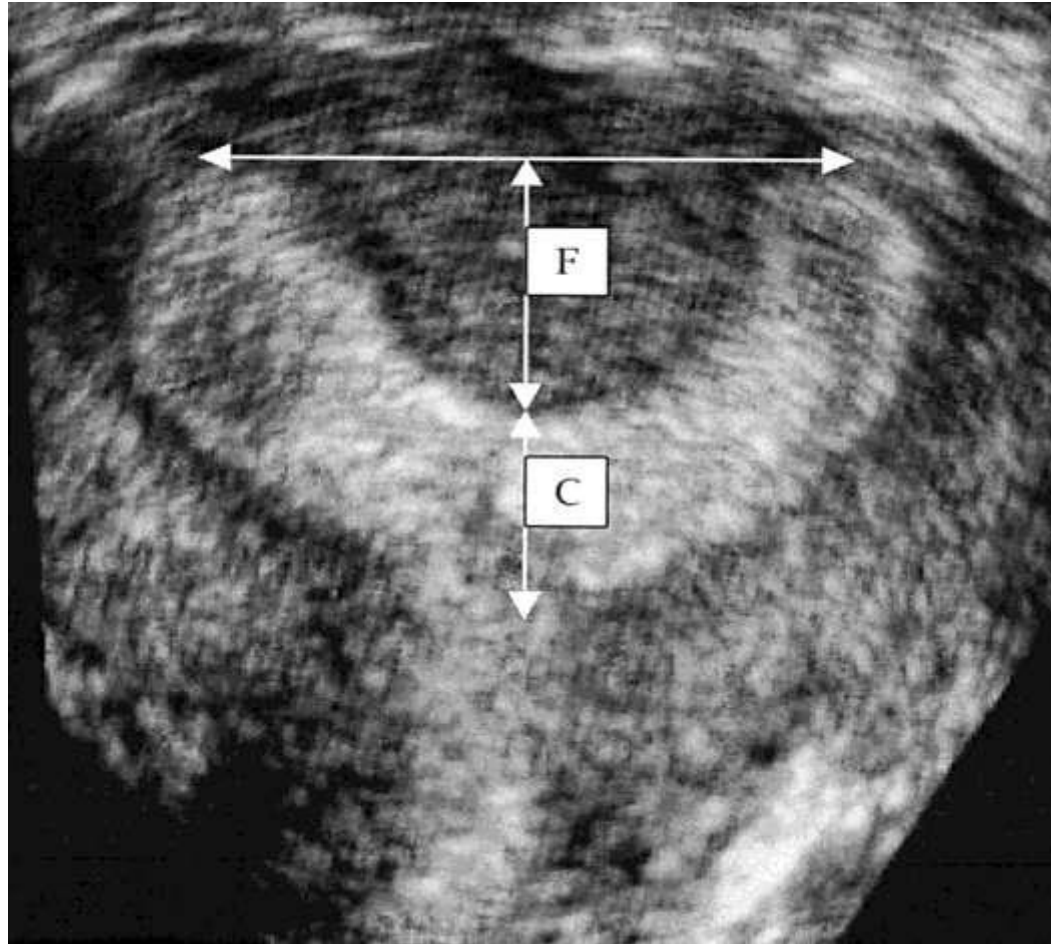


DIDELPHUS UTERUS



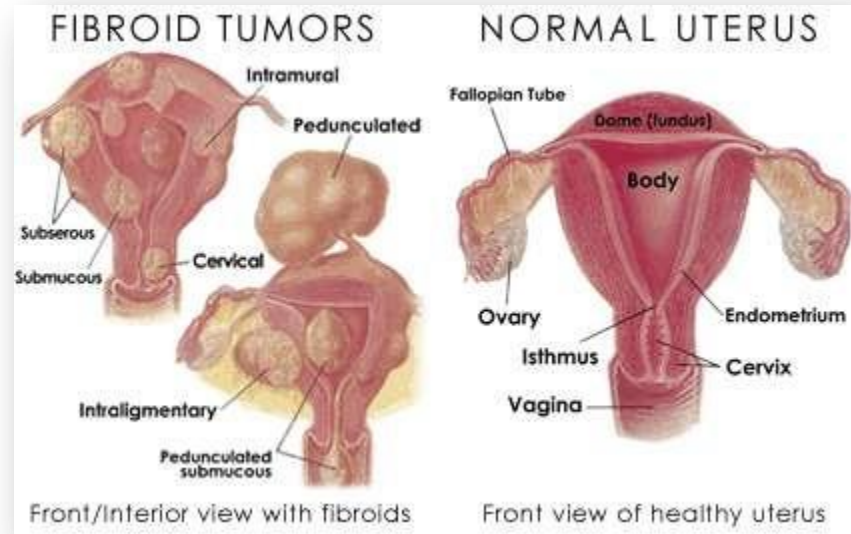
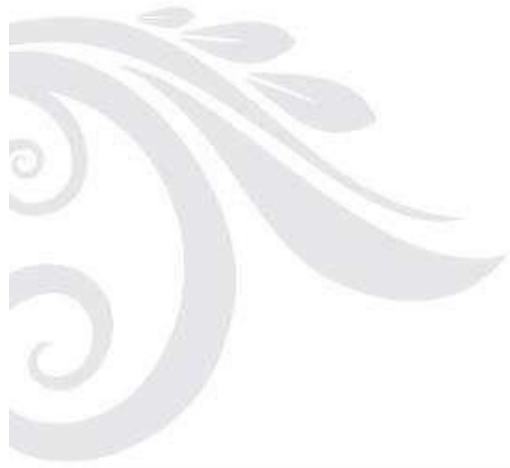
S
E
P
T
A
T
E

U
T
E
R
U
S

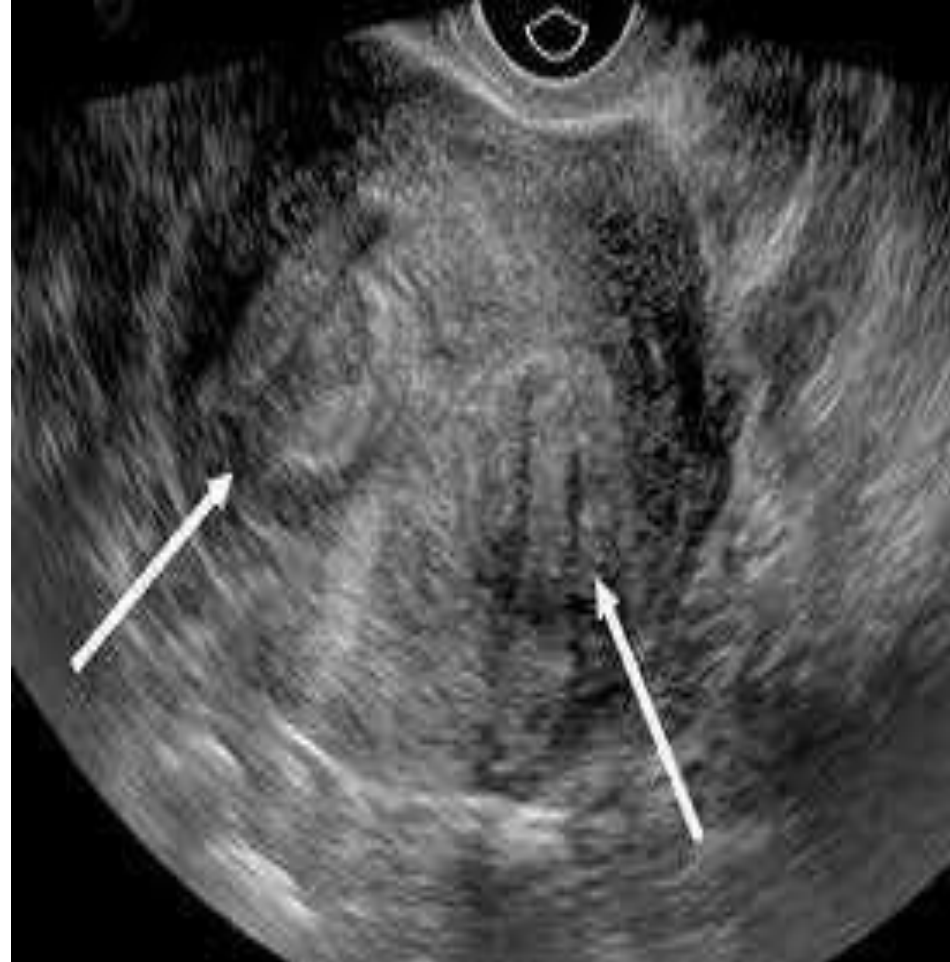


$F < 2\text{cm}$ –
Incomplete/
Partial
Septum

$F > 2\text{cm}$ –
Complete
Septum



FIBROID UTERUS

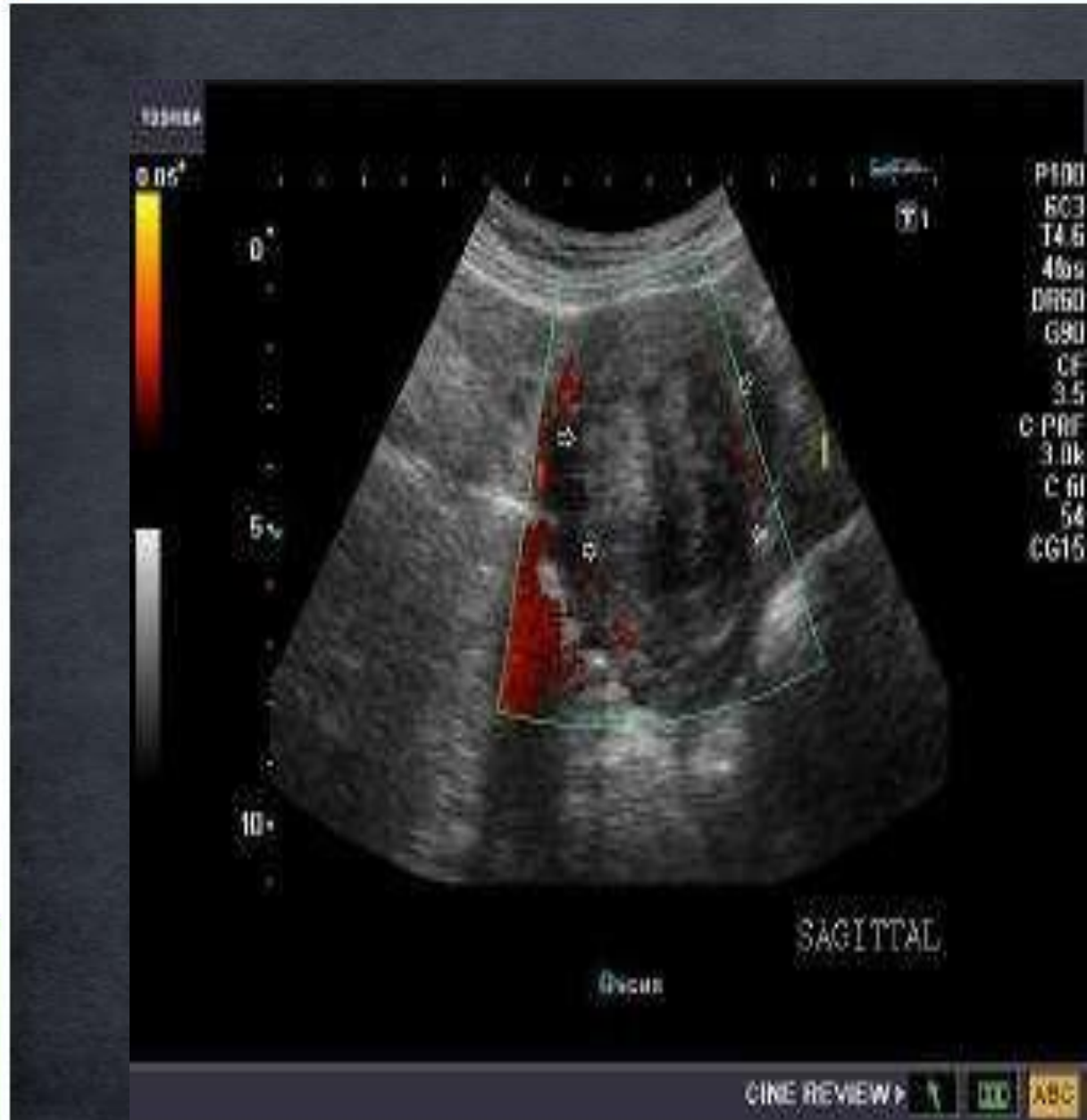


With pregnancy a myoma can be seen better as the anechoic amniotic fluid provides a good window.



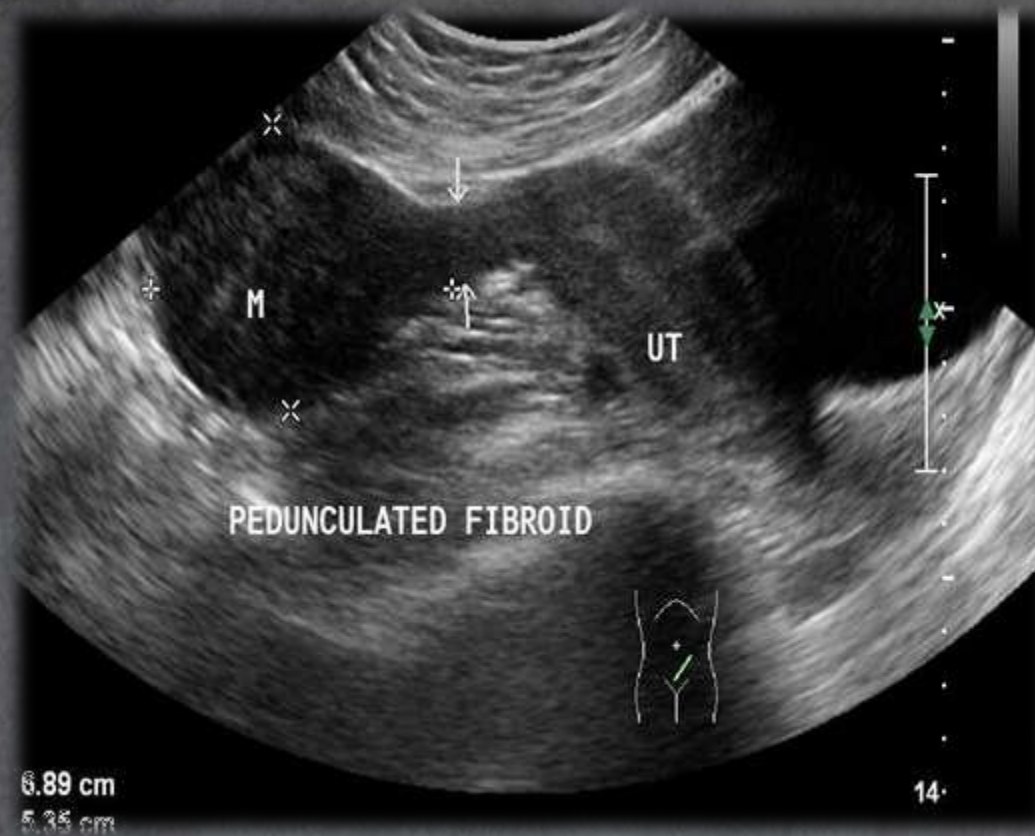
SUB-MUCOUS FIBROID

The fibroid intrudes the uterine cavity.



SUB SEROSAL FIBROID





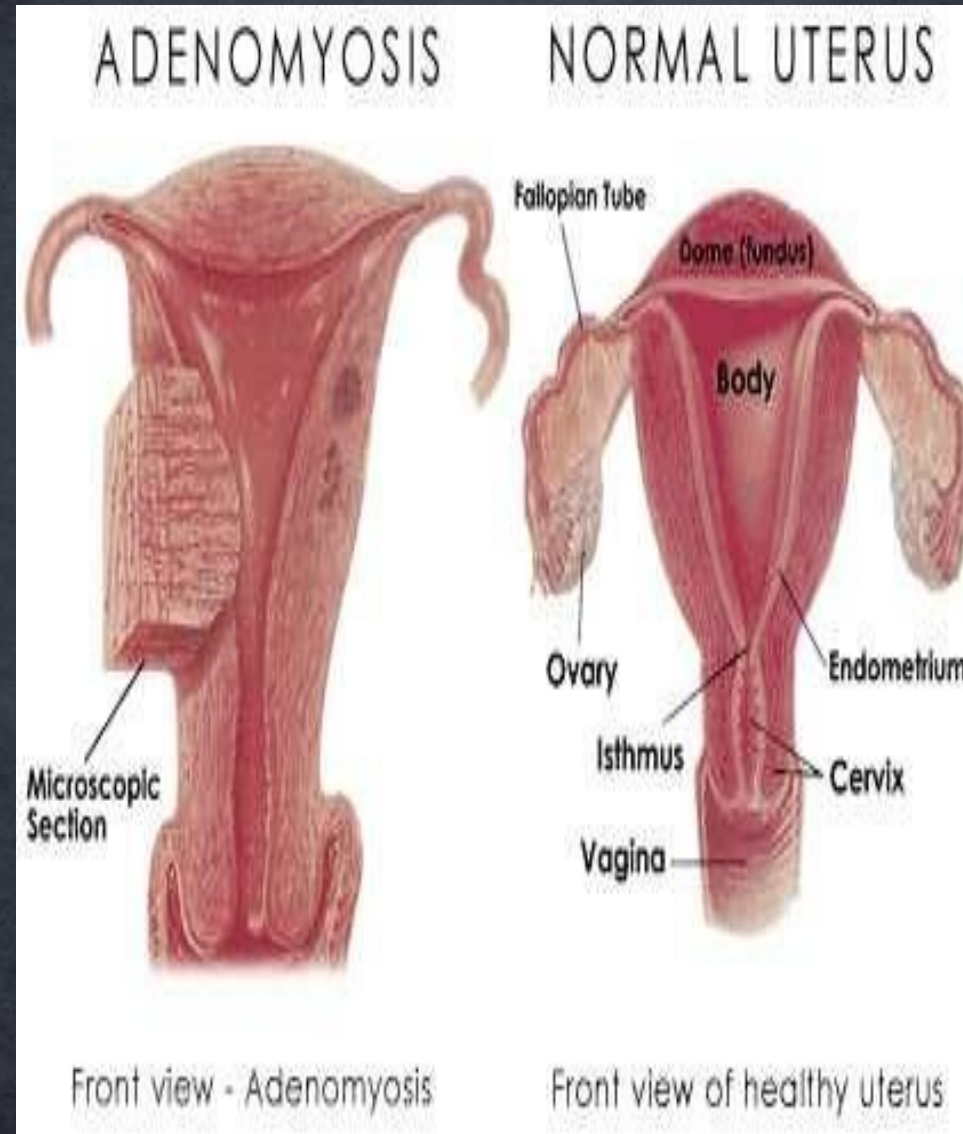
The fibroid stalk may twist on itself.

PEDUNCULATED FIBROID

ADENOMYOSIS

A common benign condition that often co-exists with endometriosis and fibroids, often described as endometriosis within the uterus itself .

Endometrial tissue exists within the muscle of the uterus.



ASPECTS

- Diffuse uterine enlargement with no alteration in echo- texture or uterine contour, often reported as a “bulky uterus”
- Asymmetrically thickened uterus, usually posteriorly
- Cystic hyperplasia of the endometrium
- Myometrial cysts

Voluson
P6

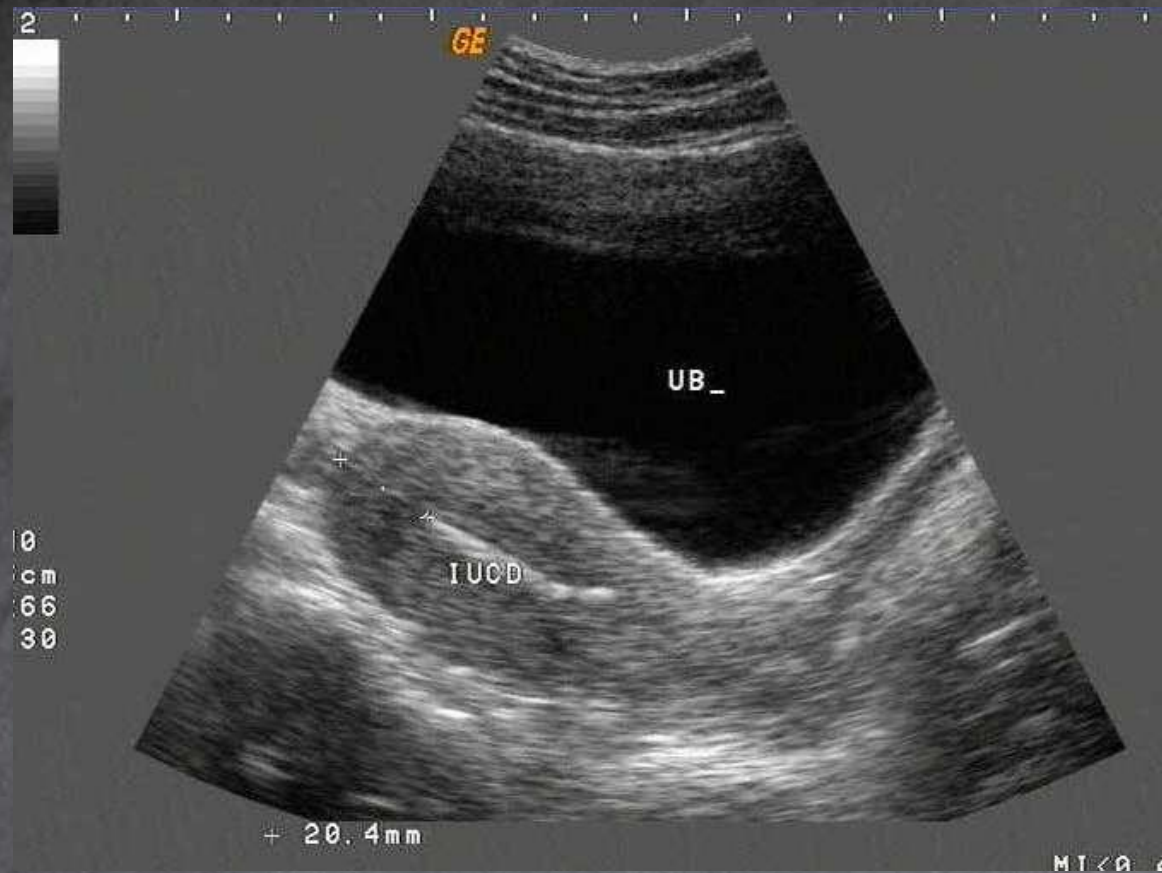
R
HI M

DIFFUSE ADENOMYOSIS

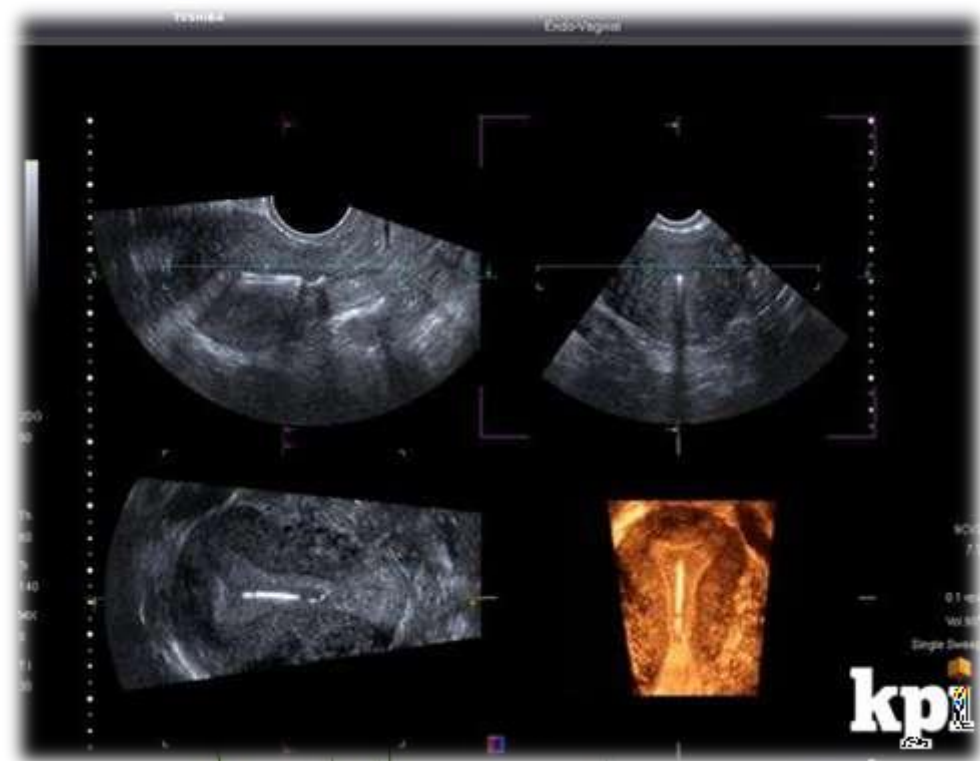
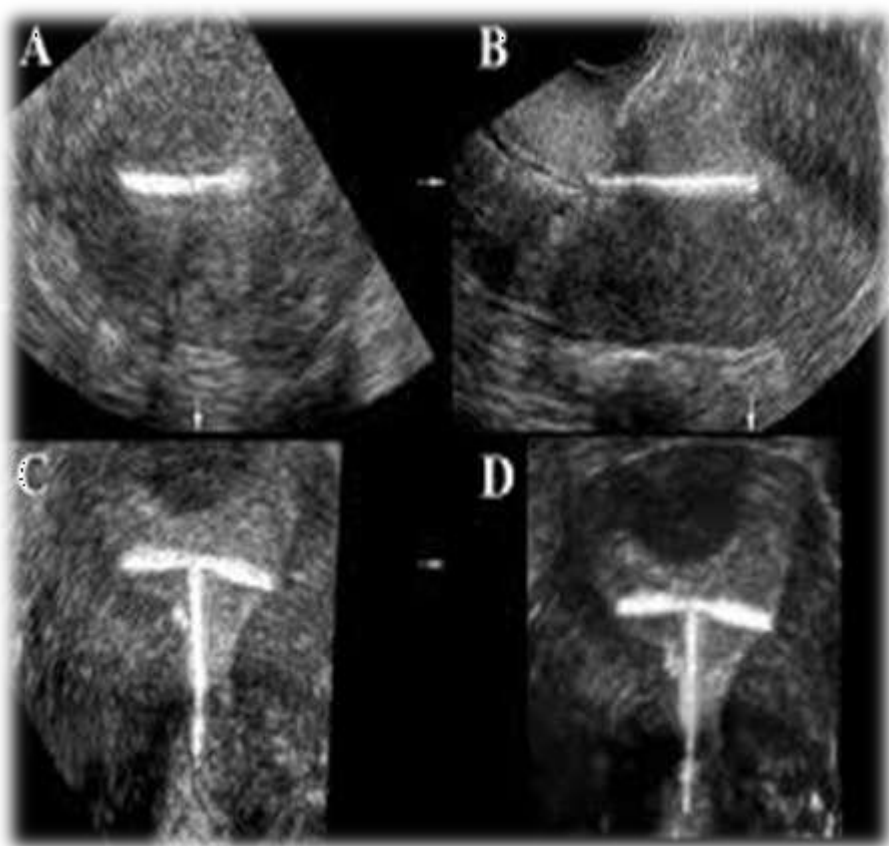
The loss of endometrial myometrial junction when seen on images is characteristic.

Voluson
P6

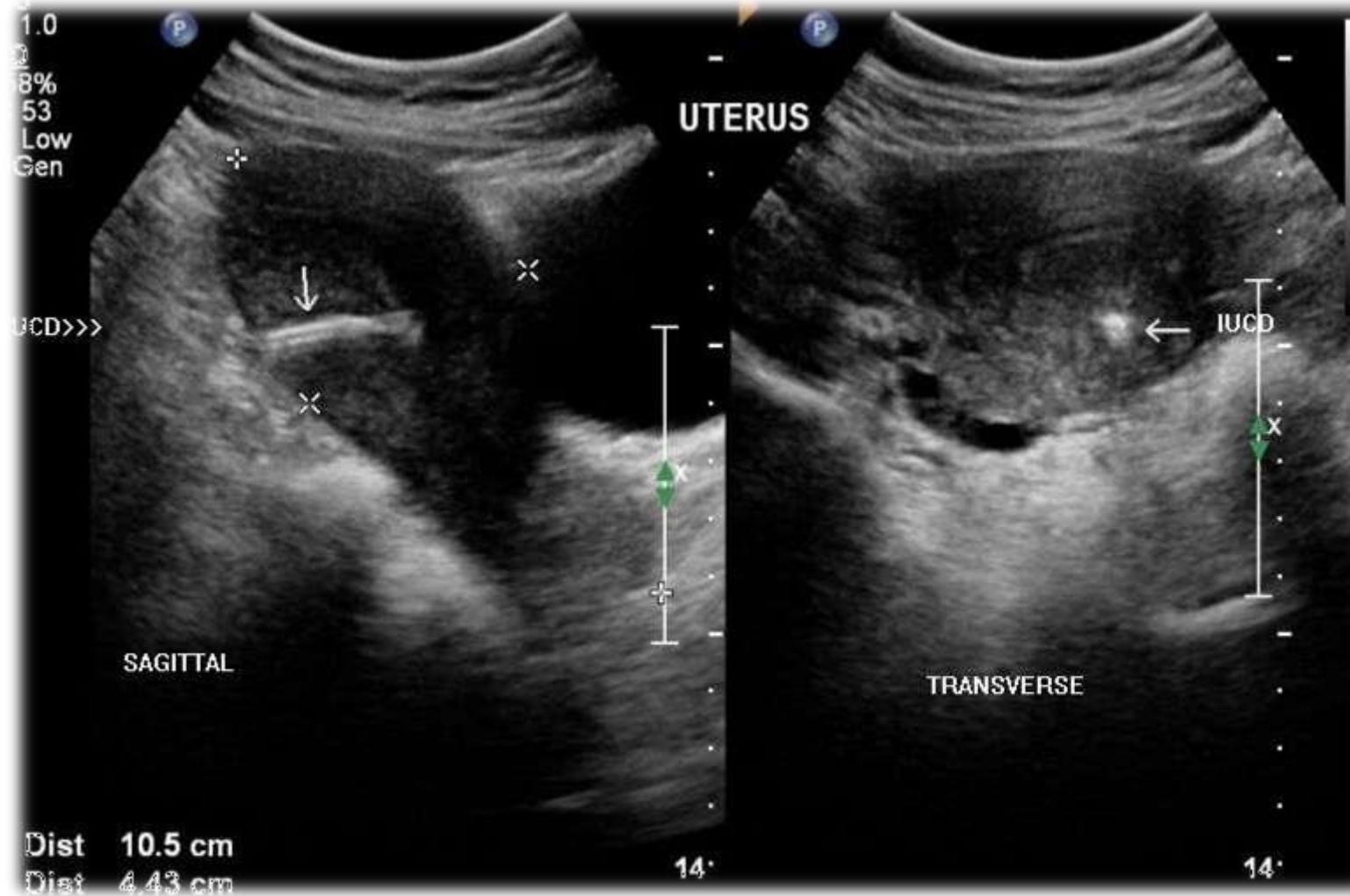
Cystic appearance with
thickened myometrium



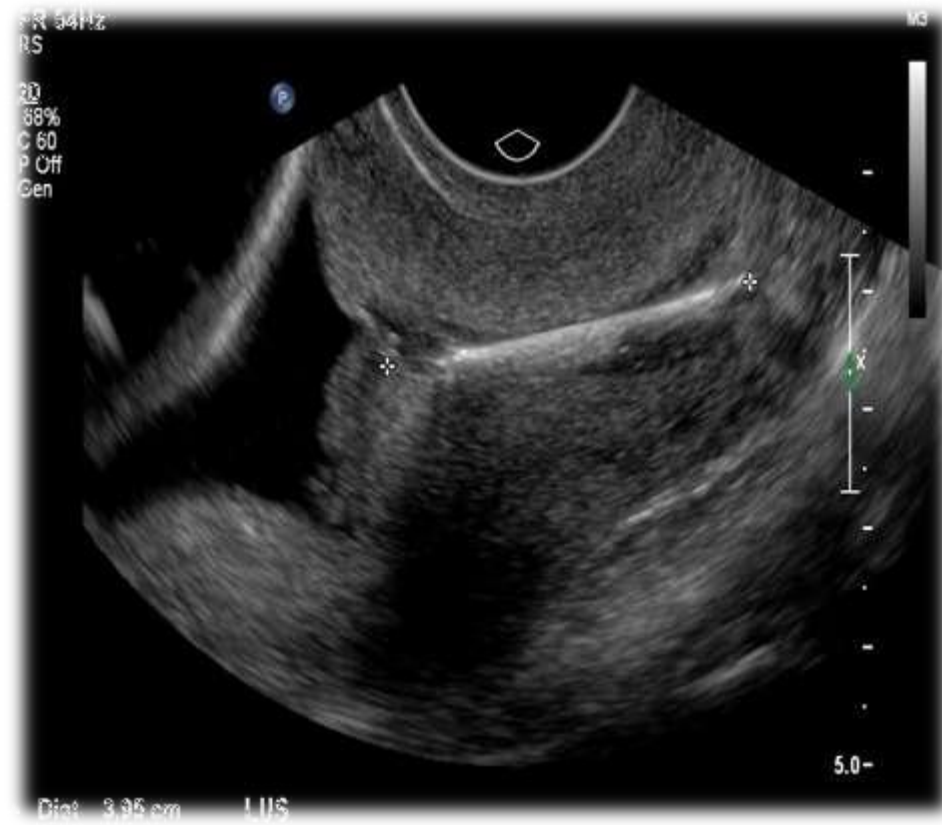
***INTRA-UTERINE CONTRACEPTIVE DEVICE
(IN SITU)***

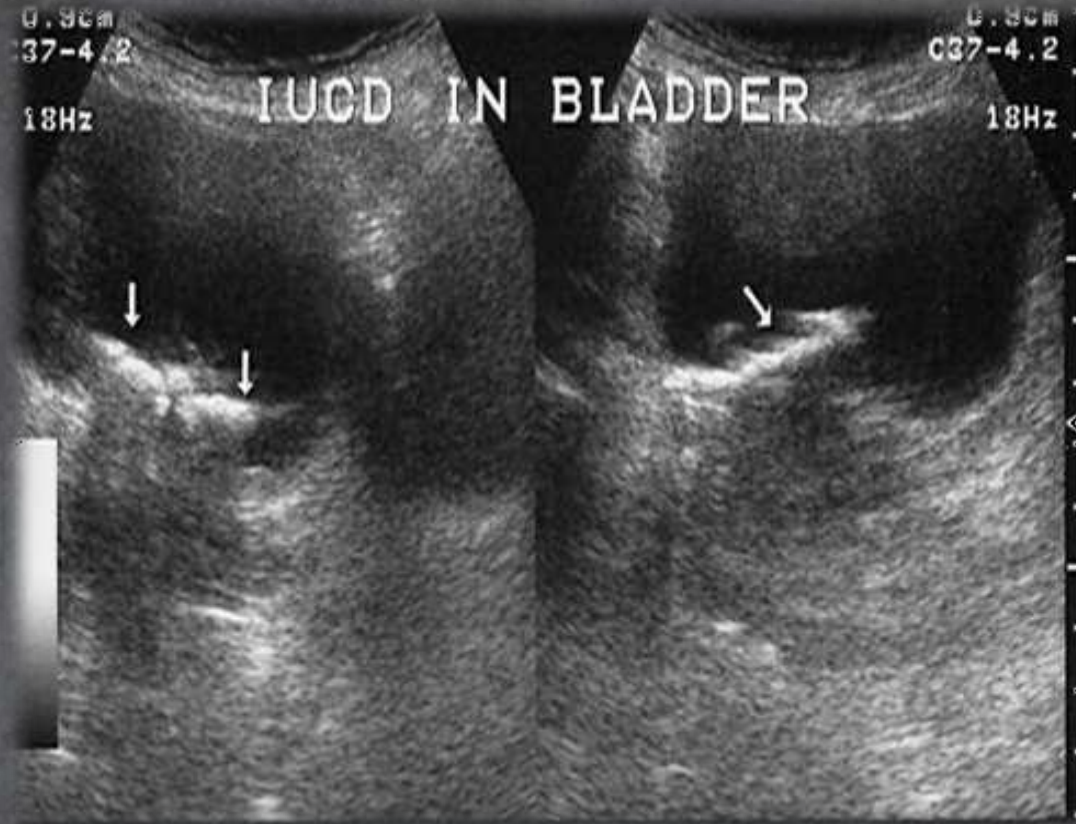


IUCD PENETRATING THE MYOMETRIAL WALL



CERVICAL IUCD





IUCD IN BLADDER

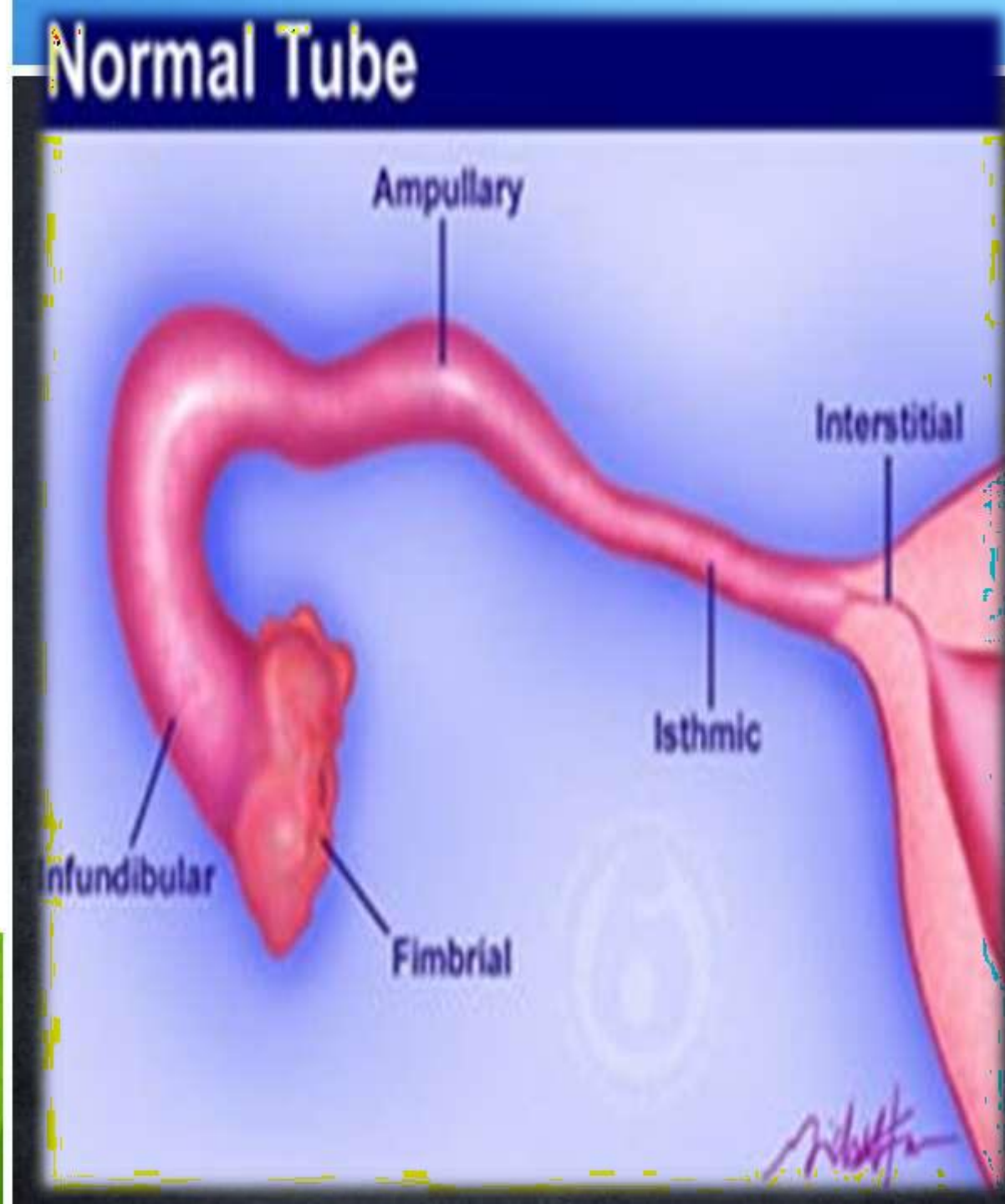
PERFORATED IUCD



FALLOPIAN TUBES

Normal fallopian tubes
**NOT SEEN, IN A
ROUTINE SCAN.**

Pathological tubes seen as
DILATED, FLUID FILLED
structures.





HYDROSALPINX

- PID
- Tuberculosis

HEMATOSALPINX

- Hematometria
- Ectopic Pregnancy
- Tubal Carcinoma
- Endometriosis

HYDROSALPINX

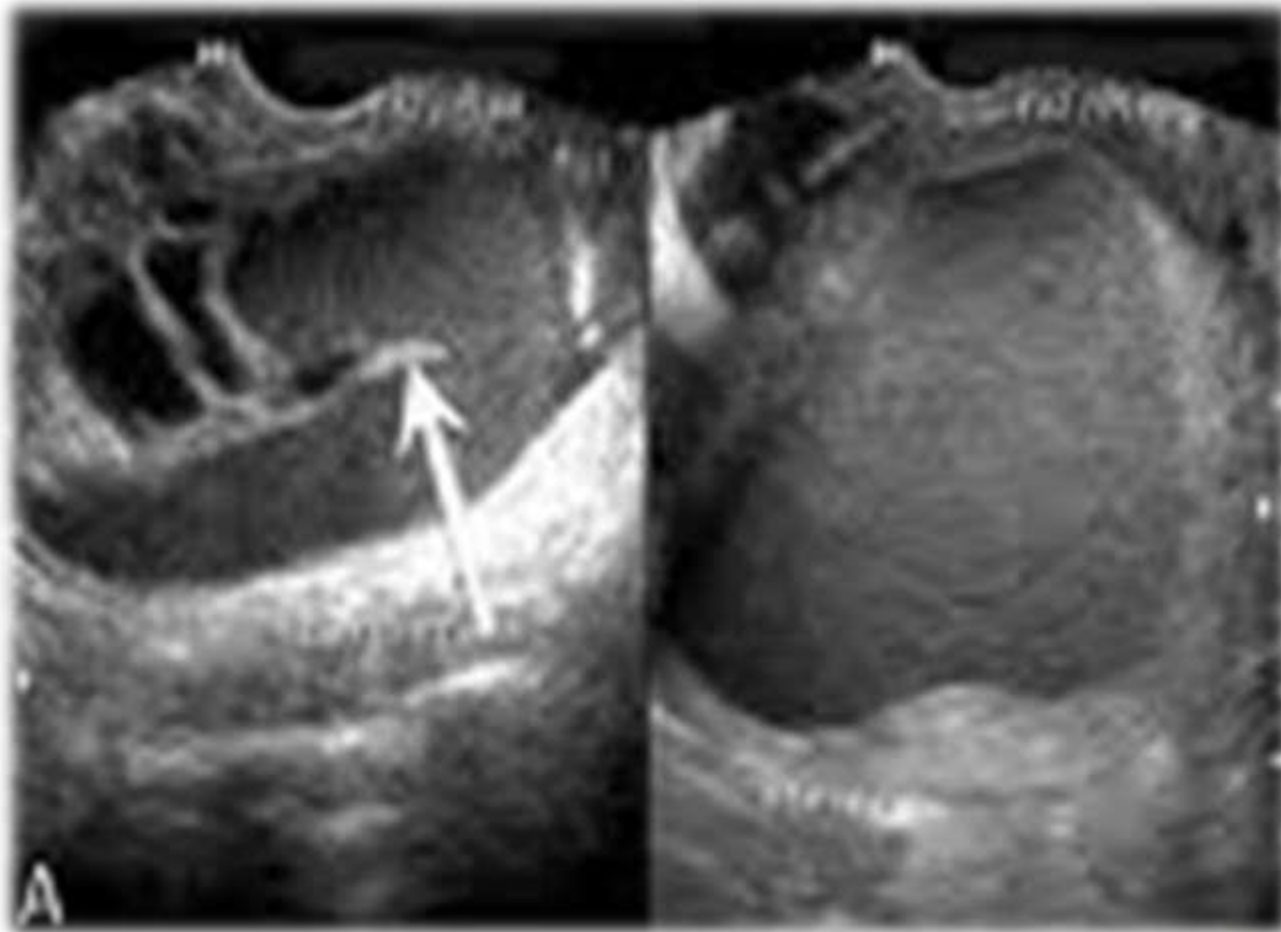




GE
L9

RT ADNEXA

HEMATOSALPINX



Thick
echogenic
homogenous
material
filling the
lumen is
blood





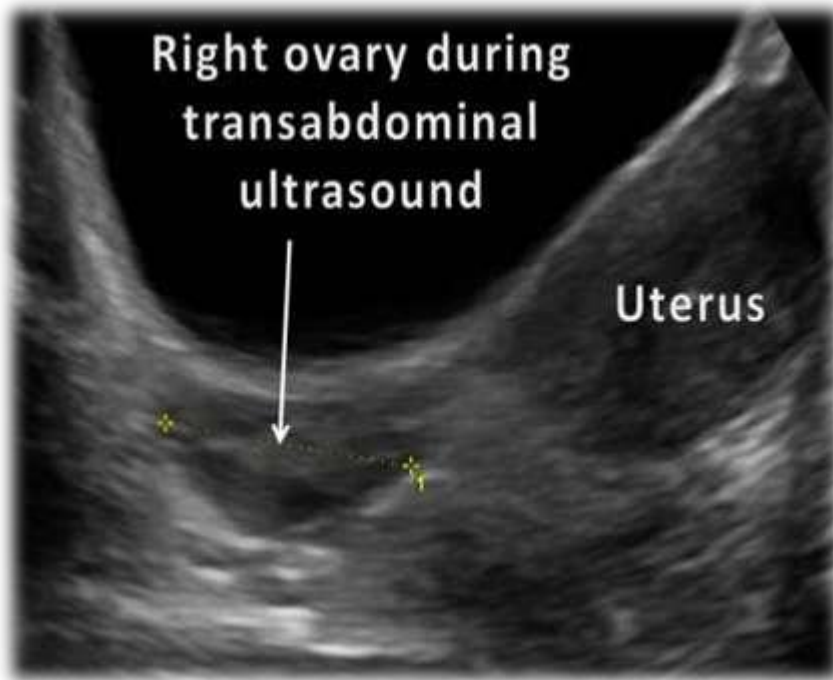
PYOSALPINX

Echogenic debris seen within the lumen is pus.

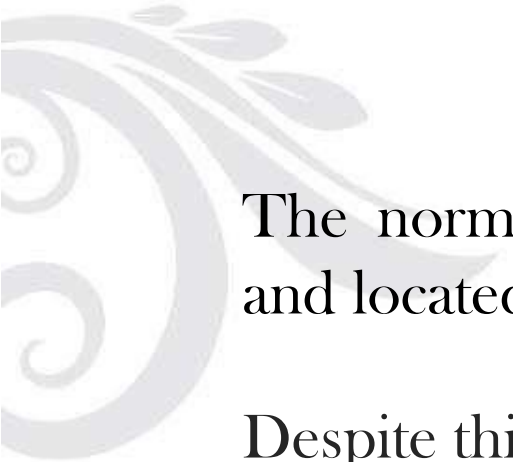


OVARIES

NORMAL APPEARANCE



Position

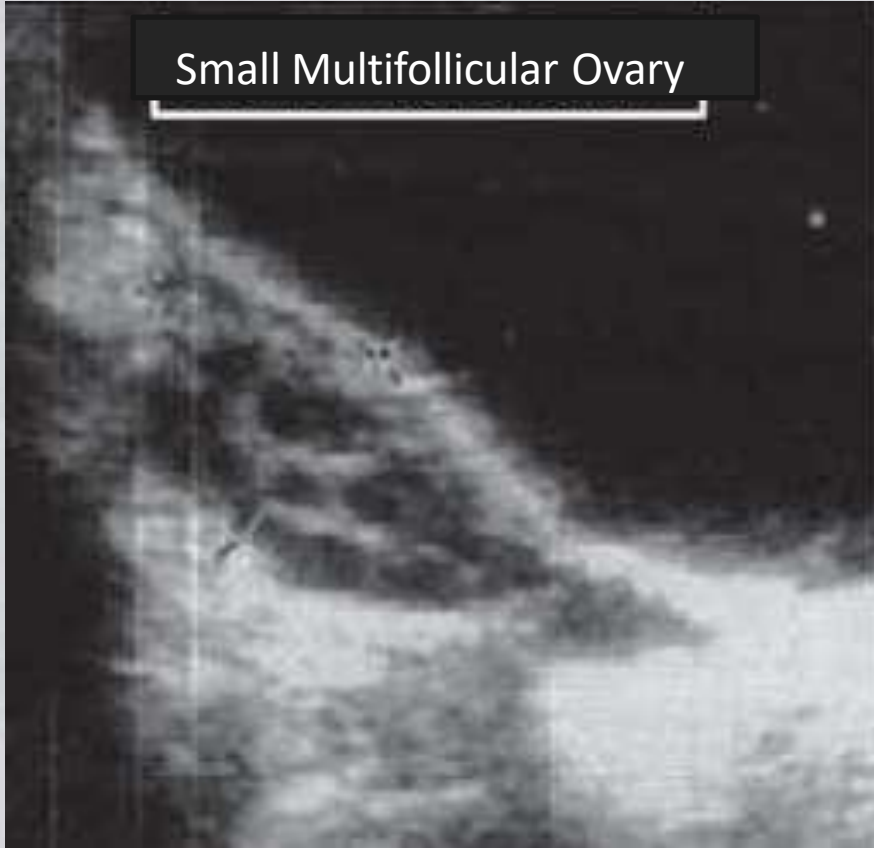


The normal ovary is moderately echogenic, well margined and located **at the lateral edge of the broad ligament.**

Despite this variability, it is **typically** found lateral to the fundus of the uterus.

Because it is **mobile**, it may be found from the pelvic cul-de-sac to the lower abdomen

Small Multifollicular Ovary



Unilocular Ovary



Because of the ovary has a variable, usually oval shape,
size is best expressed as an estimated **volume**.

Age (yrs)	Volume (ml)	Mean (ml)
0-10	0.2 - 4.9	1.7
11-20	1.7 - 18.5	7.8
21-30	2.6 - 23.0	10.2
31-40	2.6 - 20.7	9.5
41-50	2.1 - 20.9	9.0
51-60	1.6 - 14.2	6.2
61-70	1.0 - 15.0	6.0



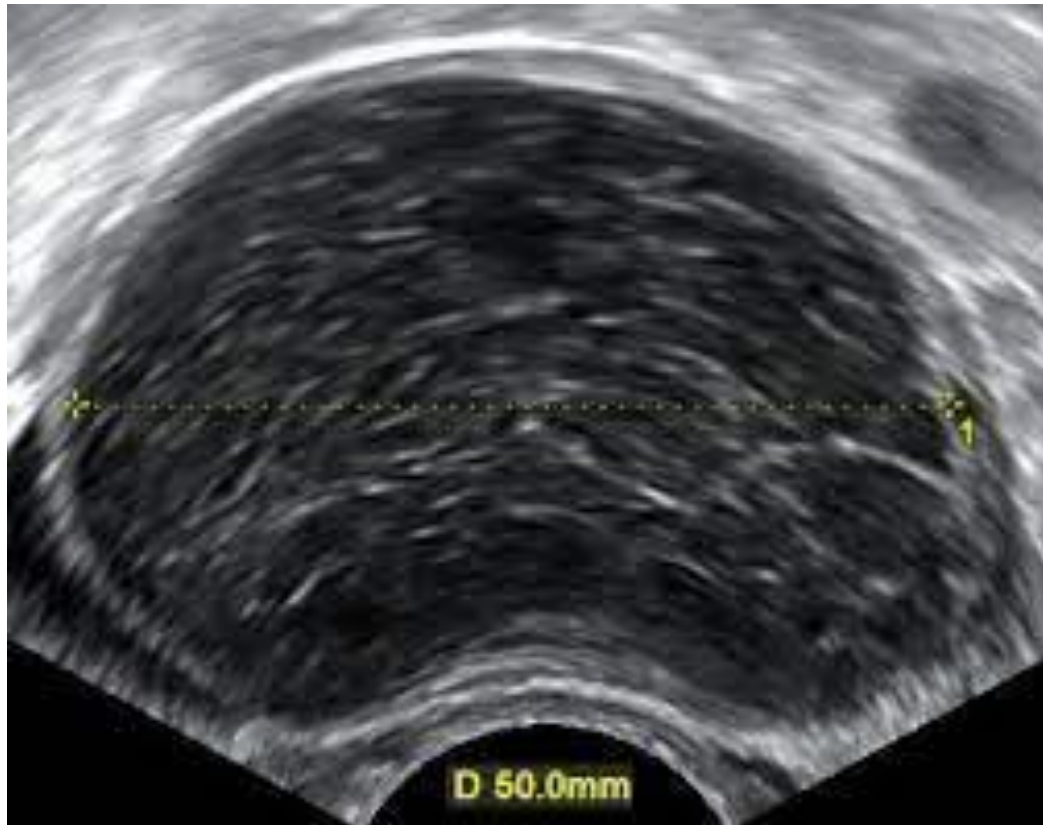
By Ultrasound, **early antral follicles** are 2-4mm in size. Developing follicles range between **5-10** mm.

The dominant (selected) follicle will continue to grow, reaching 10mm on day 8-9 and reaching final mature size of 18-24 mm, on day 14 prior to ovulation.

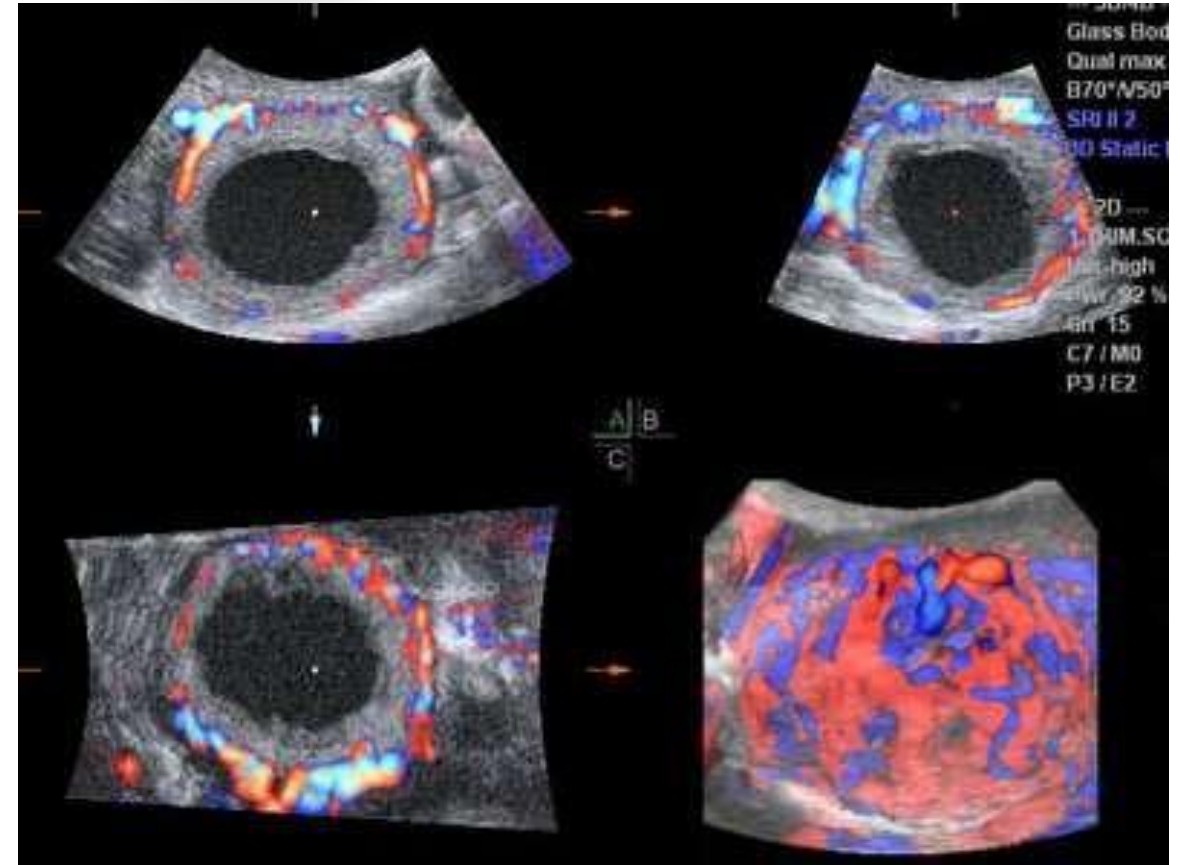
*Follicles **11 mm** or larger are usually dominate follicles.*



Screening for early ovarian tumors must be done during the **first 5 days of the cycle** to avoid needless confusion with physiologic cysts (anovulation).



CORPUS LUTEAL (CL) cyst

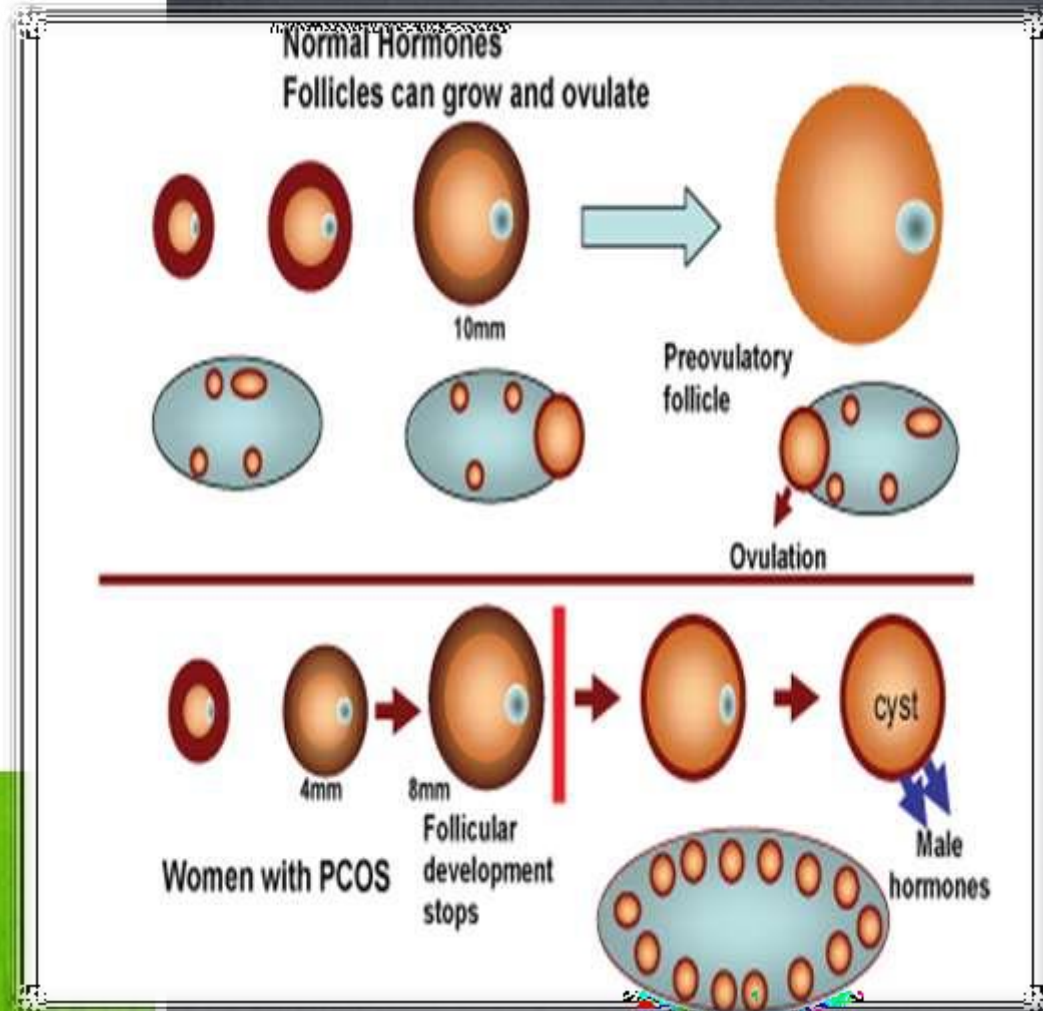


Colour Doppler shows either no vascularity within the cyst or at times show low resistance

POLY CYSTIC OVARIAN DISEASE / SYNDROME

On ultrasound, these patients ovaries may be "normal", but are more often enlarged (> 6ml), and tend to have an *increased number of small incompletely developed follicles* (<11) and *no dominant size follicles*.

Doppler blood flow has been reported to be faster in PCOS.





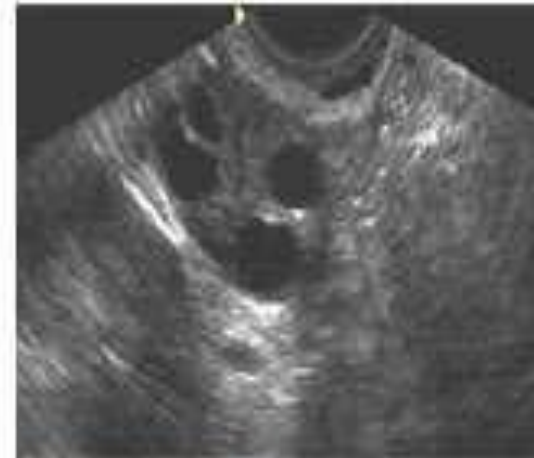
Normal ovary



Polycystic ovary



Ultrasound of Ovaries



Normal Ovary



PCOS Ovary

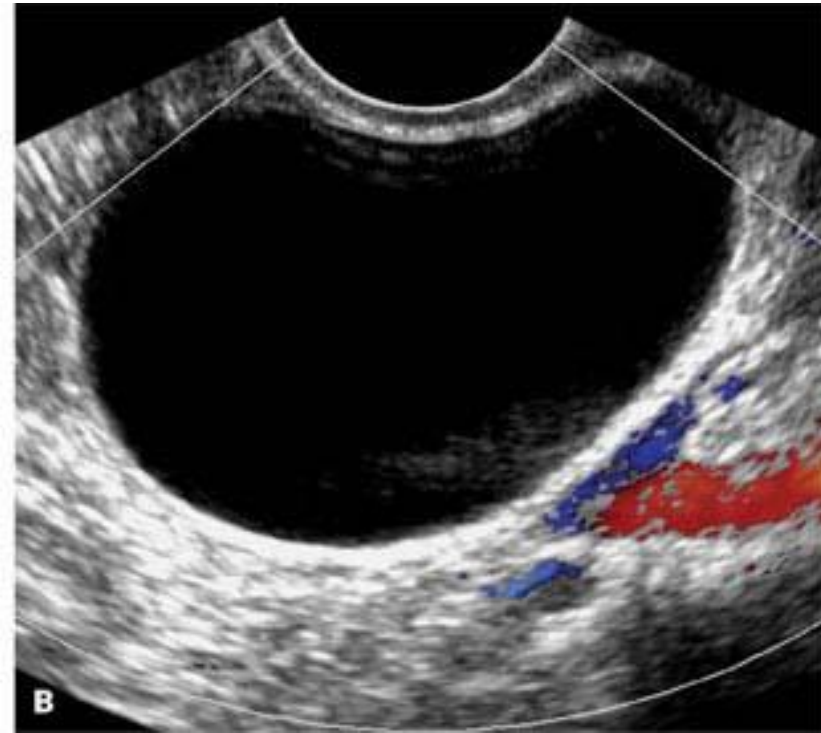




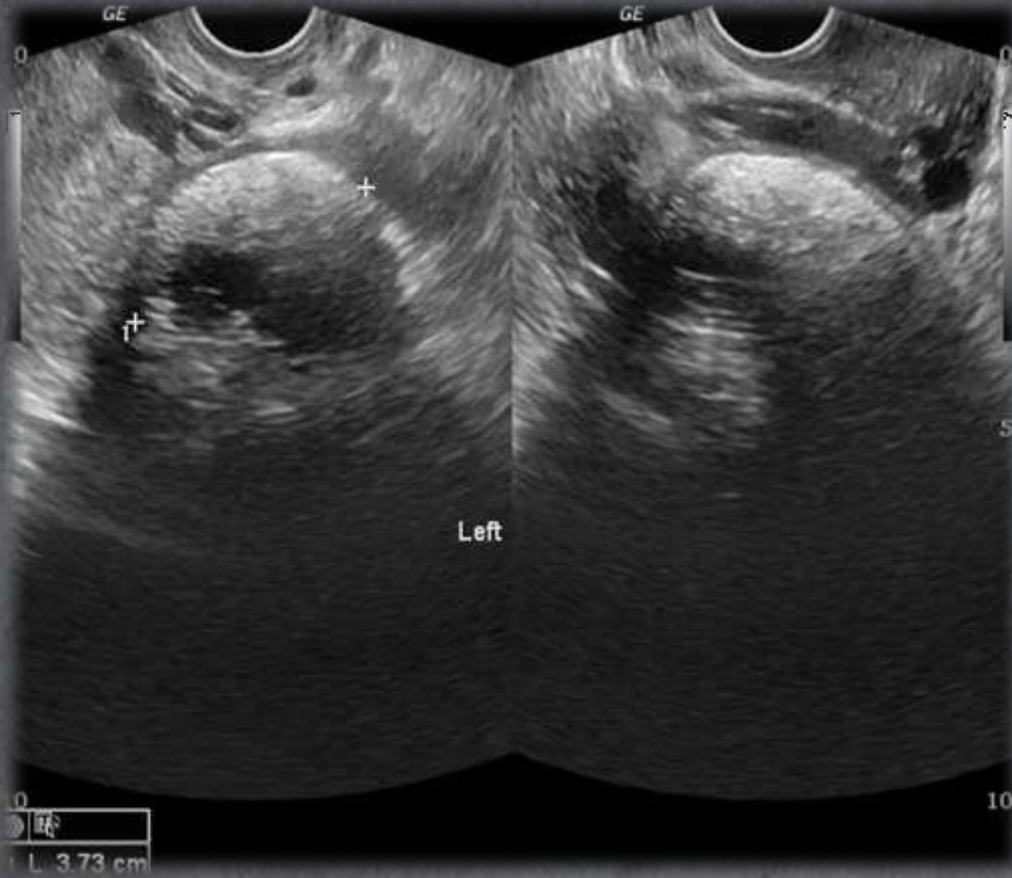
STRING OF PEARLS
APPEARANCE



SIMPLE SEROUS OVARIAN CYST



DERMOID



TIP OF ICEBERG SIGN

Sebaceous material/hair/
calcified material within the
cyst.



Acoustic mismatch



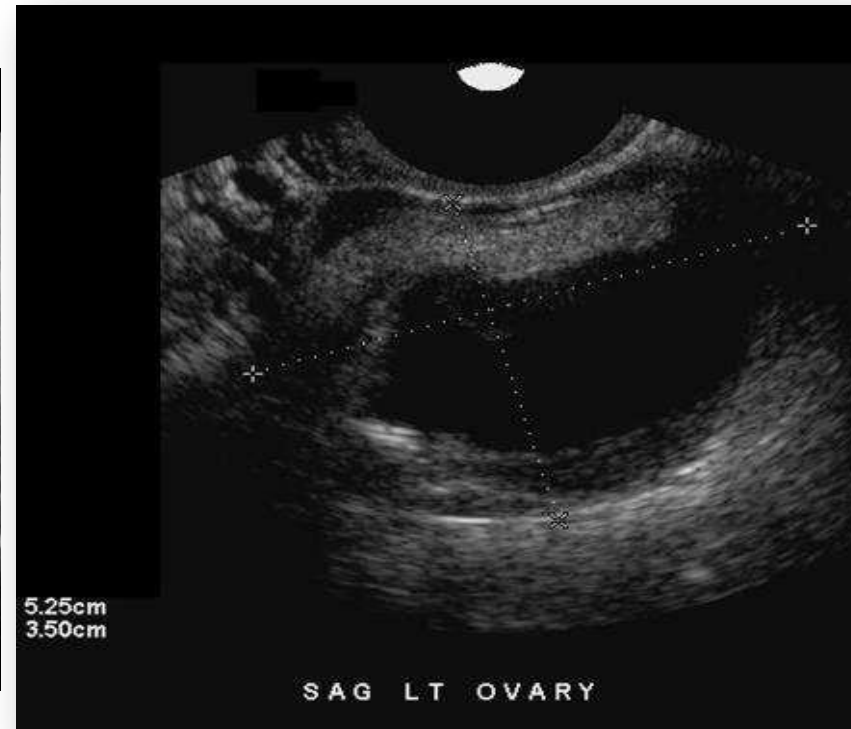
Attenuation of the rays
passing through the above
contents.



Behind these structures, all
appears dark (sono-opaque)

DERMOID

CYSTIC vs MIXED APPEARANCE

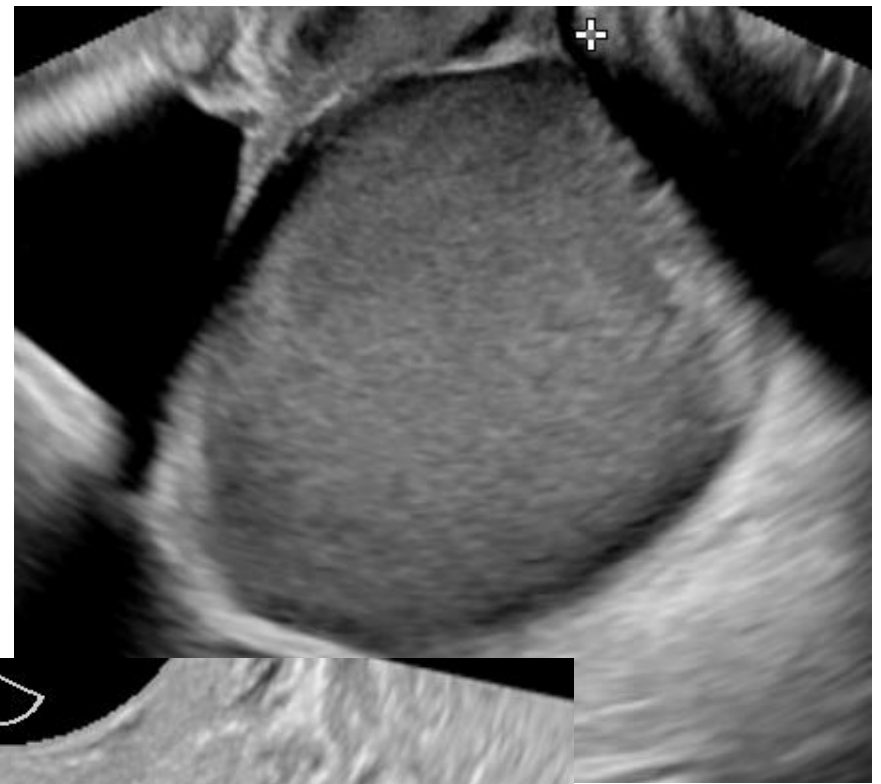


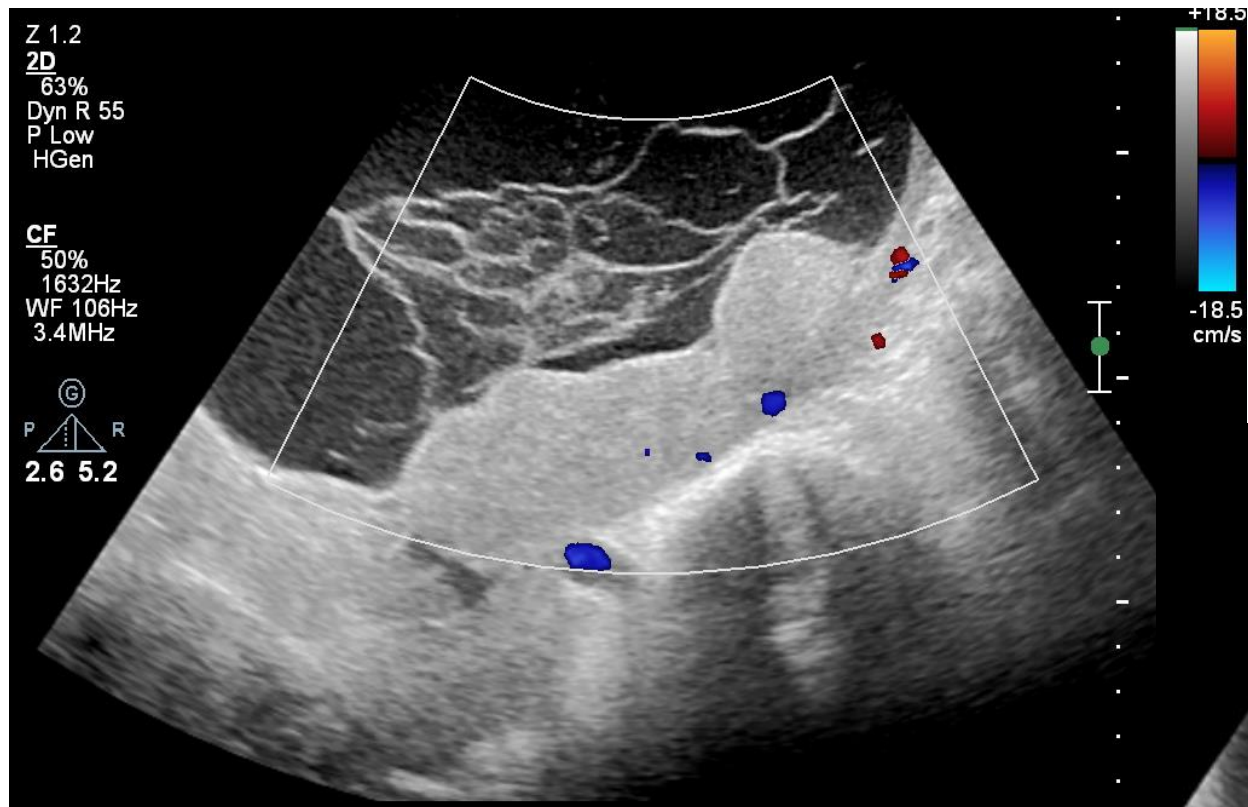
It often contains **calcific, dental, adipose, hair and / or sebaceous components**

ENDOMETRIOMA

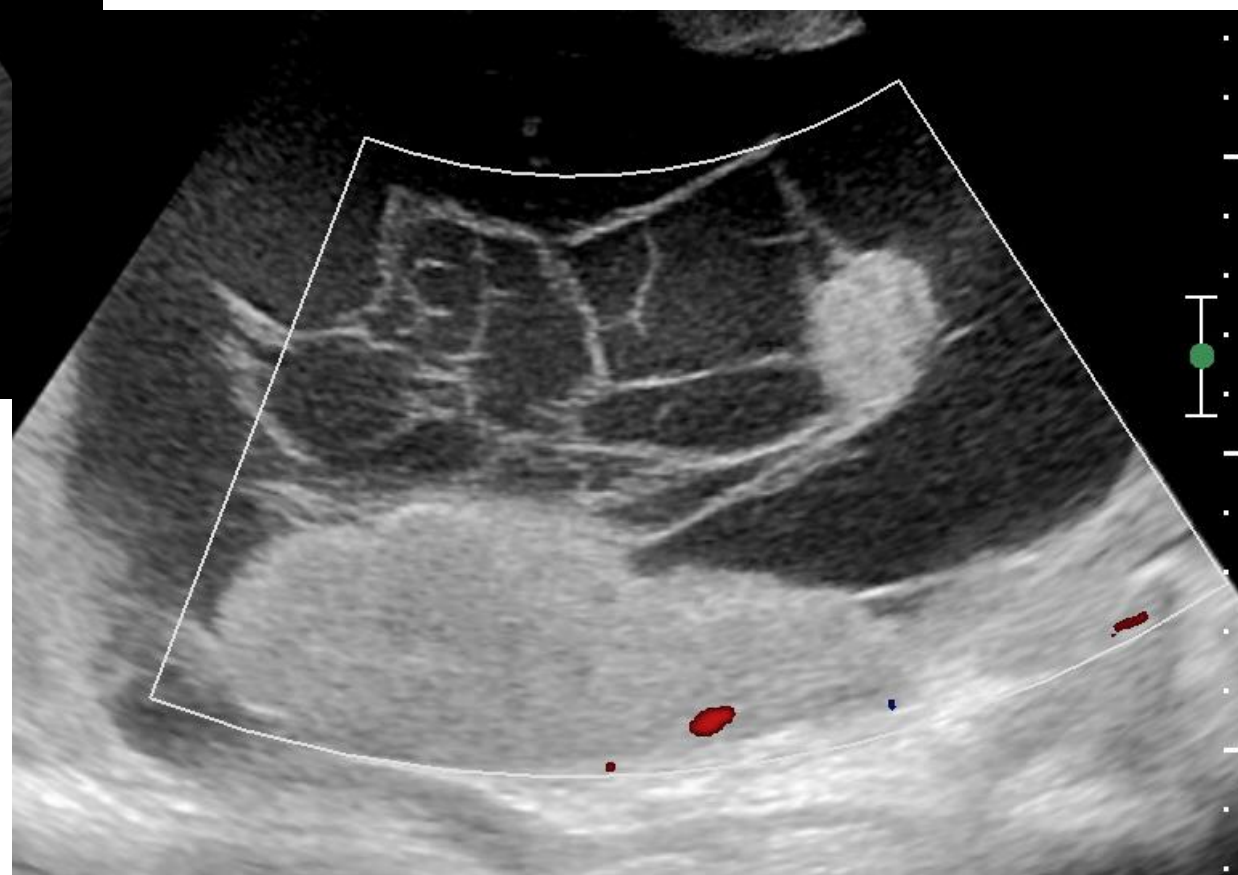
Ectopic Endometrium
when present within
the ovaries, proliferates
under the influence of
hormones, during the
normal cycles.

Seen here, is the
classical **GROUND
GLASS
APPEARANCE**

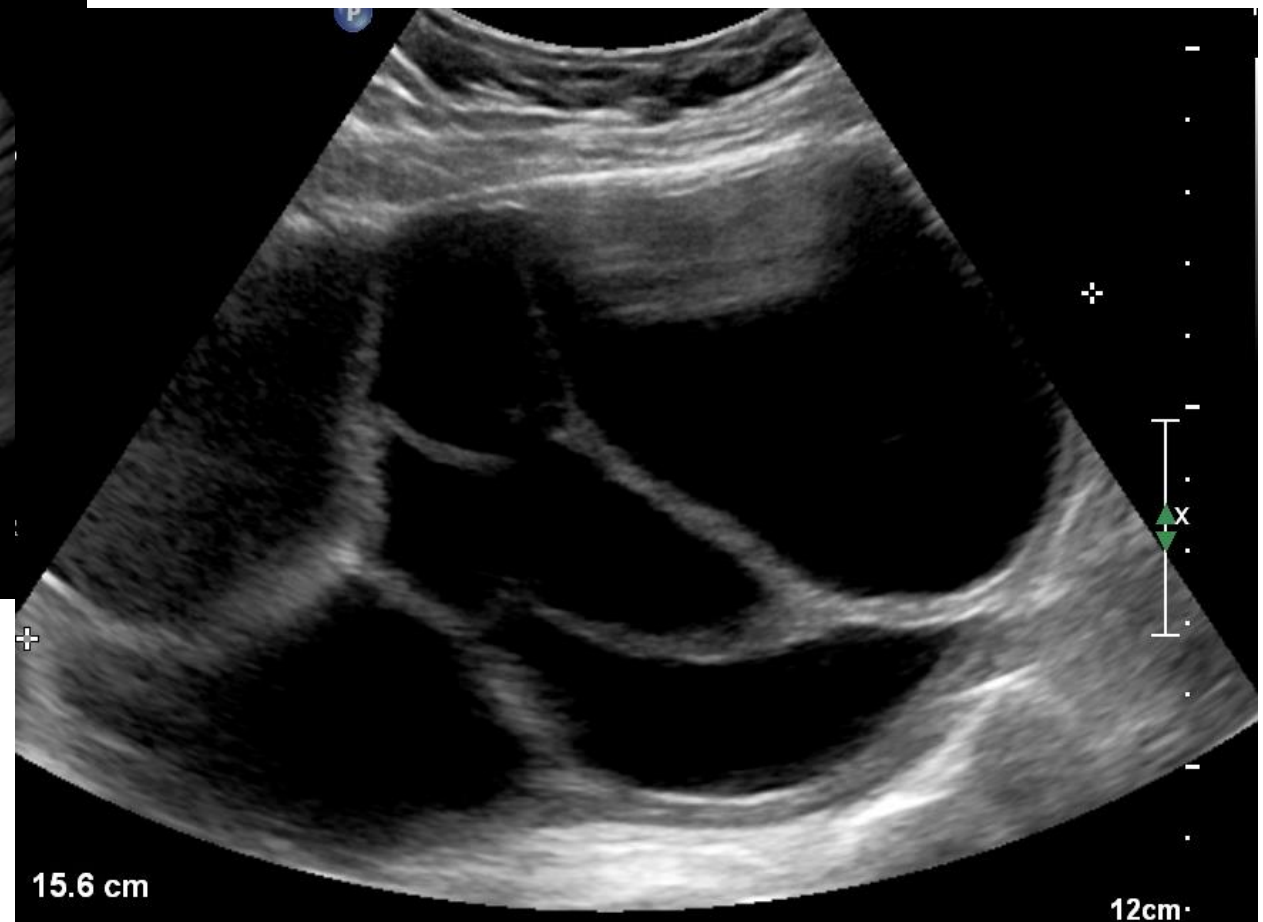




OVARIAN CANCER

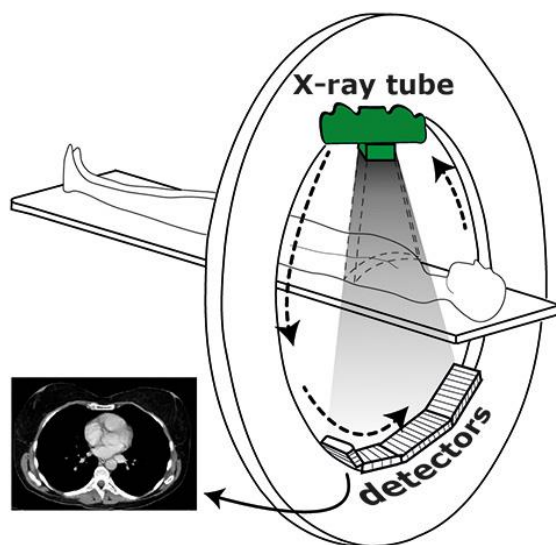


OVARIAN CANCER

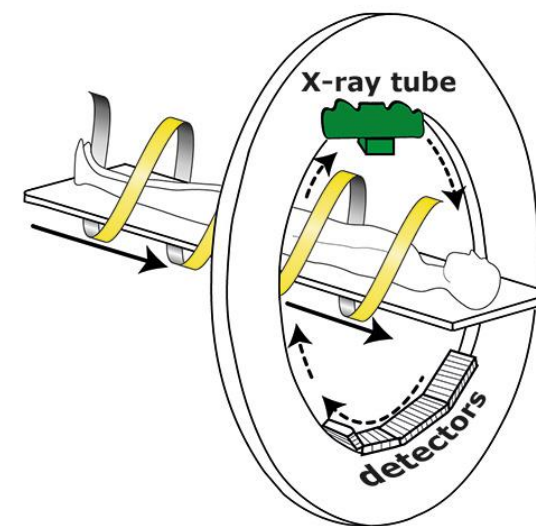
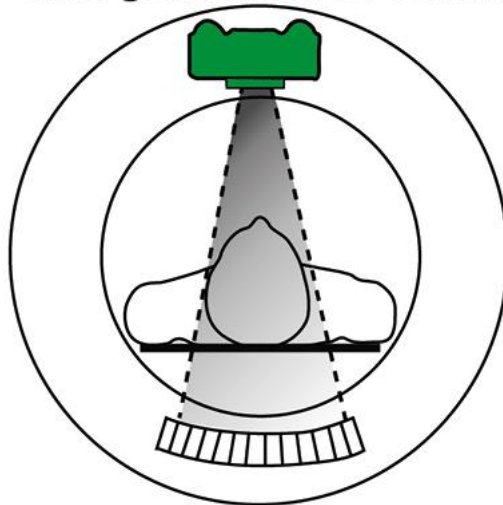


Computer Tomography

- Since 1970 in medical practice
- Uses multiple slices of acquisition and forms a volume
- The **volume may be used for reconstruction**
- If using i.v. **contrast**, the vascularization, ureters and bladder are assessed.
- Oral or Intrarectal contrast may be used for gastro-intestinal evaluations



third generation CT scanner



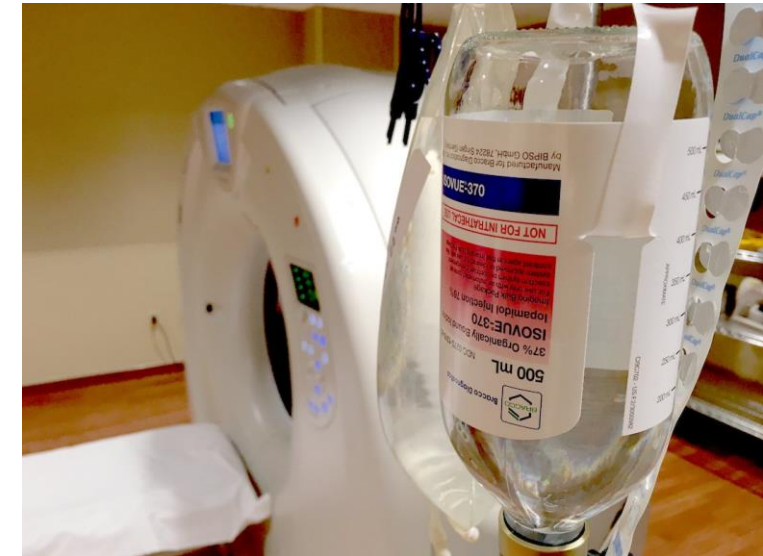


Advantages/indications for CT scan

- When ultrasound images are not convincing
- Good differentiation between pelvic inflammatory disease and tumoral pathology
- For the great field, good assessment of large tumors
- Preprocedural evaluation of malignancy; recurrence evaluation
- After surgery complications (abscess, hematoma, fistula, organs injury)

Disadvantages for CT

- More expensive than Ultrasound
- X-ray exposure
- Allergenic risks for iodine contrast
- Precaution in pregnancy
- Precaution in renal injury



MRI

- Similar images, but does not use X-ray.

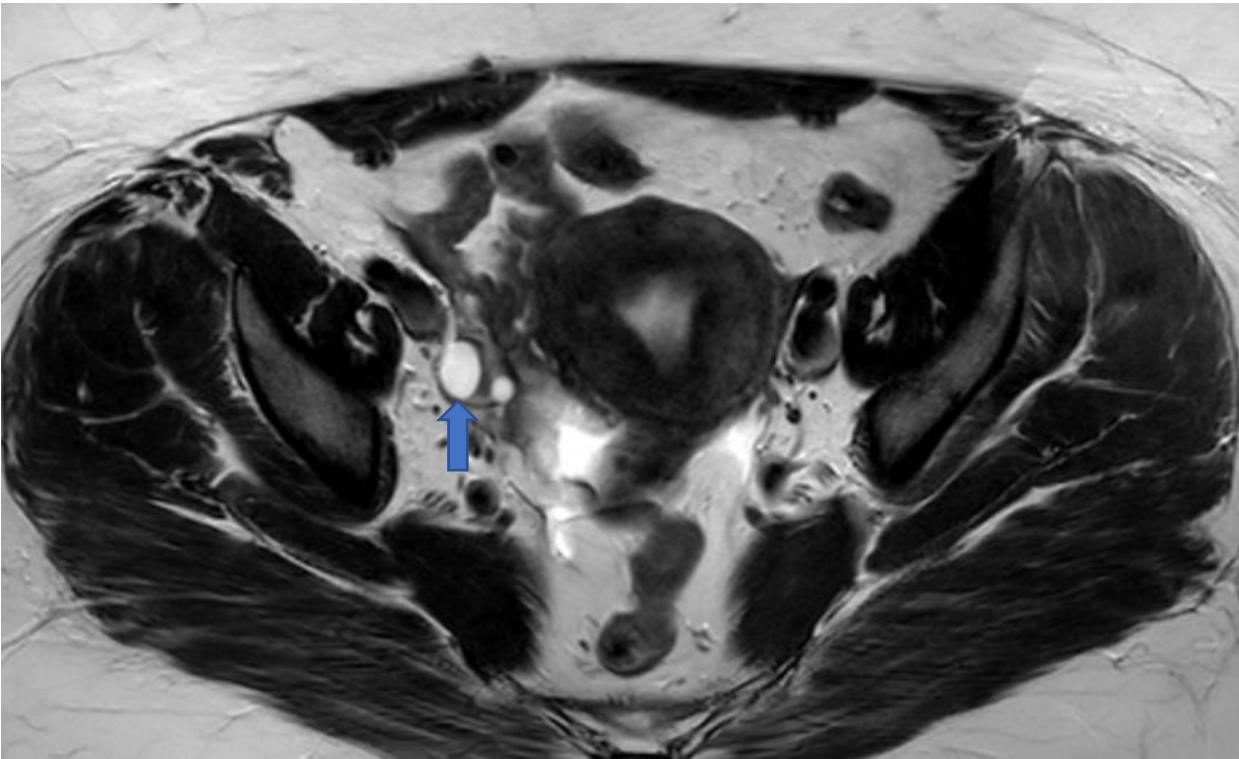
Advantages:

- Good evaluation of **soft tissue** compared to ultrasound and CT
- **Non irradiation** technique
- Uses not iodized contrast – low allergic risk
- Multiple incidences after reconstruction – like CT technique
- Most reliable for : gynecological cancers, myomas, endometriosis, Mullerian malformations of the uterus.

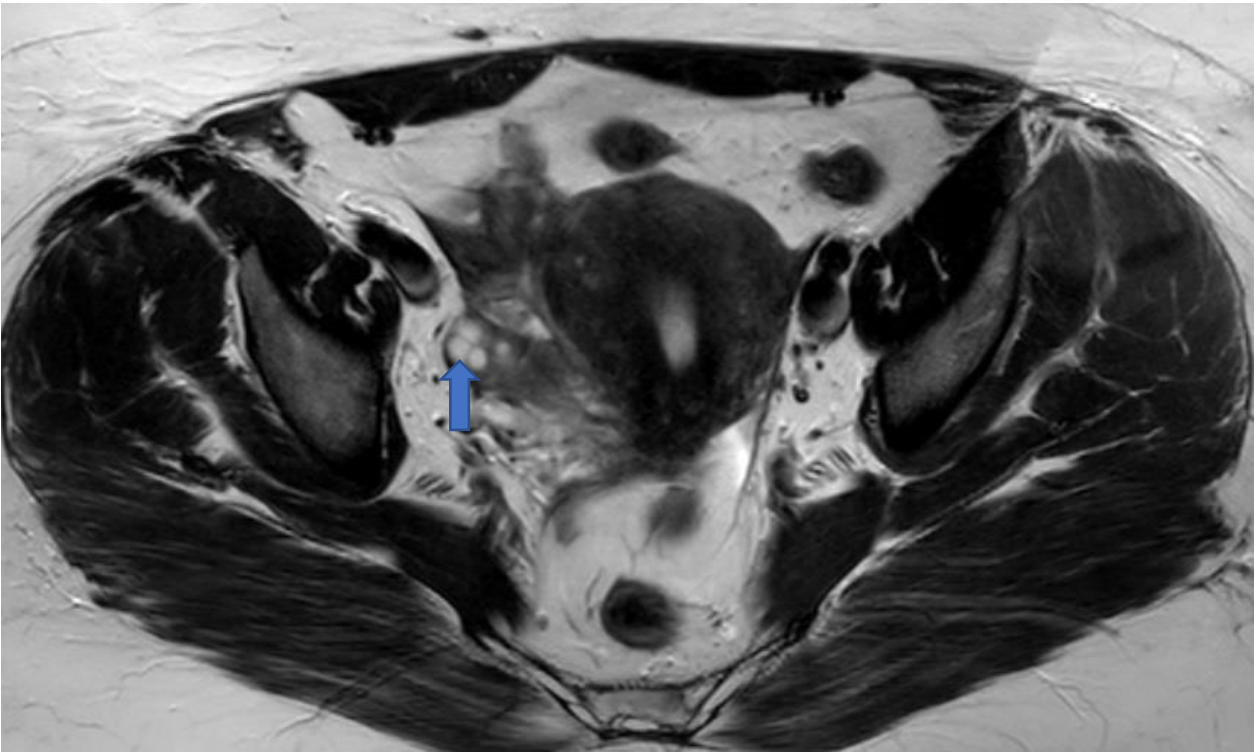


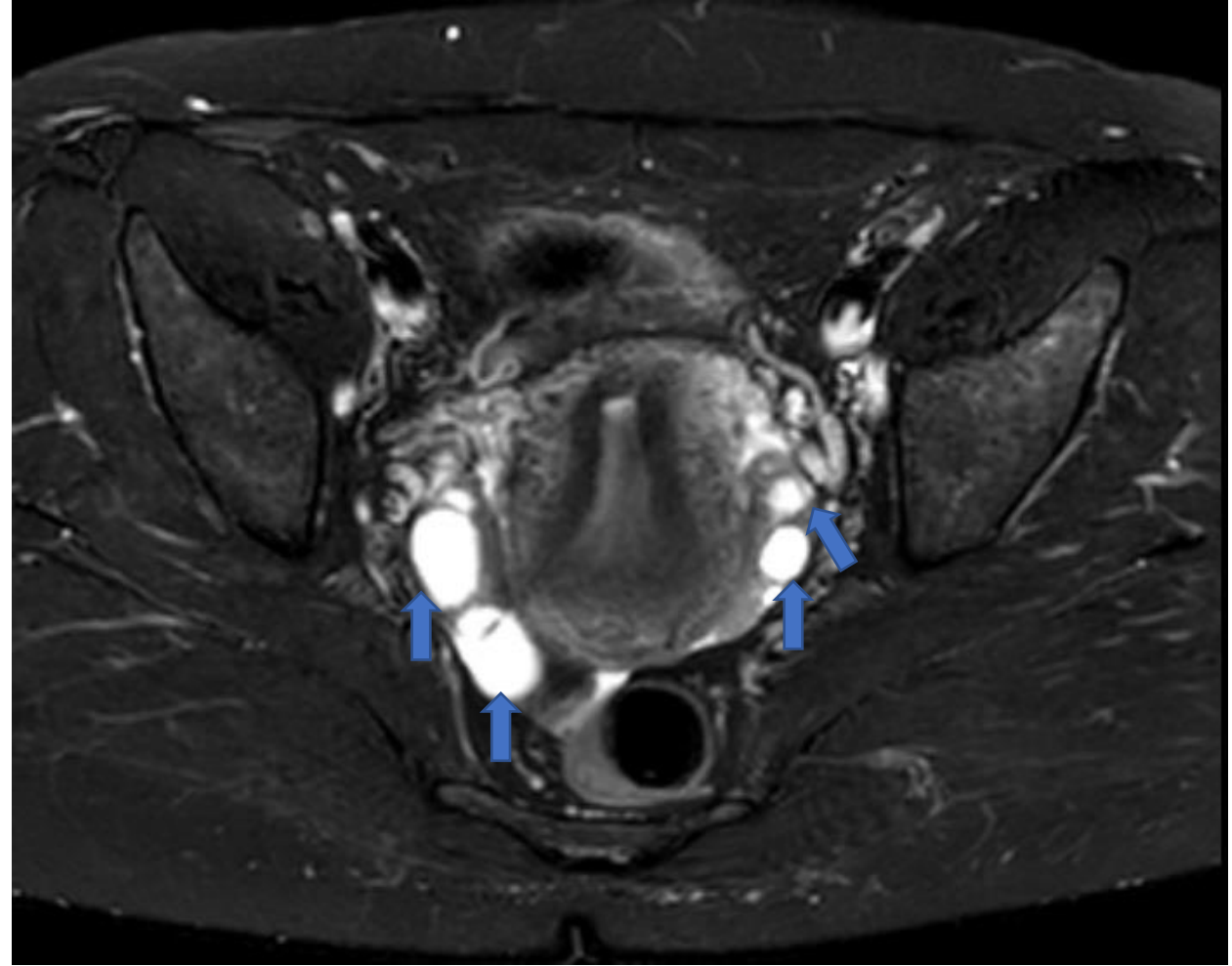
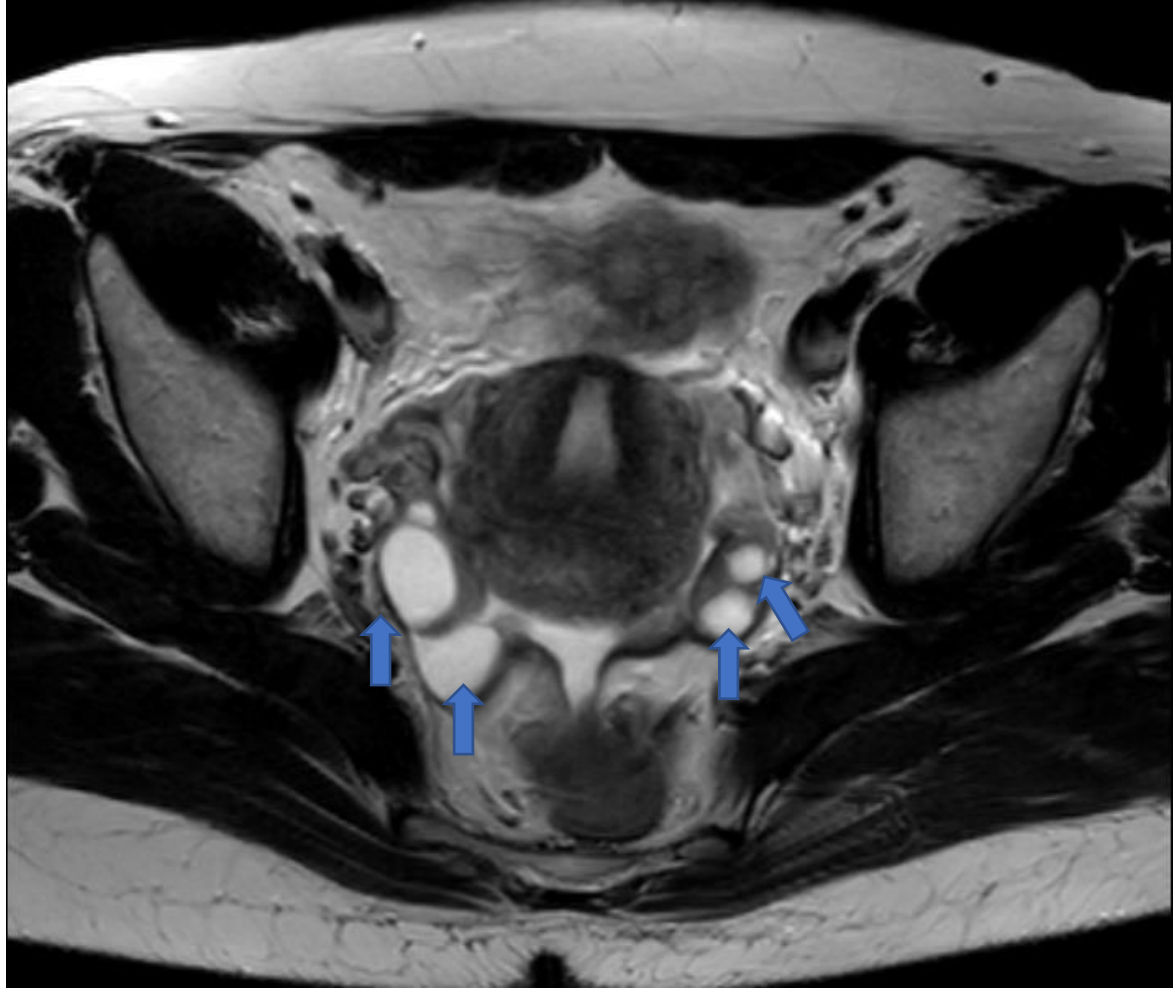
Disadvantages:

- Expensive
- Limited availability
- Limitation regarding magnetic field :
 - Cardiac peacemaker
 - Metallic implants
- Claustrophobic accidents are more frequent

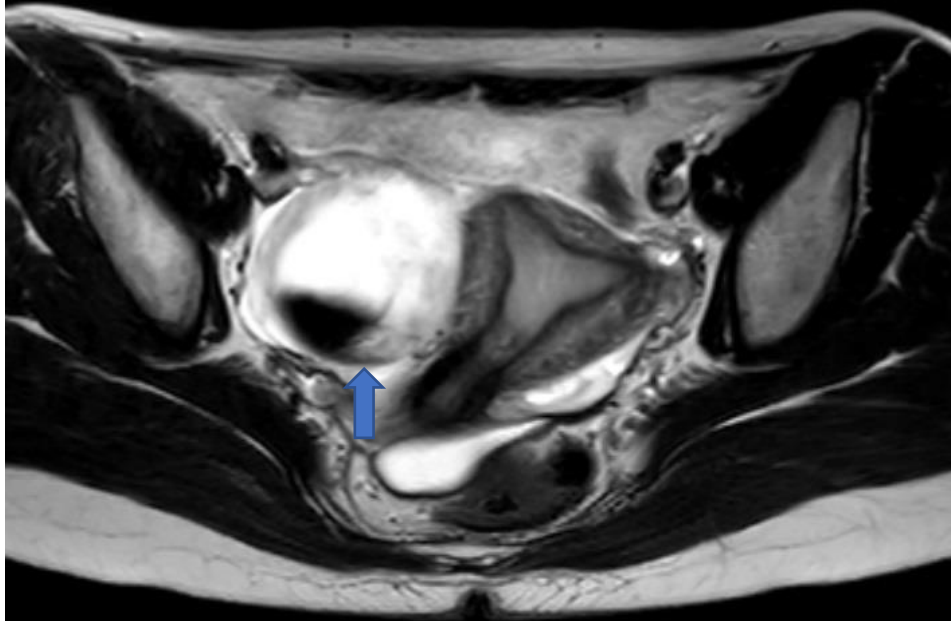
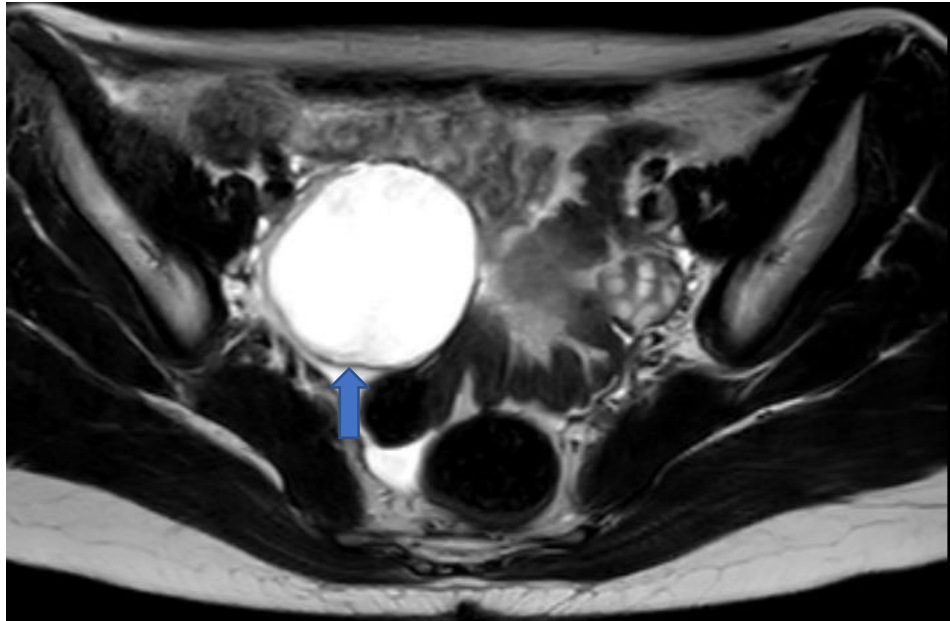


MRI - Right ovarian follicular cysts

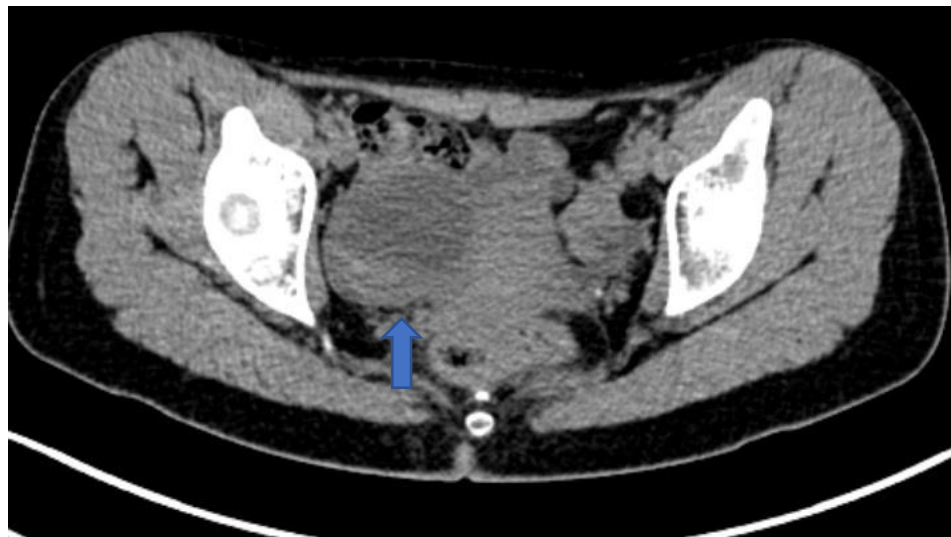
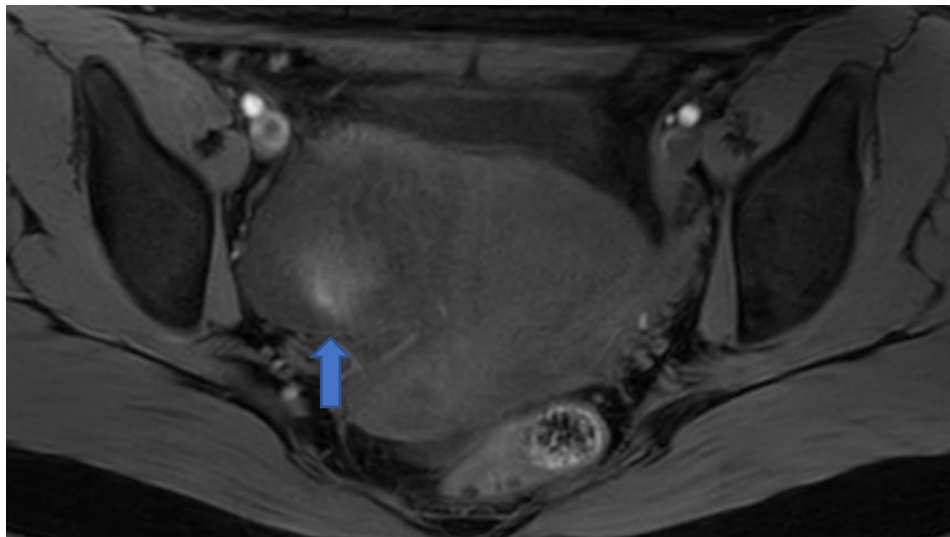




MRI – Bilateral ovarian follicular cysts

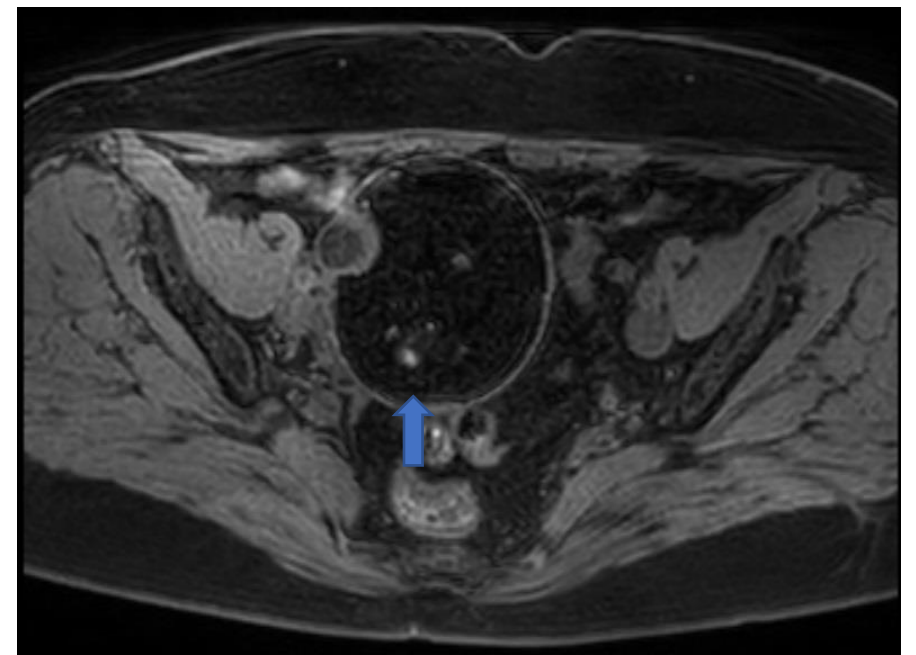
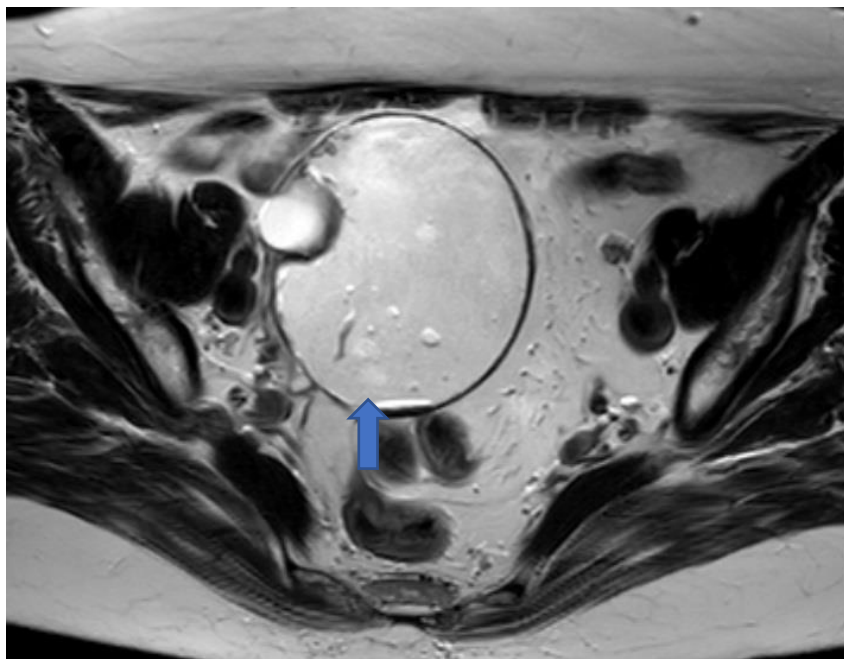


MRI

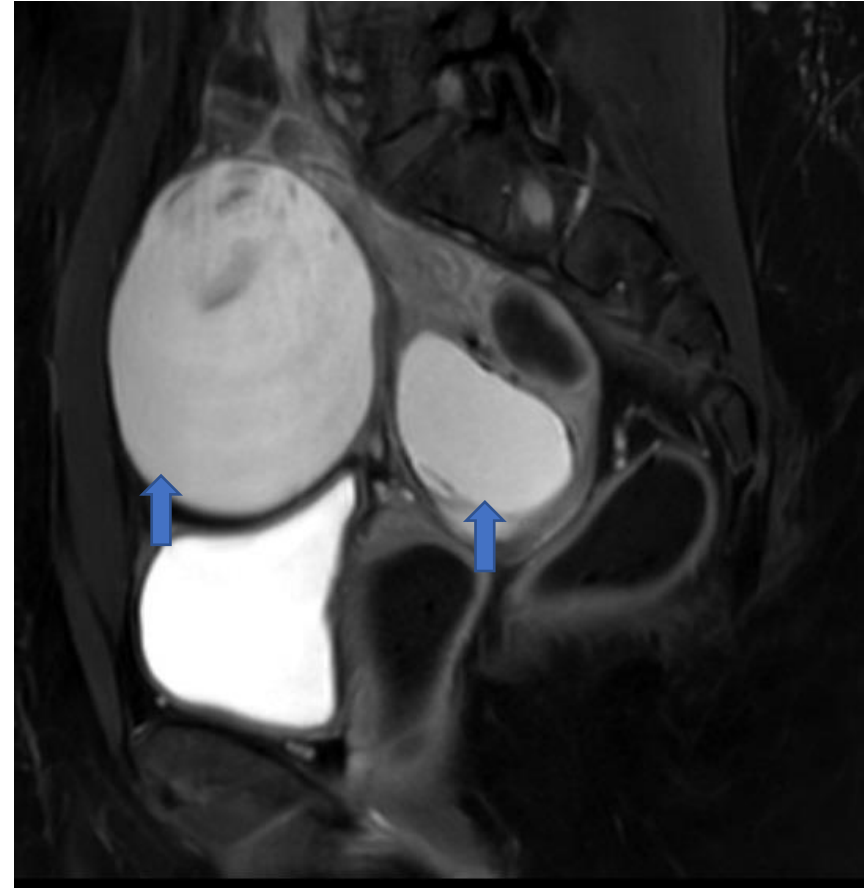
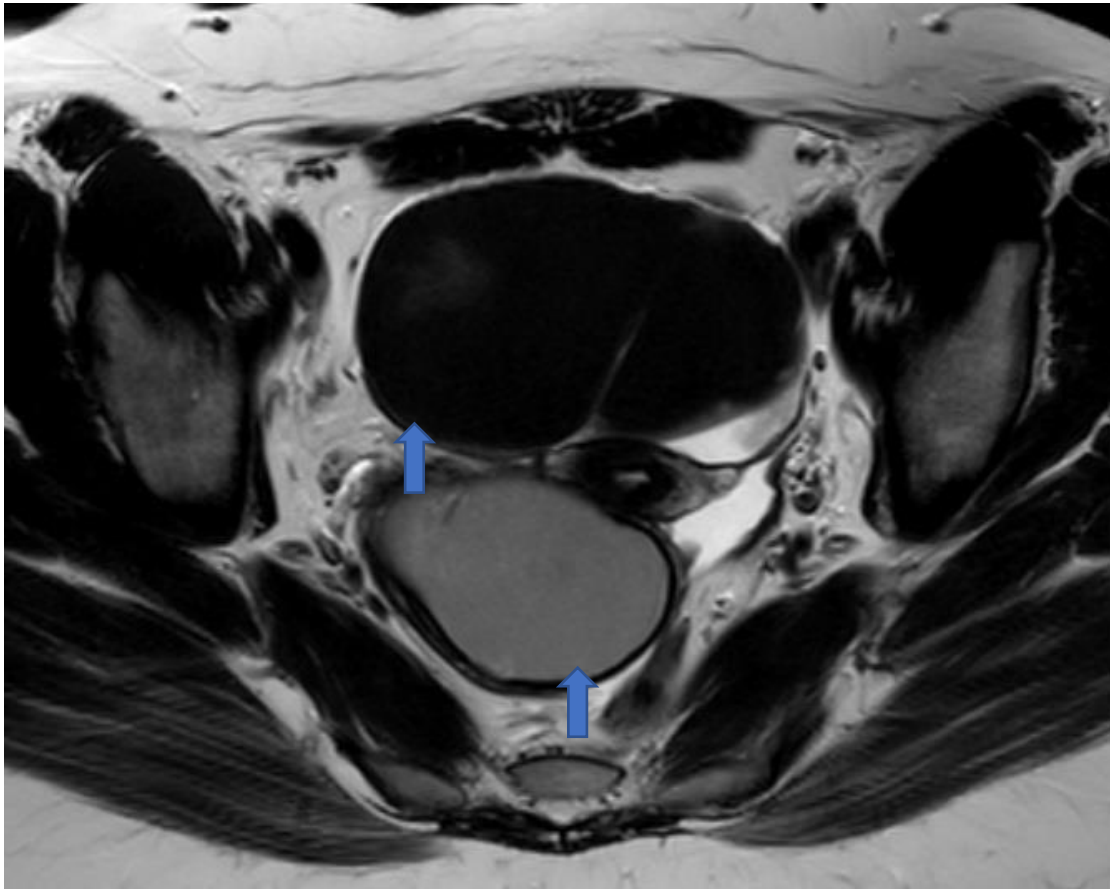


CT

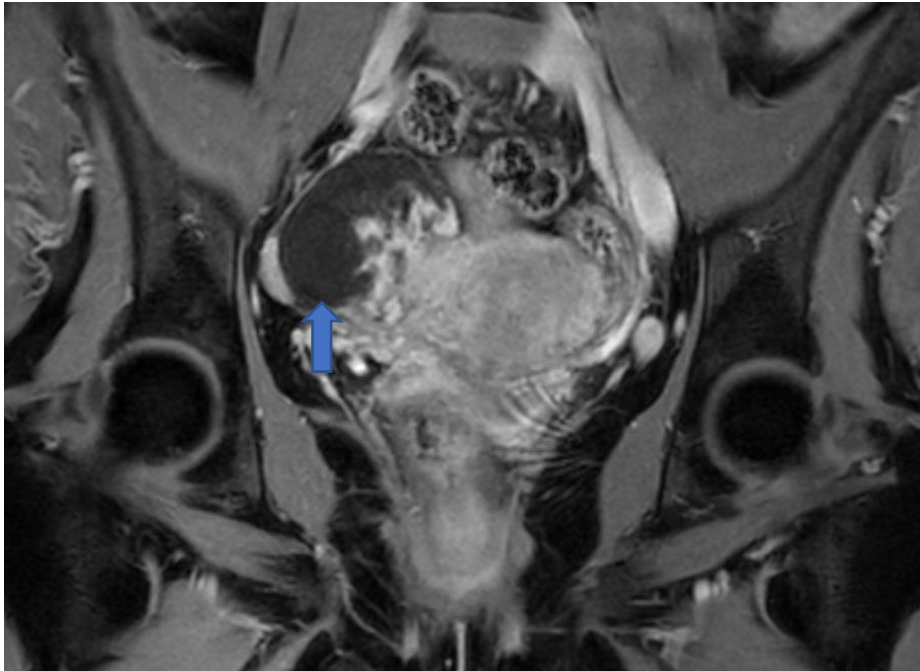
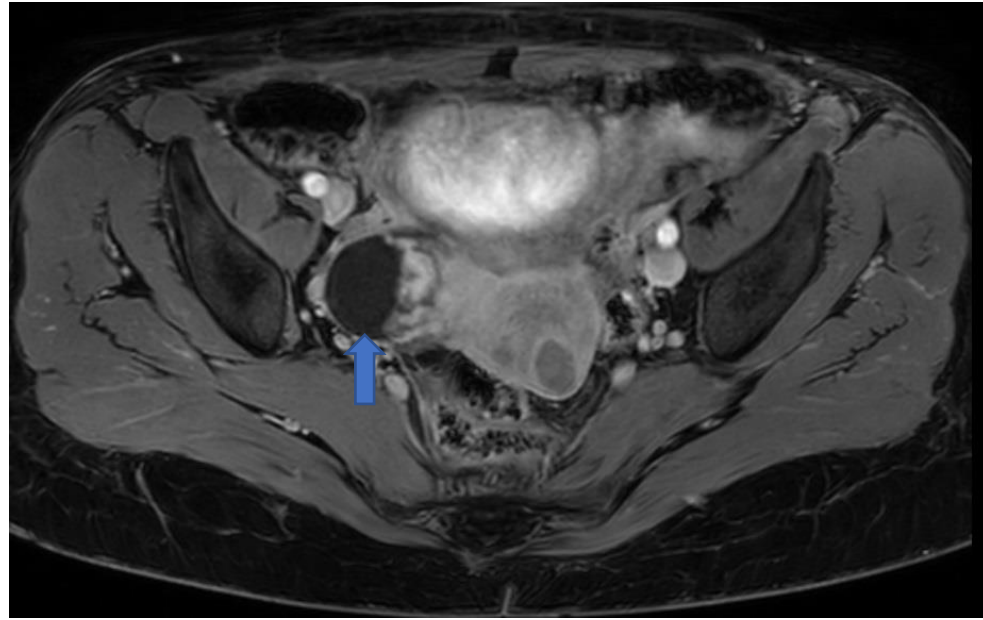
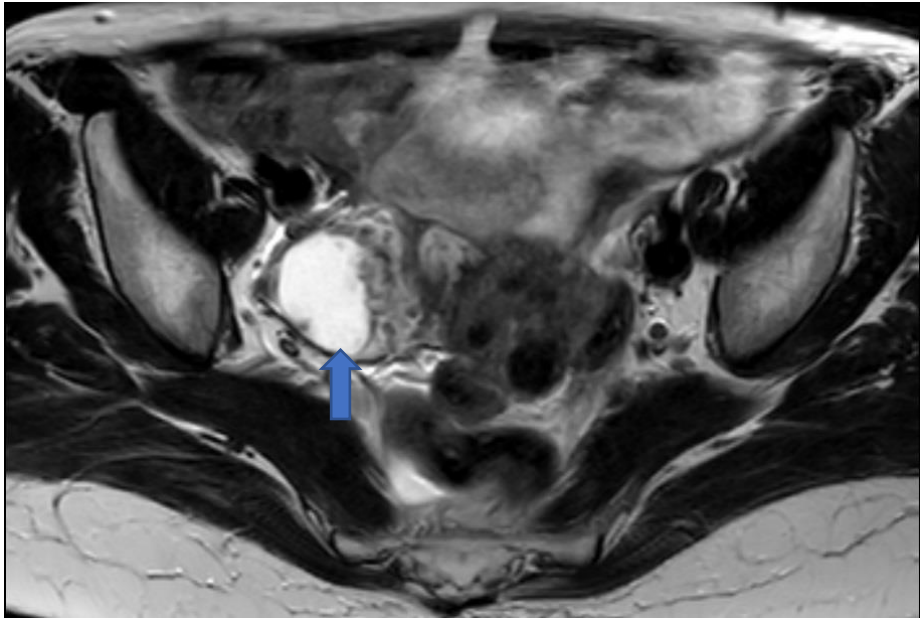
Right hemorrhagic ovarian cyst



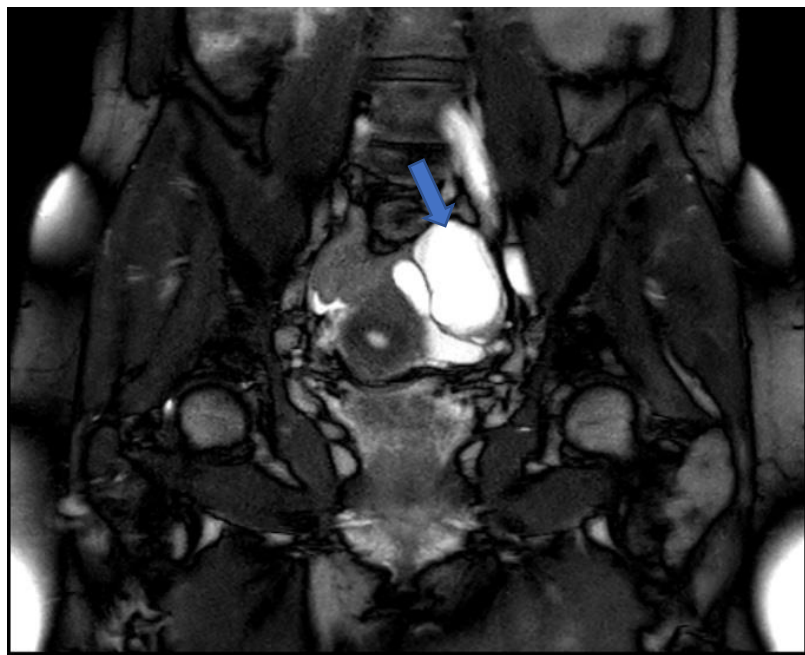
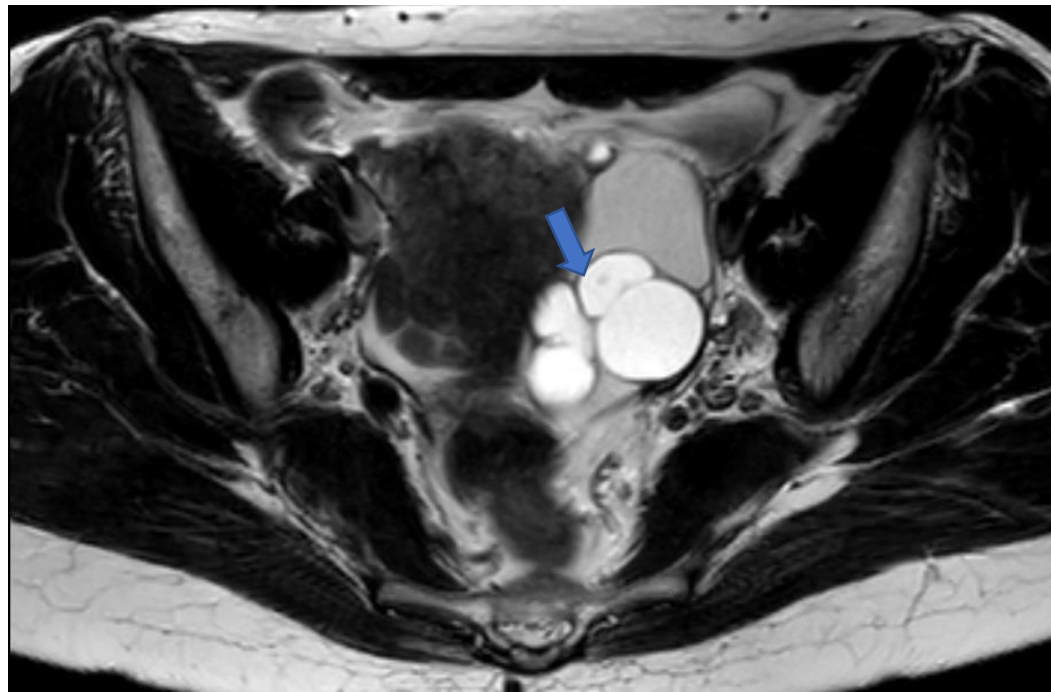
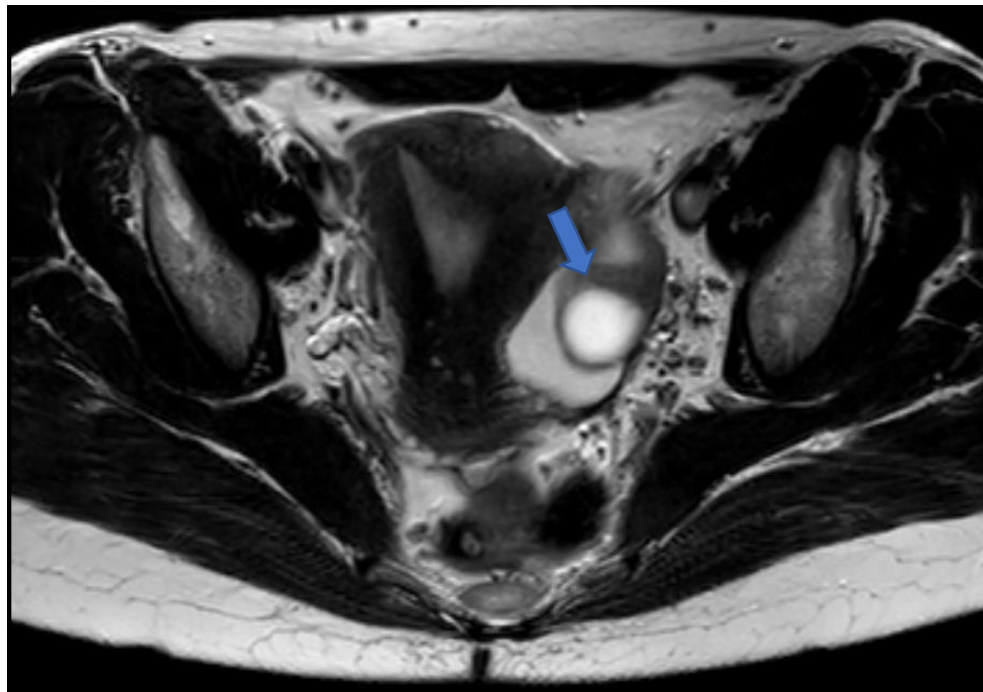
MRI - Dermoid cyst



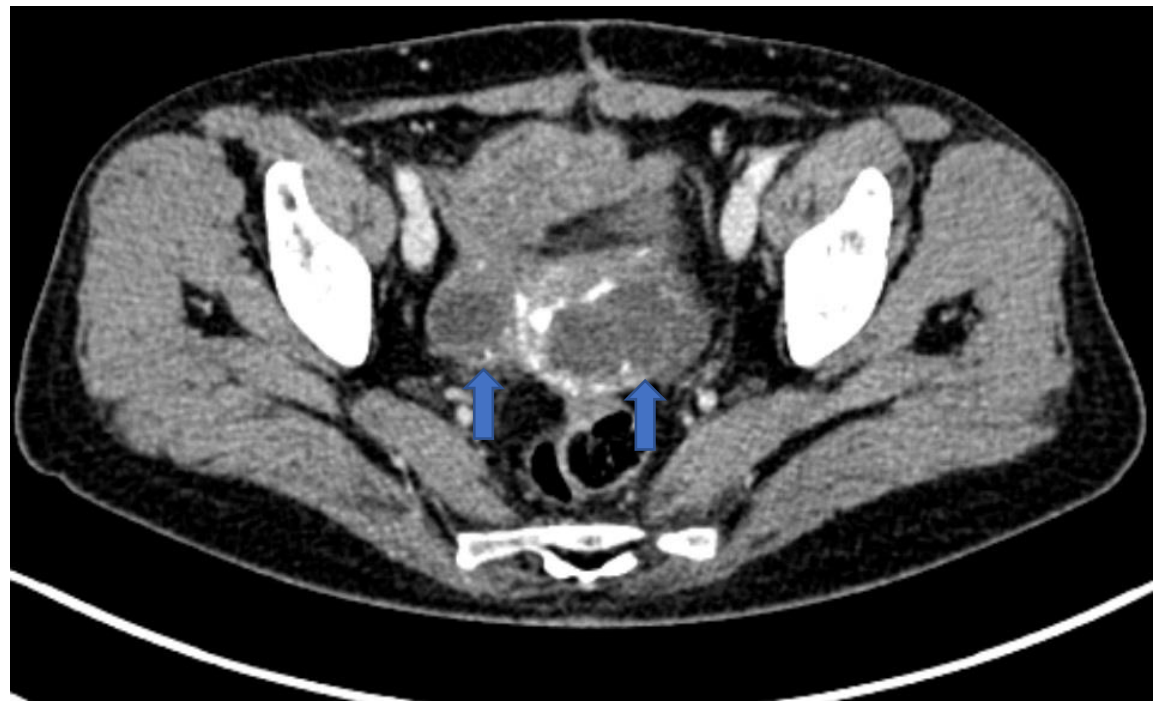
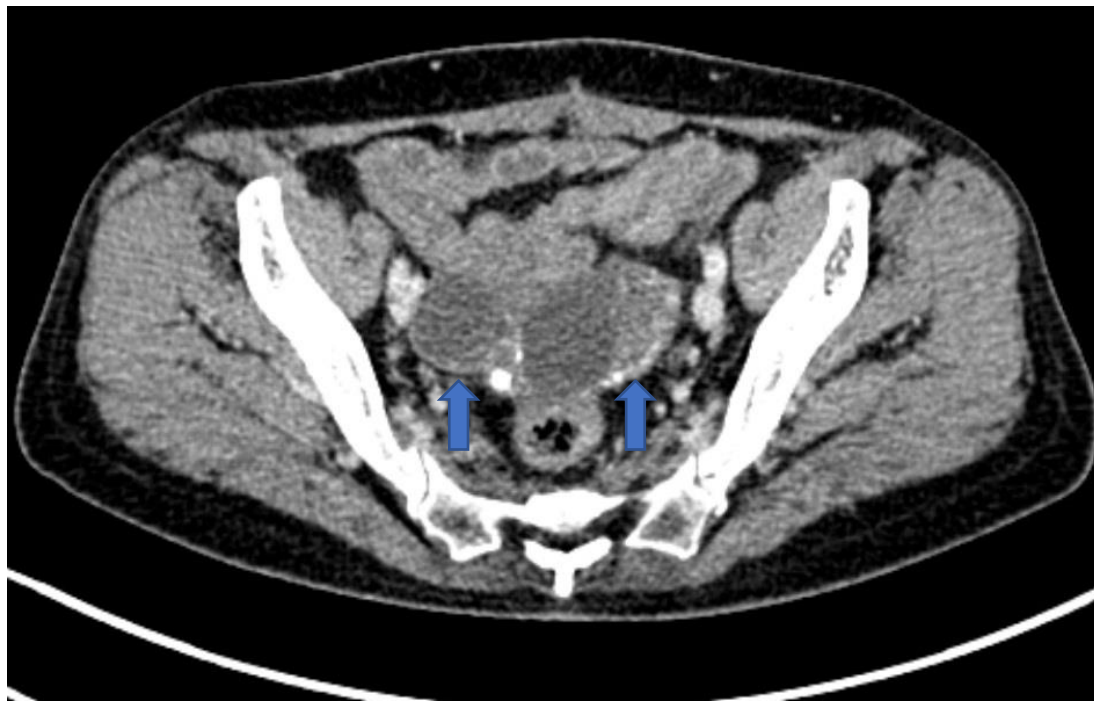
MRI - Endometrioma



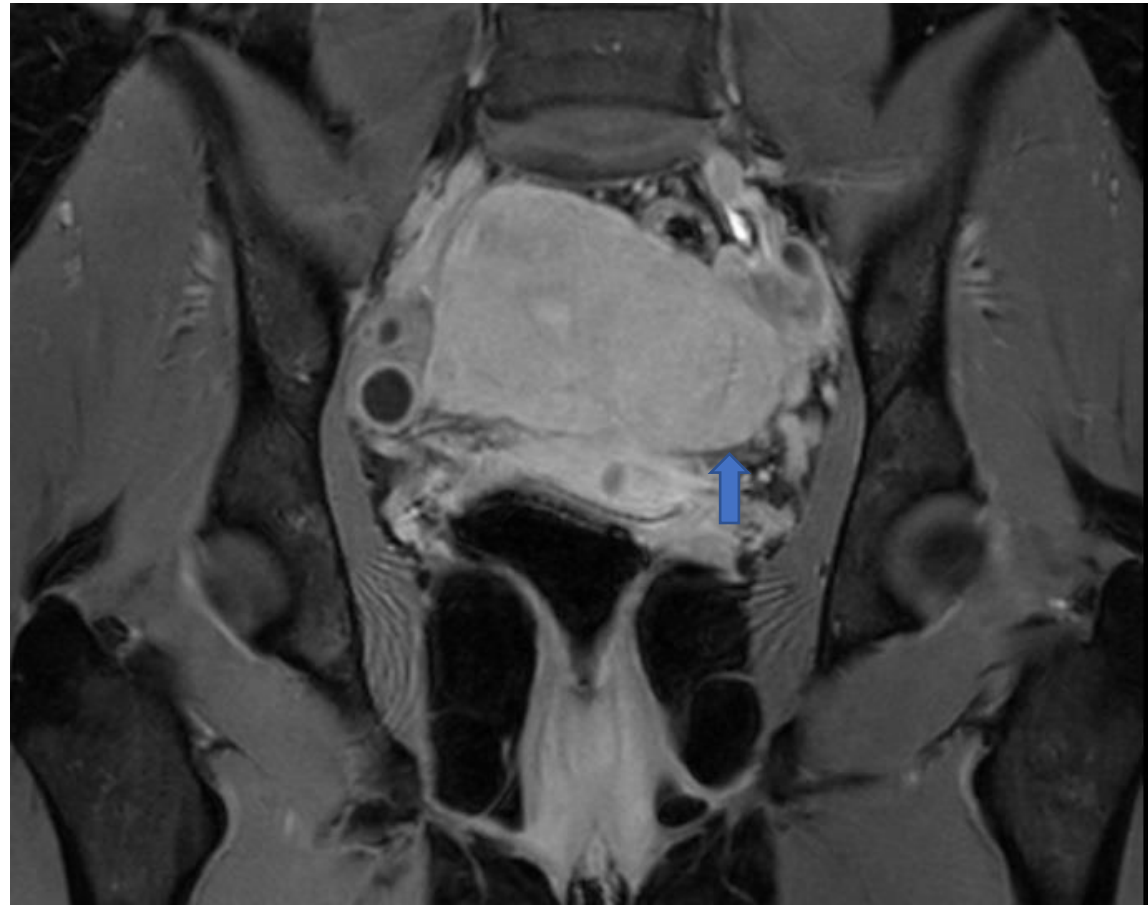
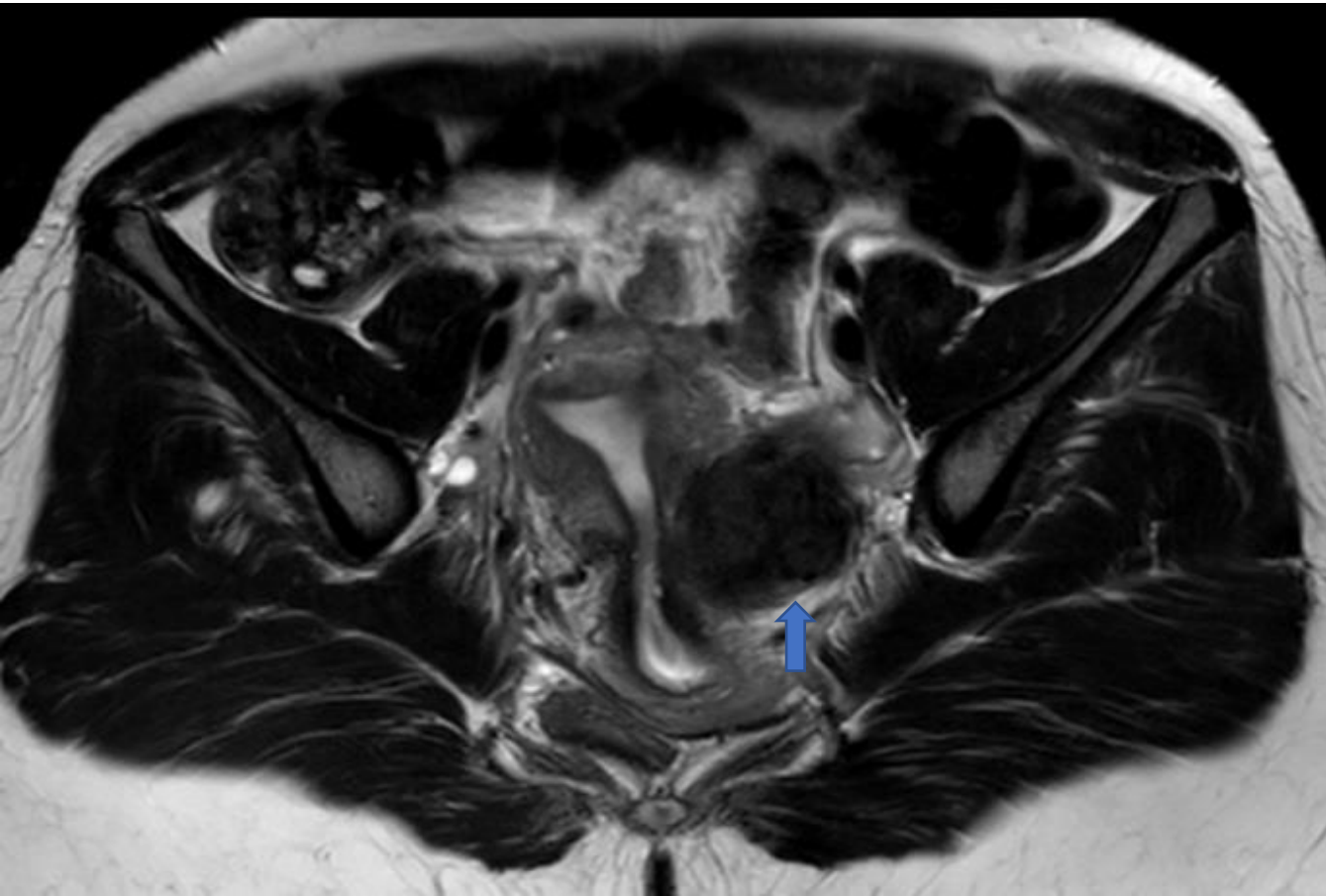
MRI - Right adnexal abscess



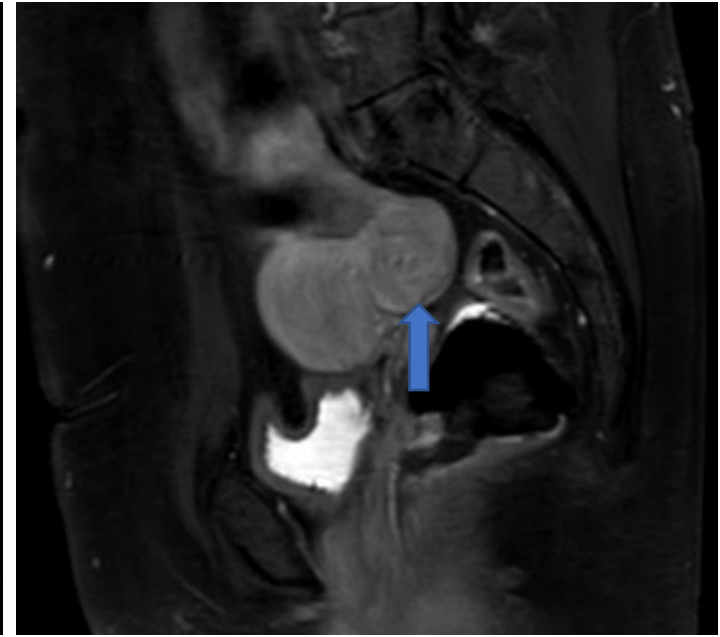
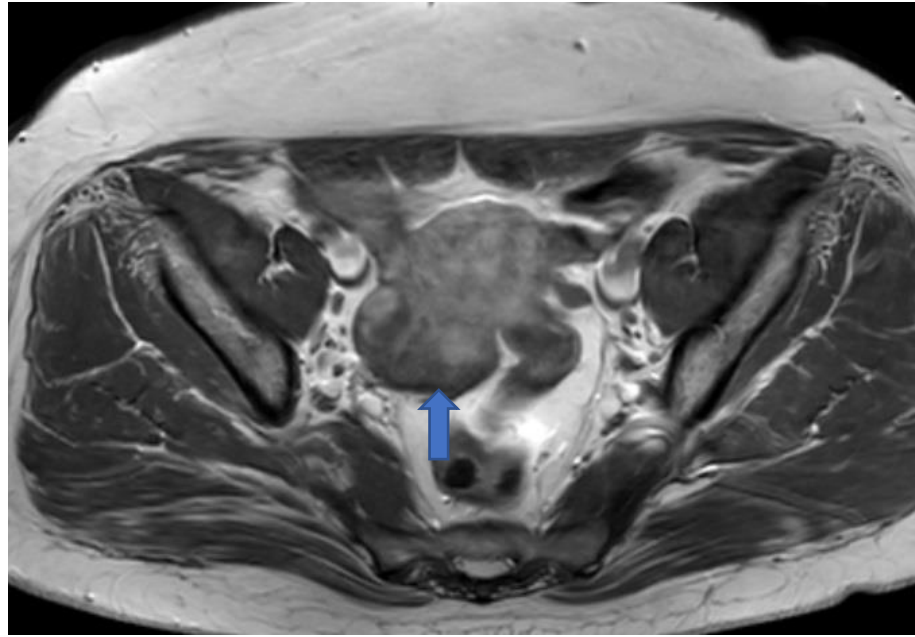
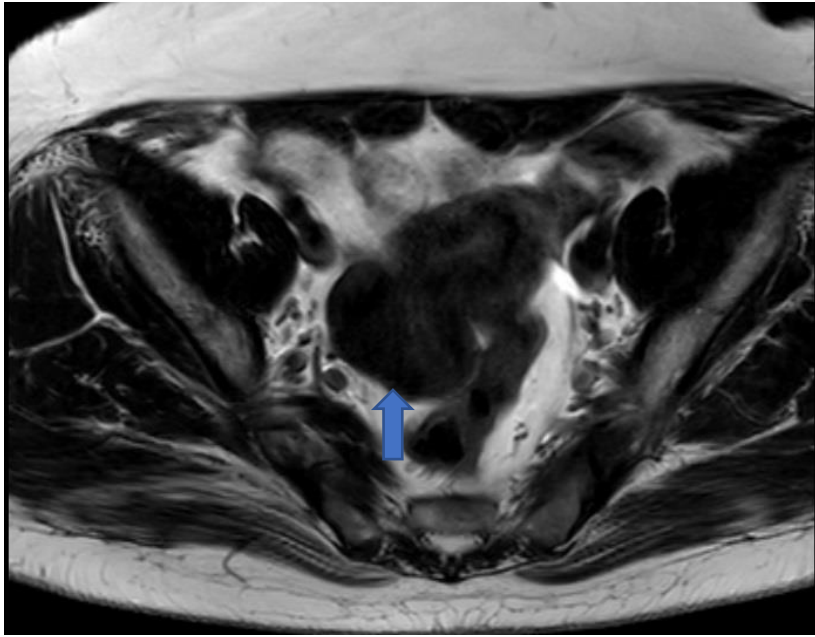
MRI – left hydrosalpinx



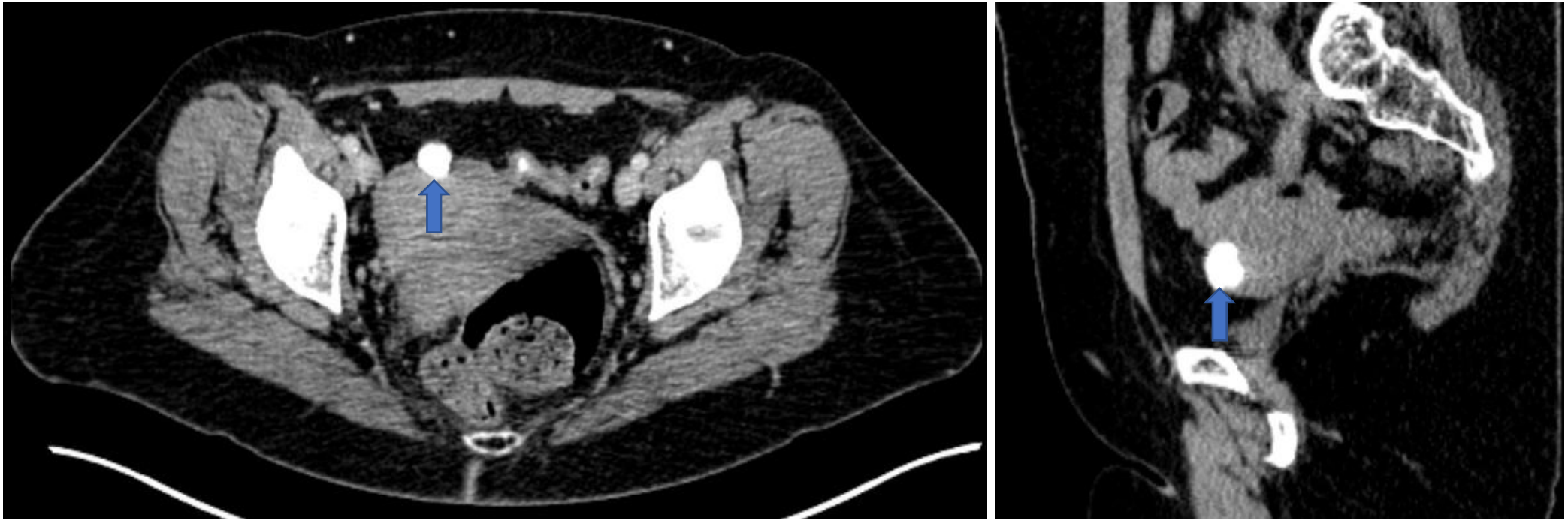
CT – bilateral ovarian cancer



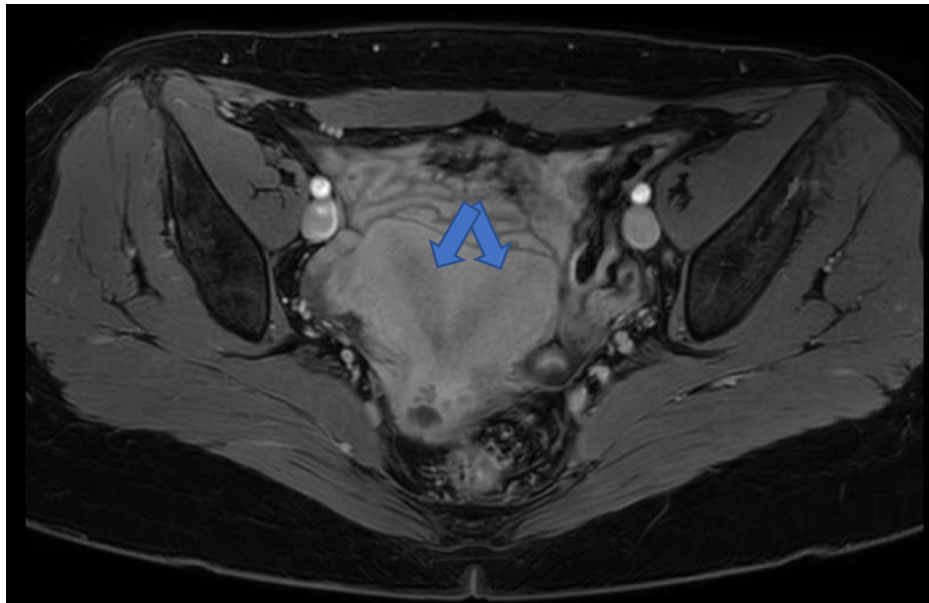
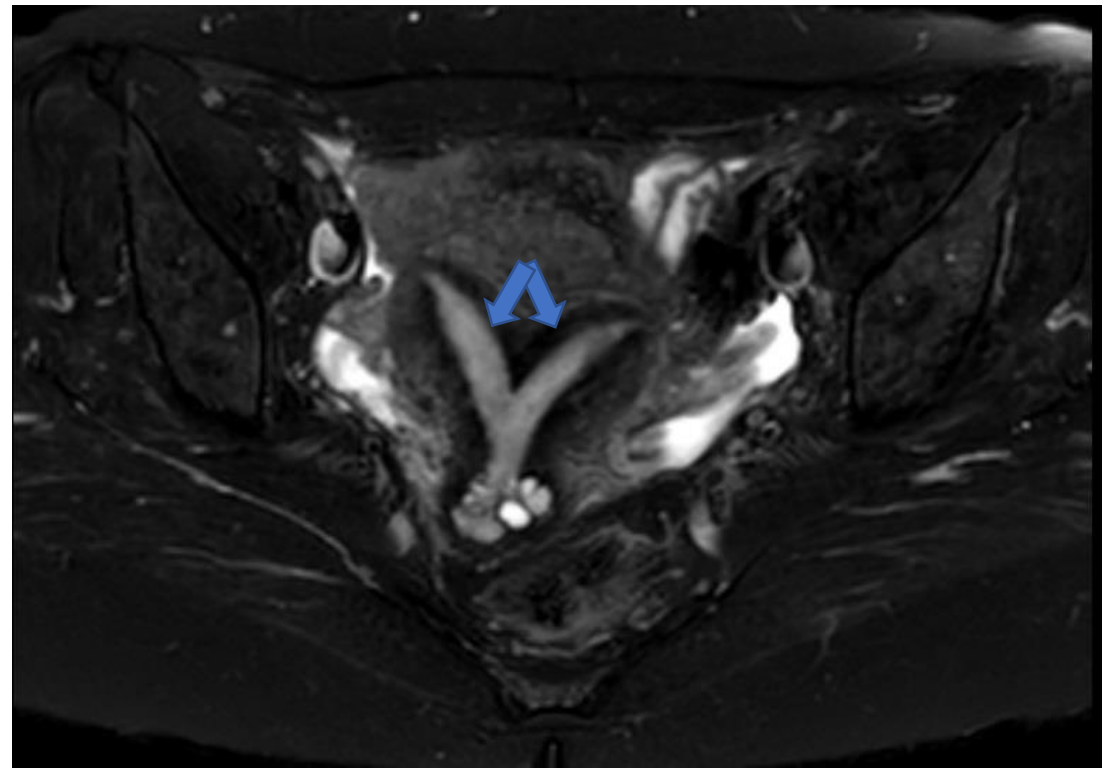
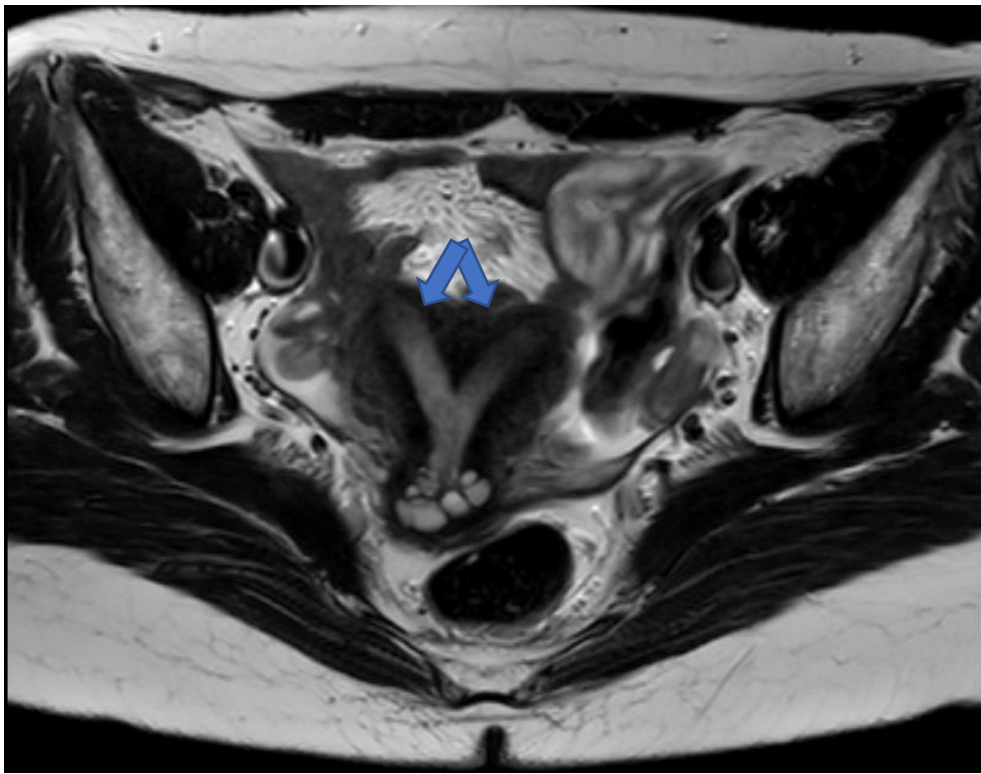
MRI subserous uterine myoma



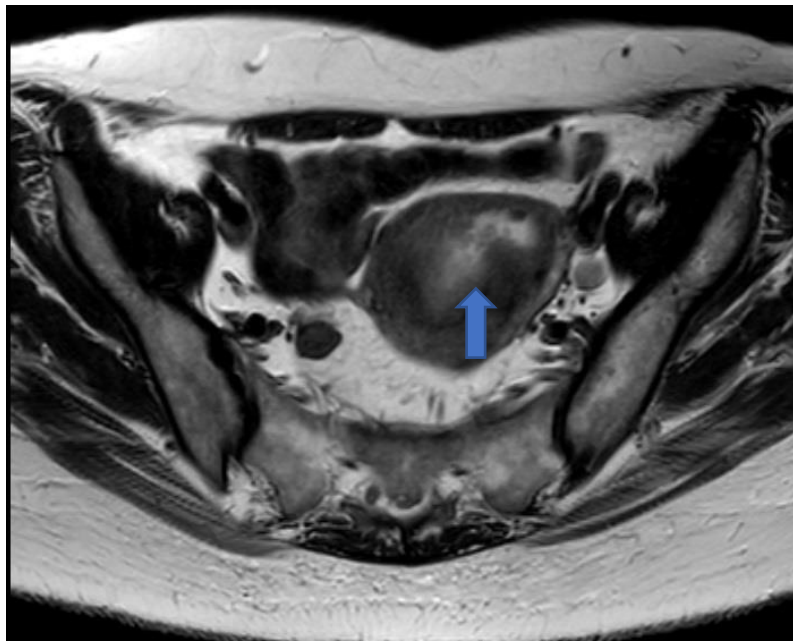
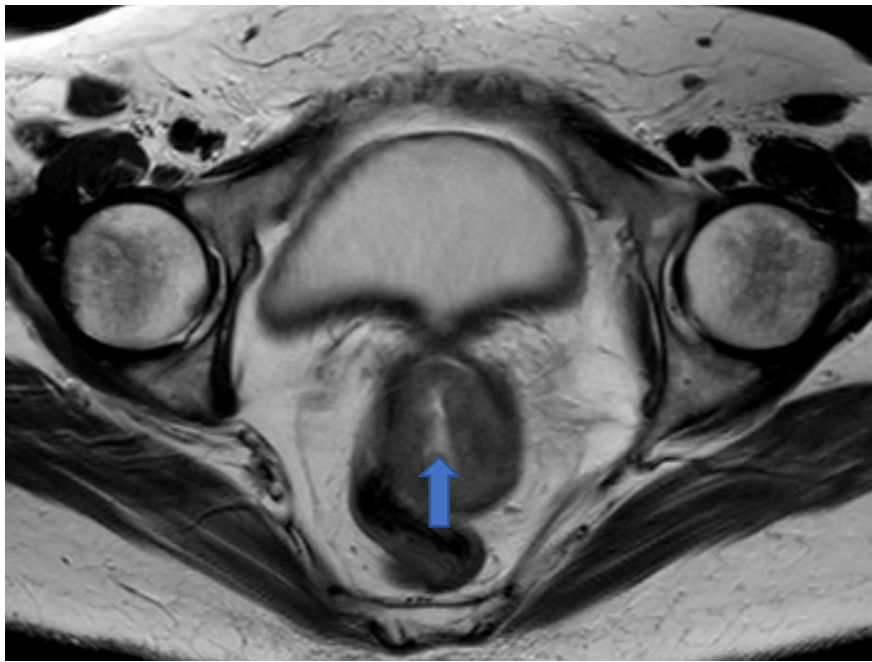
MRI subserous uterine myoma



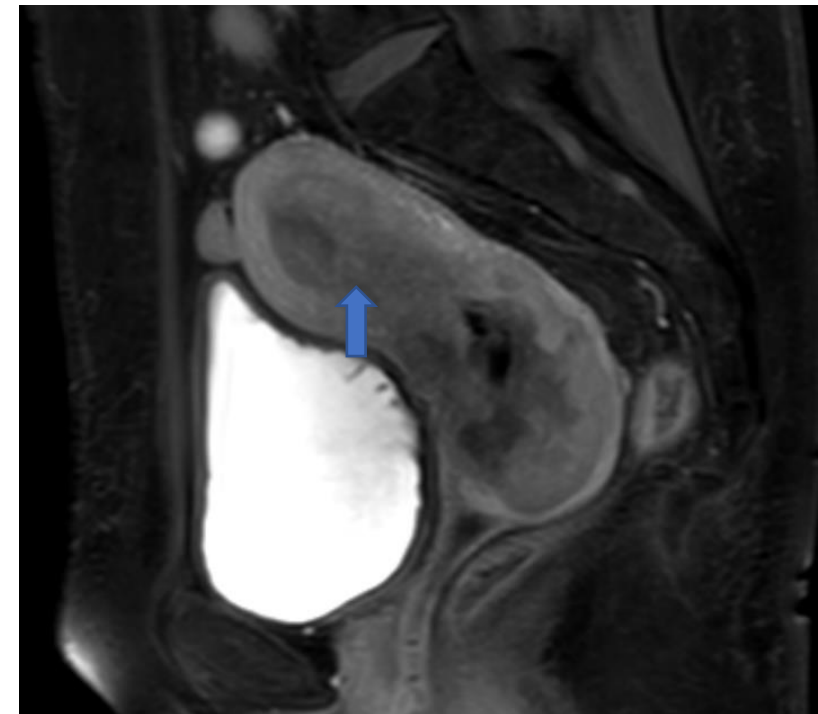
CT – Calcified subserous uterine myoma

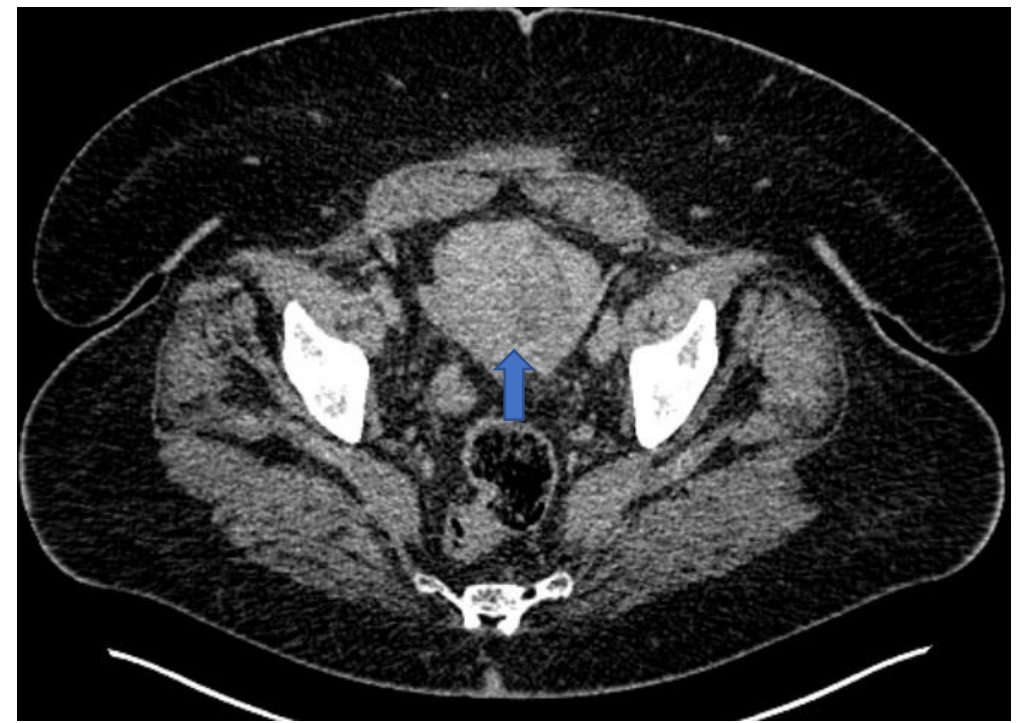
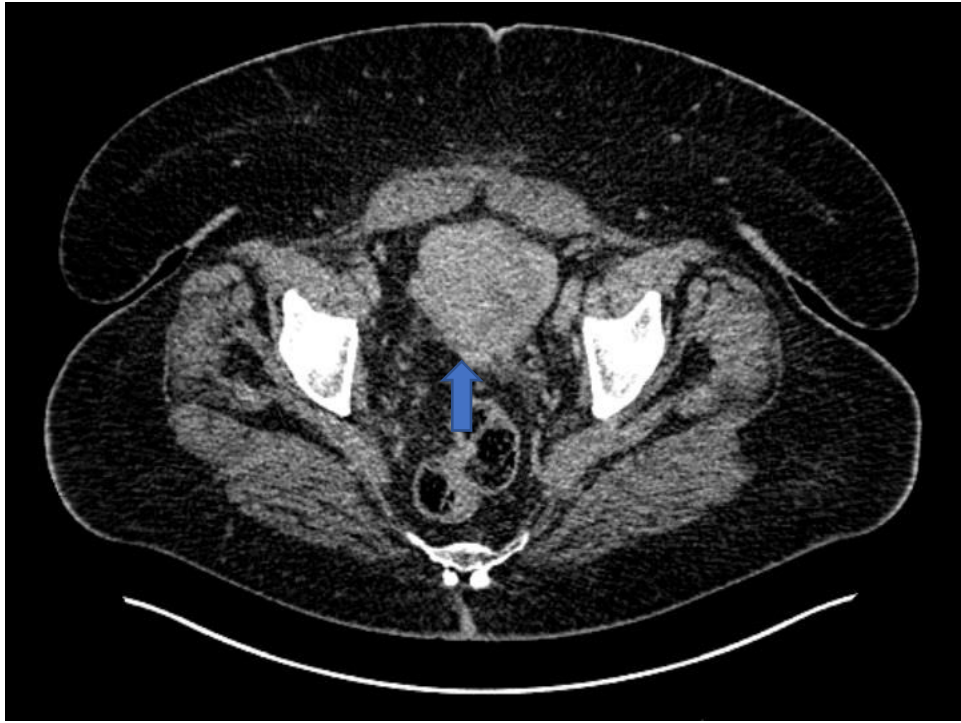


MRI - Mullerian malformation – bicornuos uterus

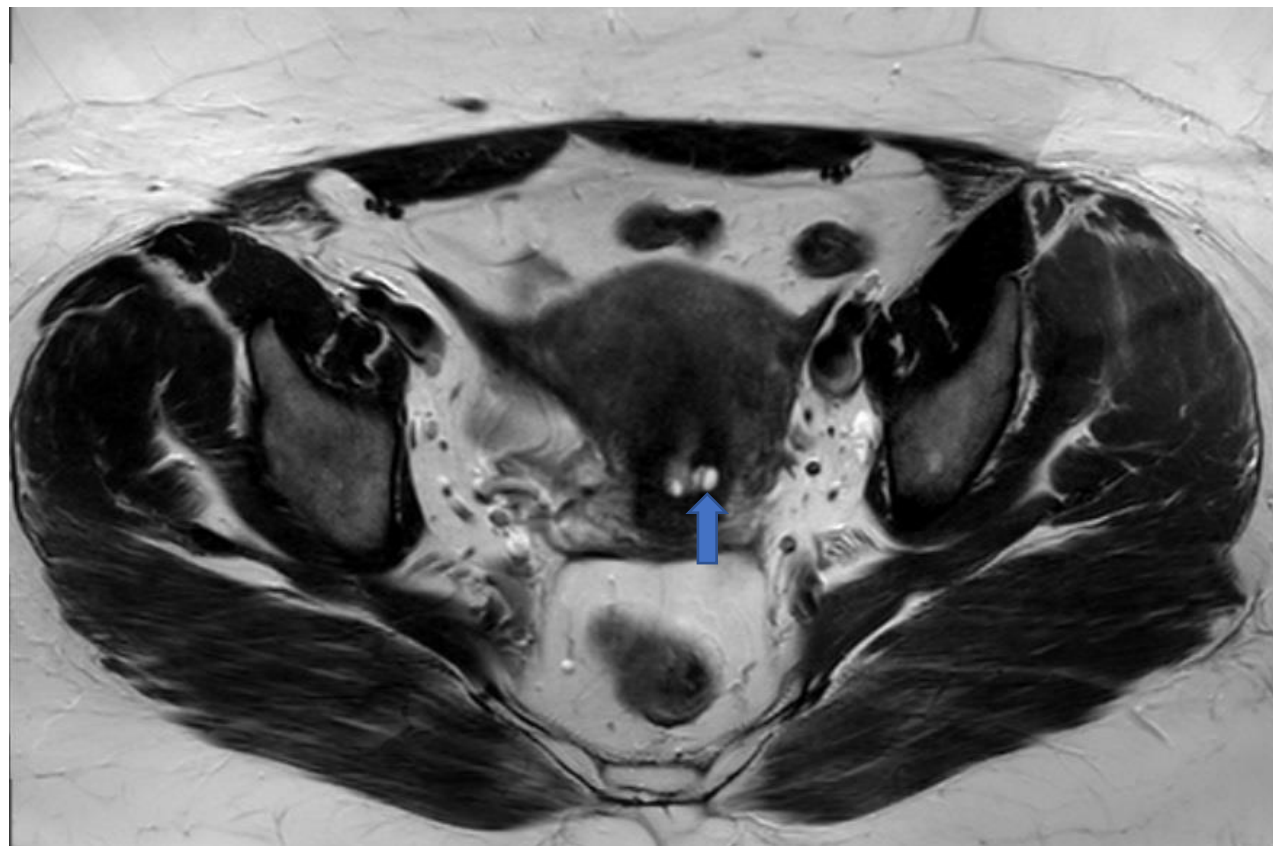
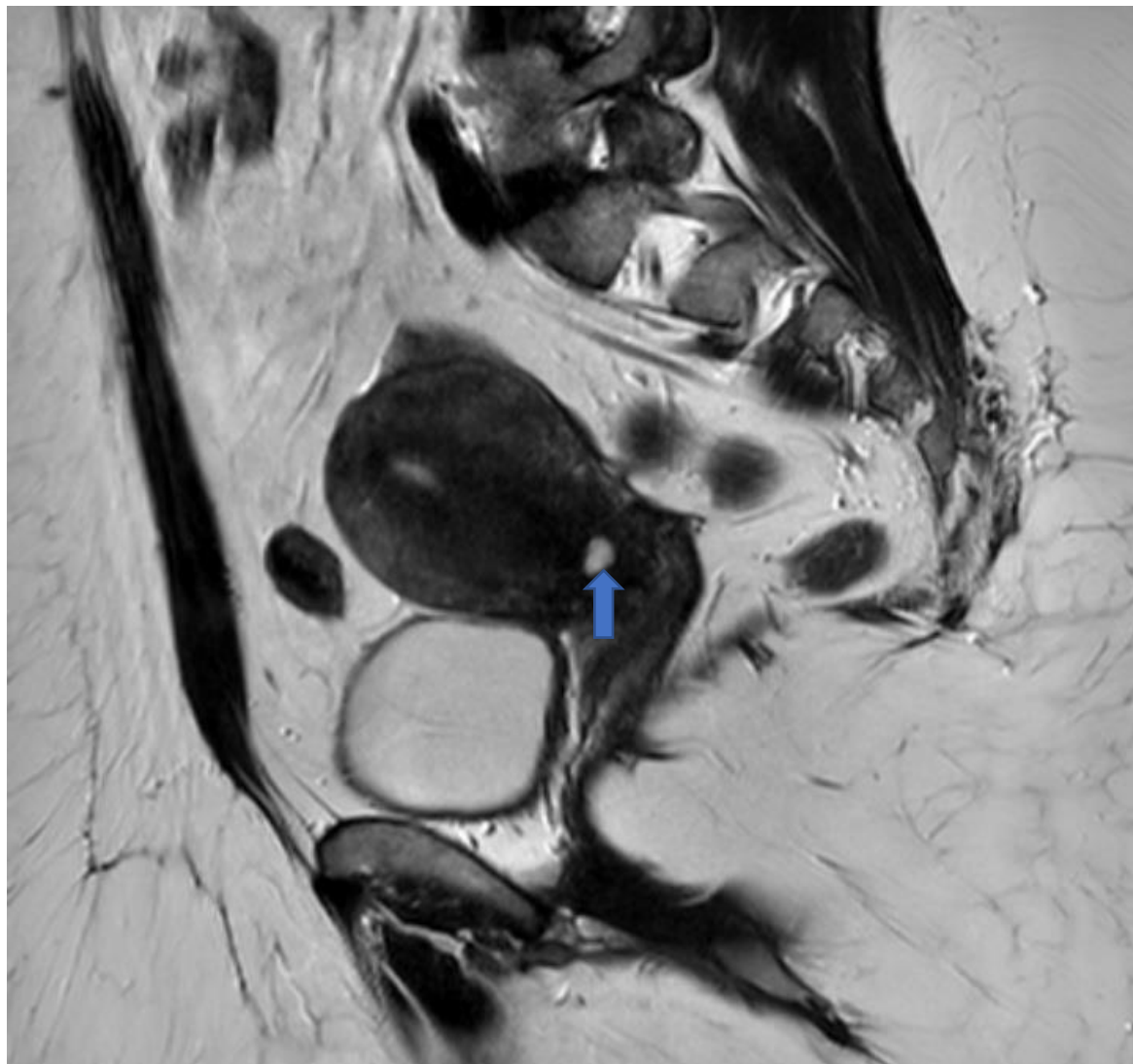


MRI - Endometrial cancer



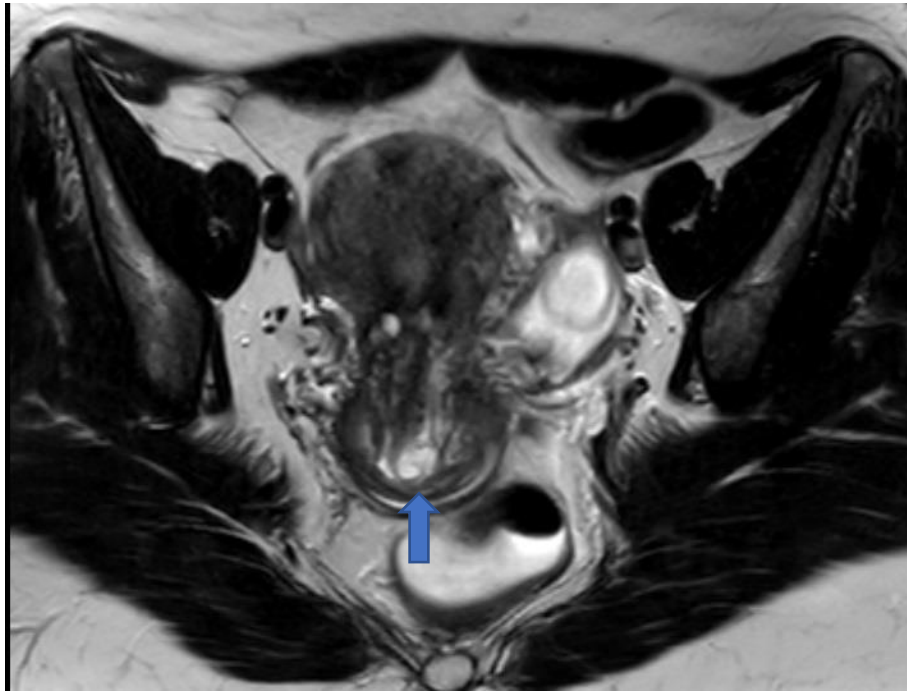
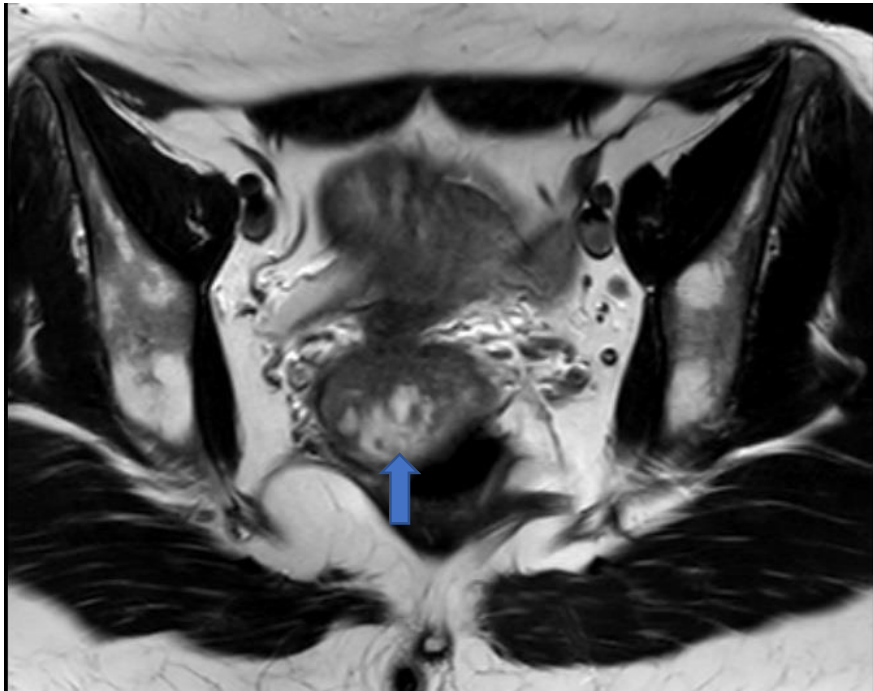


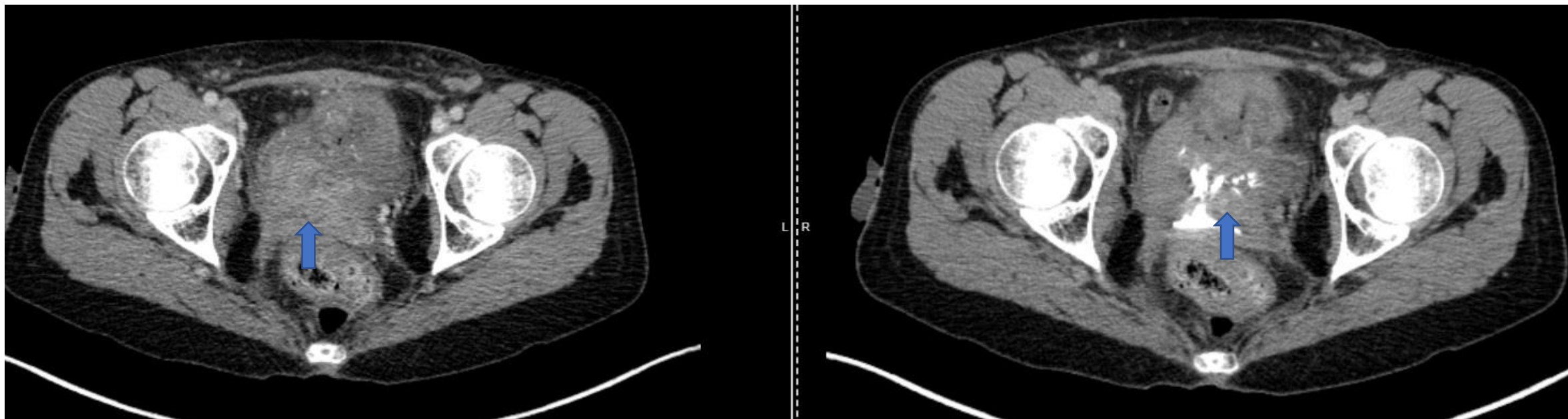
CT - Malignant uterine tumor



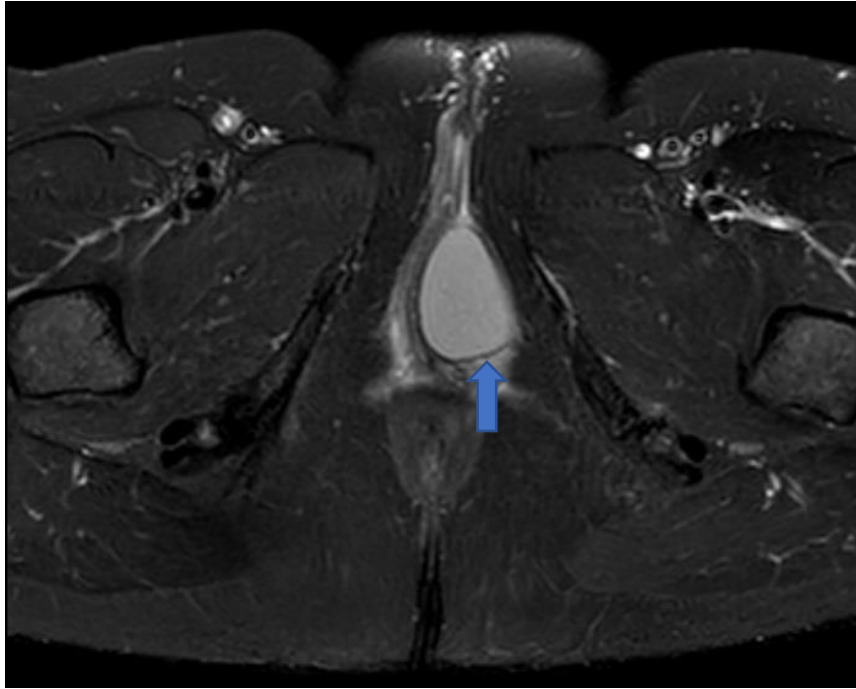
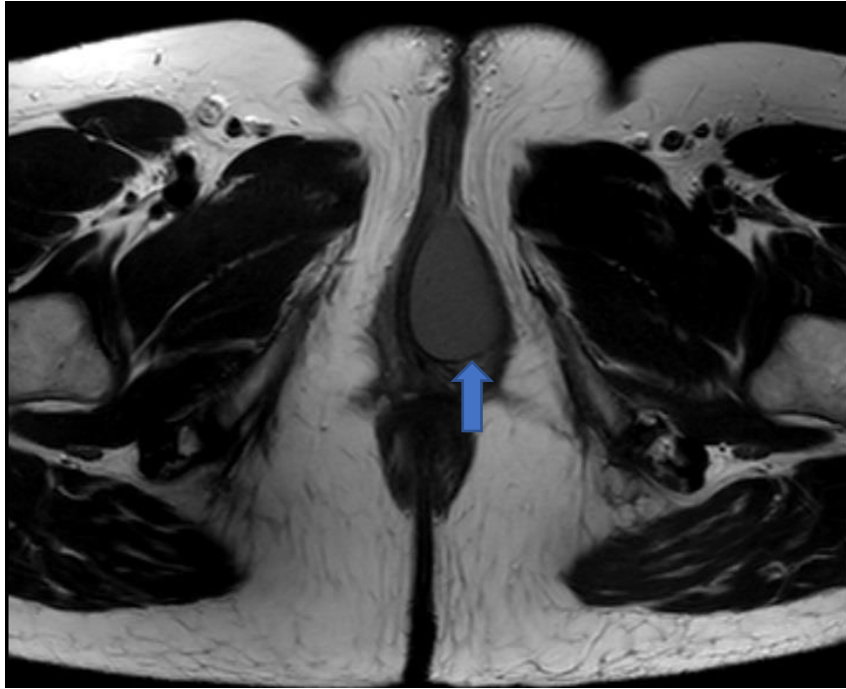
MRI - Cervical Naboth cyst

MRI - cervical cancer





CT – recurrent cervical cancer (after surgery)



MRI - Bartholin gland cyst

Metode ce folosesc substanțe de contrast, cu pasaj utero-tubar

- Histerosalpingografia (**HSG**)
- Histerosonografia cu instilare de soluție salină izotonă (**SIS**)
- Histerosalpingosonografia cu contrast (**HSSG**)

Pregătire comună preintervențional

- Profilaxia infecției înalte prin tratarea infecțiilor vaginale și cervicale (diagnosticate clinic și subclinic)
 - Culturi col și vagin - inclusiv pentru *Chlamidia* trachomatis, *Ureaplasma* urealiticum, *Mycoplasma* hominis, *Neisseria gonorrhoea*
- Perioada optimă: preovulator; (z 7-12 ale CM)
- Administrarea de **antispastice** este recomandată preintervențional pentru a preveni spasmul tubar.
- **Atropina** 0,5 mg, **Diclofenac** pot fi administrate



CONTRAINDICĂȚII



- BIP
- Metroragie
- TIS pozitiv
- Fluid în FSD înaintea procedurii (pt SIS)
- Alergie la iod – pt HSG



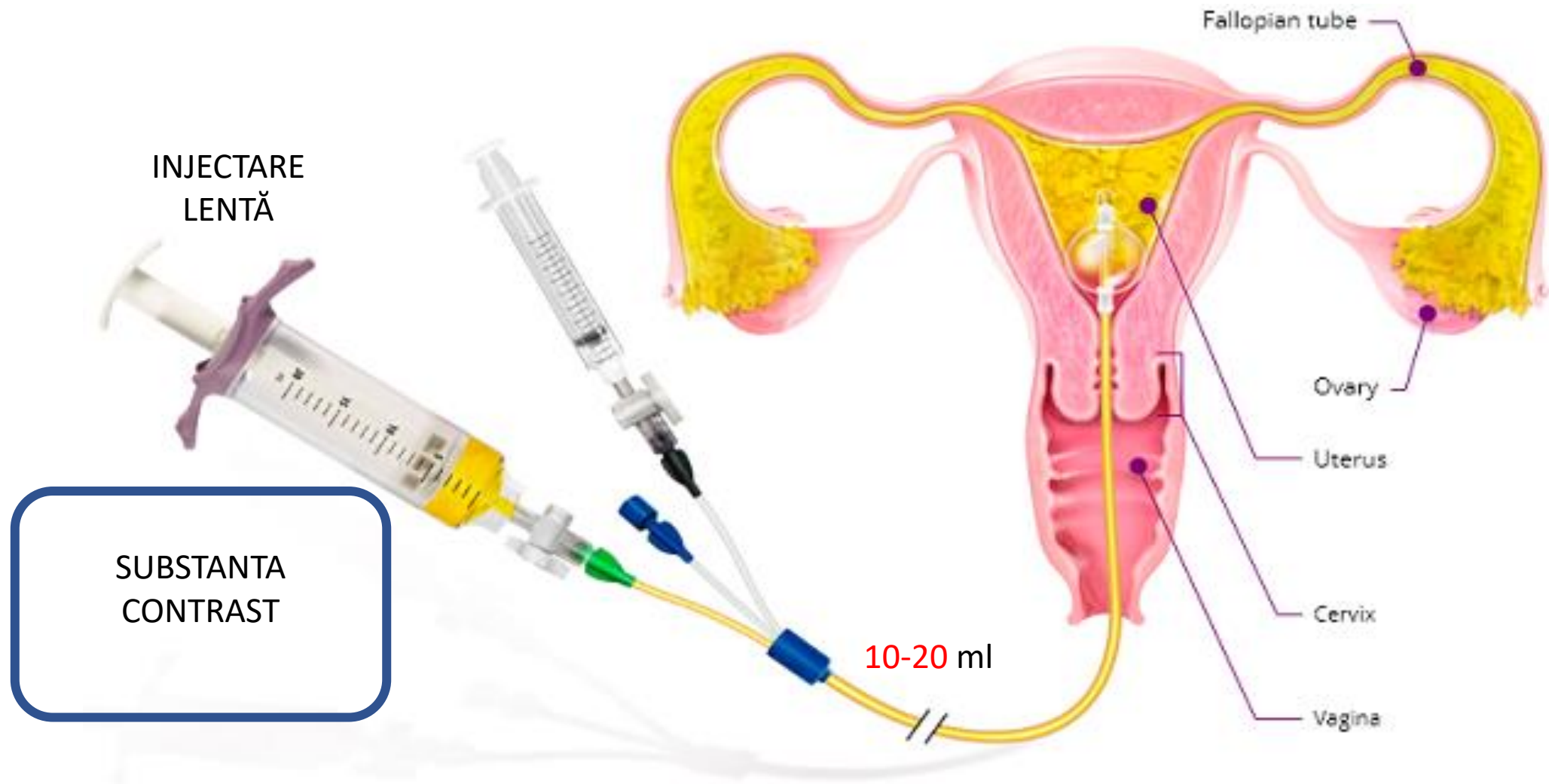
PREGATIRE

Cateterizarea - Foley 8 Fr cu mandren

Rareori necesită pensarea colului cu
tractiune si dilatare

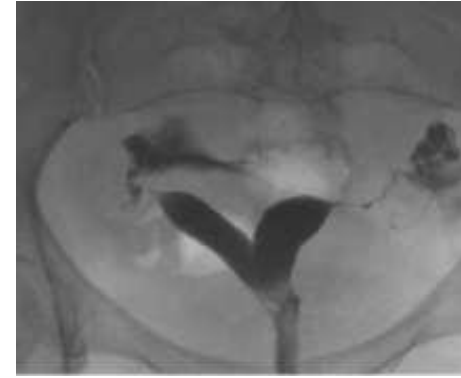
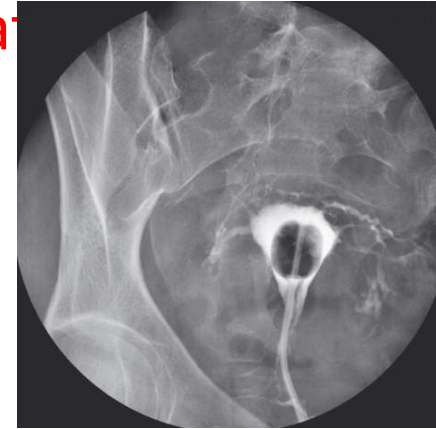


PREGATIRE

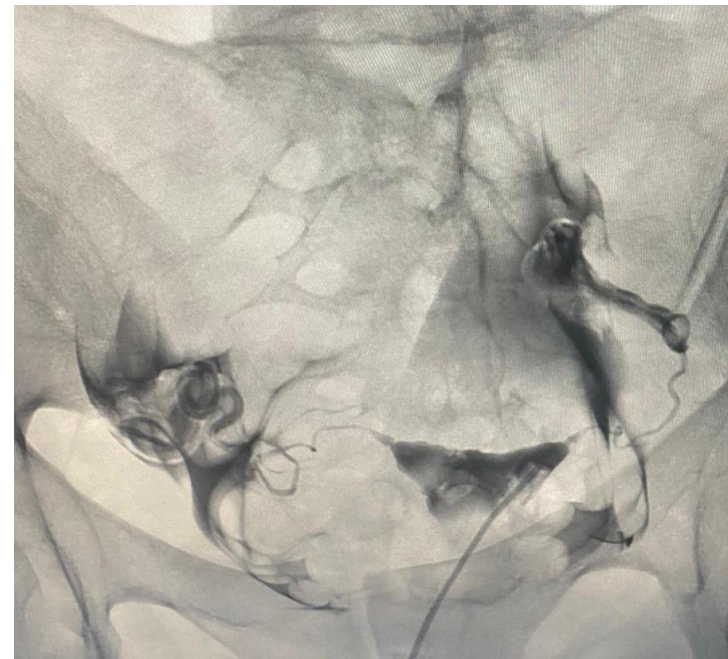
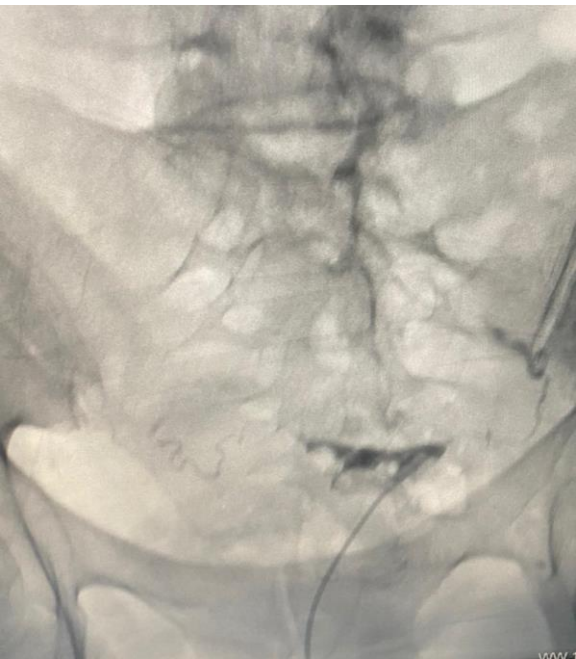


HISTEROSALPINGOGRAFIA (HSG)

- folosită pe scară largă pentru a investiga **permeabilitate tubară** și **forma cavității uterine**
- Se pot descrie
 - Anomalii **muleriene**
 - **Formațiuni cu dezvoltare intracavitară** (uterină), sinechii – cele de dimensiuni reduse sunt ușor trecute cu vederea. – defecte de umplere
 - Semne de **adenomioză** (margini crenelate ale cavității uterine)
 - **Permeabilitatea tubară** –difuziunea în peritoneu – **proba Cotte +**
 - **Compresiuni extrinseci la nivel tubar**
 - **Obstrucții parțiale sau totale tubare**, chiar și localizarea acestora
 - Acumularea substanței la nivel tubar, cu sau fără difuziunea substanței în peritoneu prin creșterea presiunii de umplere și depășirea obstacolului (hidrosalpinx cu supapă) – **obstrucție distală**

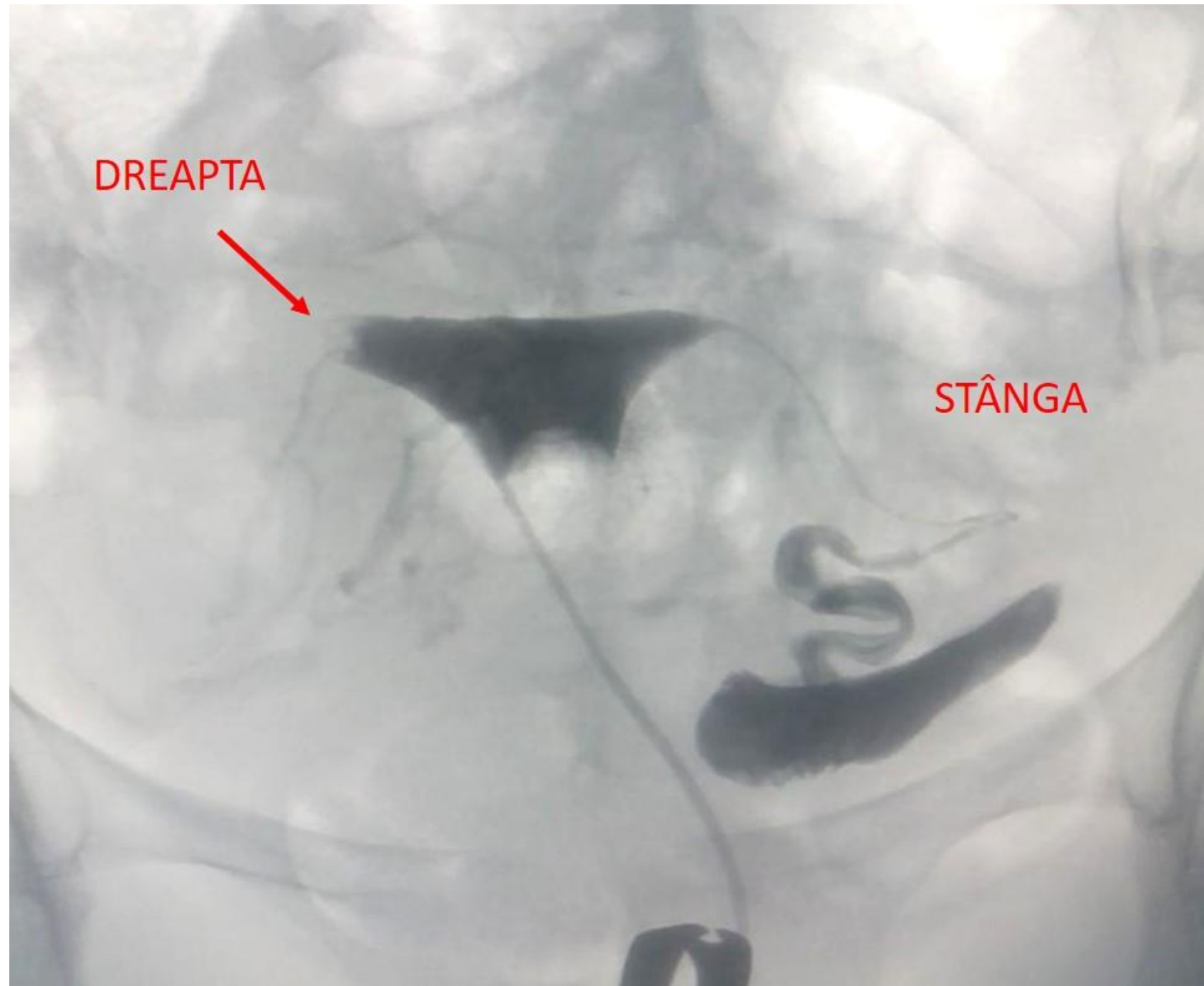


HISTEROSALPINGOGRAFIA (HSG)



HSG

- Obstrucție tubară proximală dreaptă
- Acumulare progresivă la nivel ampulo-pavilionar stg. Fără difuziunea substanței în peritoneu
- Proba Cotte negativă bilateral



HISTEROSALPINGOGRAFIA (HSG)

AVANTAJE:

- Nu necesită internare
- Relativ ieftină
- Nu necesită anestezie generală
- Rezultatul este eliberat imediat
- Este asociată cu un **efect terapeutic**

The effect of the oil dye on fertility could involve any of a number of mechanisms:

1. It may produce a mechanical lavage of the tubes, dislodging mucus plugs.
2. It may straighten the tubes and thus break down peritoneal adhesions.
3. It may provide a stimulatory effect for the cilia of the tube.
4. It may improve the cervical mucus.
5. The iodine may exert a bacteriostatic effect on the mucous membranes.
6. Ethiodol decreases in vitro phagocytosis by peritoneal macrophages. If the same effect occurs in vivo it could decrease macrophage activity and thus aid fertility by inhibiting the release of cytokines and decreasing phagocytosis of sperm.



DEZAVANTAJE :

- Folosește **contrast iodat** – risc alergic ^
- Expunere la **radiatii**
- Poate fi **dureroasă** – uneori necesită sedare/anestezie
- Necesită **aparatură specifică** radiologică
- Efectuată de către **medici radiologi**, cu specializare
- **Imaginile obtinute sunt statice**
- Exista **o singură incidență** a evaluării – antero-posterioară
- Uneori greu de interpretat

Cea mai comuna metodă de investigare

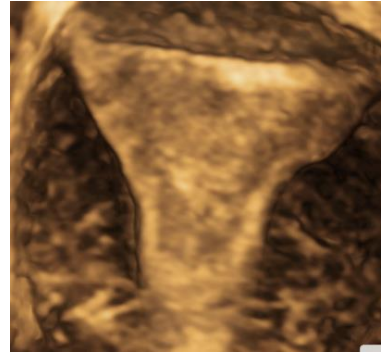
- Disponibilă
- Ușor de efectuat
- Nedureroasă
- Neinvazivă
- Repetitivă
- Fără riscuri



Cavitatea uterină – dificultăți de evaluare (ecografic)

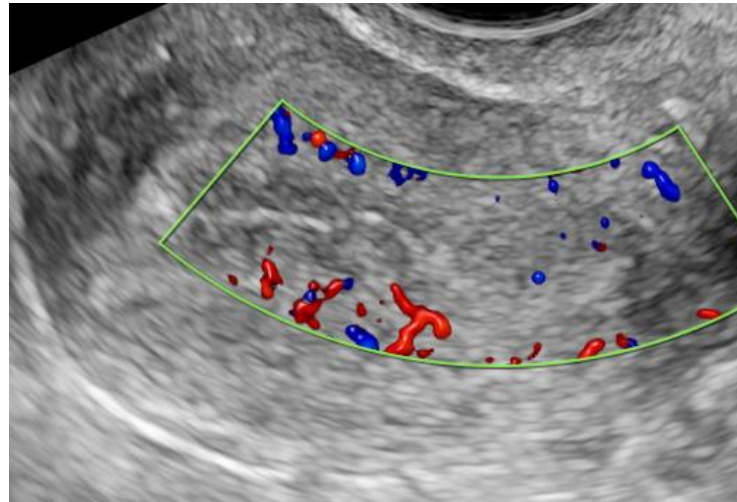
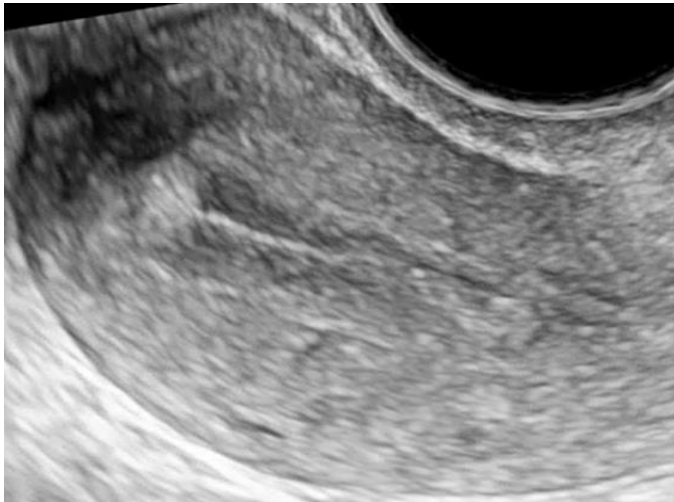
- Pot fi evaluate:

- Grosimea endometrului
- Aspectul în raport cu perioada CM
- Interlinia endometru/miometru
- Formațiuni endometriale (daca au ecogenitate diferită)
- Forma endometrului – aspect 3D
- Vascularizația - Doppler

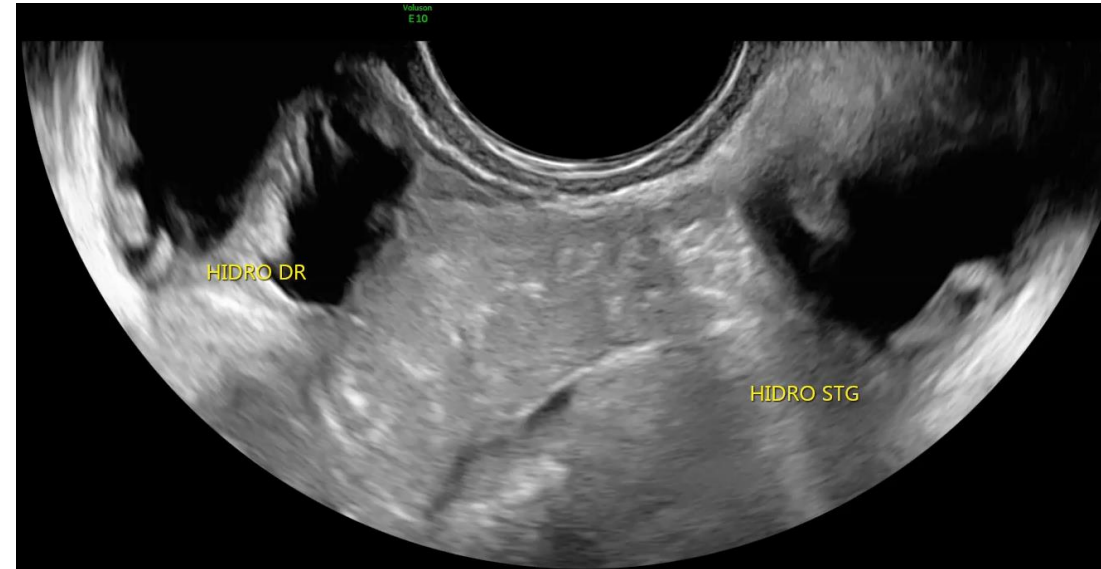


- Nu pot fi evaluate:

- Formațiuni izoecogene
- Formațiuni de mici dimensiuni
- Implantarea exactă a formațiunilor ce protruzionează în cavitate
- Raportul formațiunilor cu ostiumurile tubare
- Uneori dificil de diferentiat dg în endometrul gros (polip, hiperplazie, cancer)



Trompele uterine - dificultăți de evaluare (ecografic)



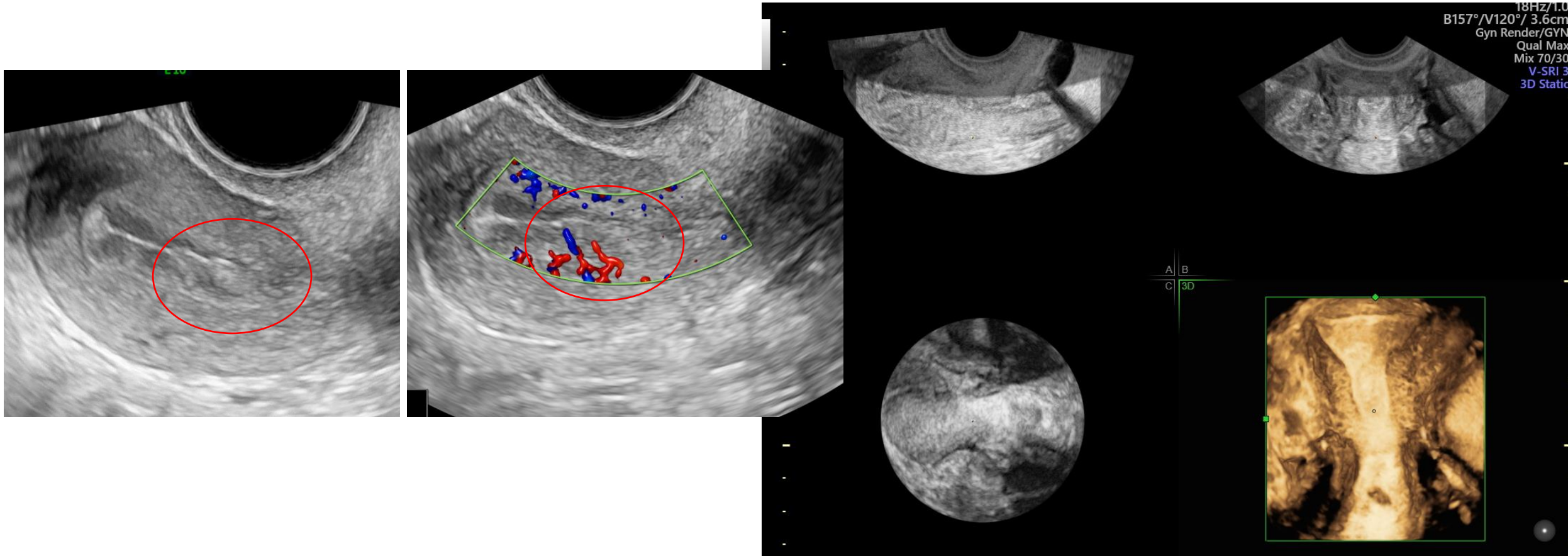
- Izoecogenice
- Nu pot fi vizualizate in mod normal ecografic
- Vizualizate daca au conținut lichidian sau există lichid peritubar



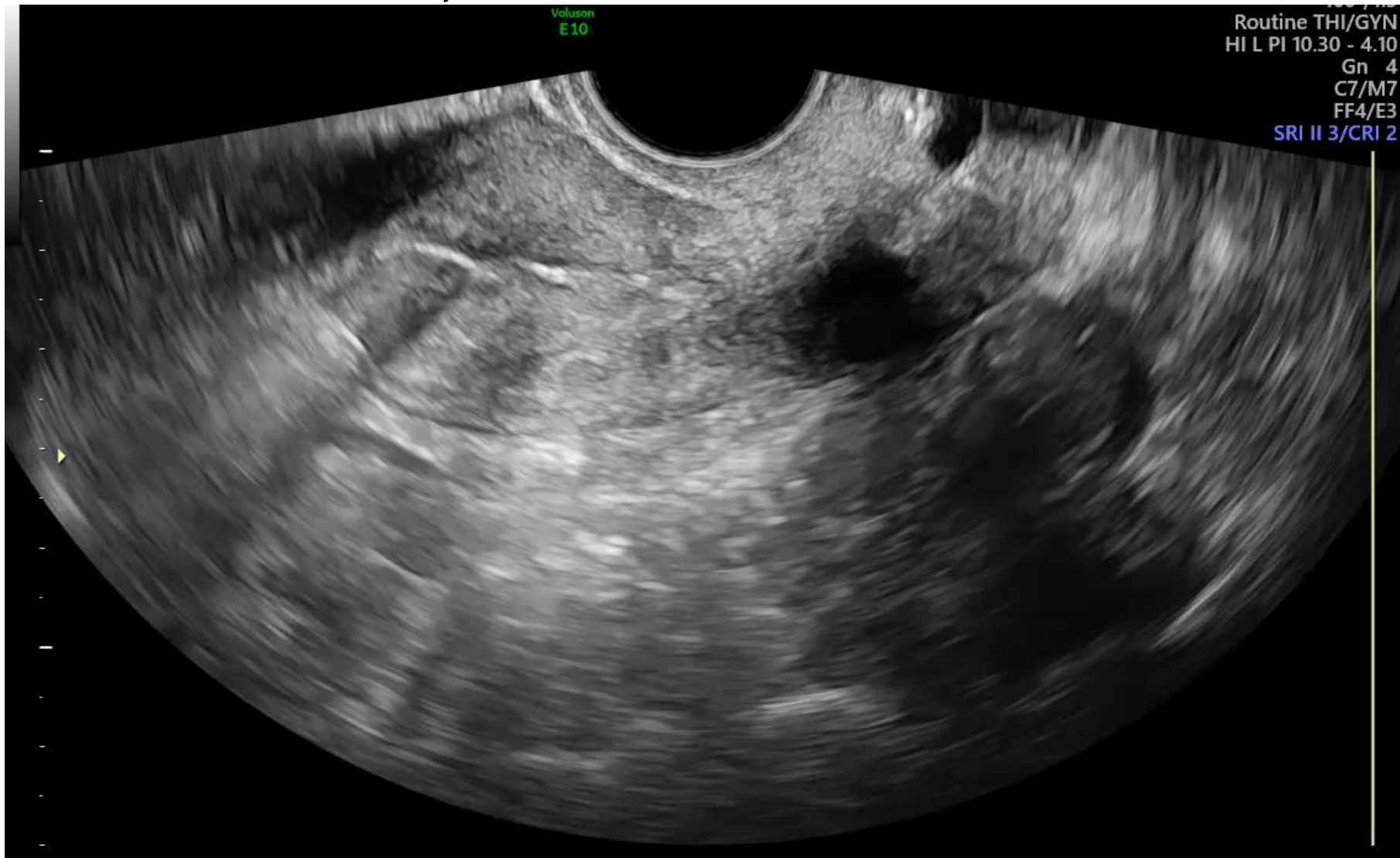
HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ

- **Cateterizarea** canalului cervical (în același mod ca la HSG)
- Se urmărește ecografic distensia cavității uterine, după instilarea de soluție salină (**ser fiziologic**)
- Folosește drept **contrast prin distensie** și **aspect anecogen**
- **Permeabilitatea tubară** – dar cu pasaj tubar dificil de urmărit de cele mai multe ori. Obstrucțiile tubare distale cu acumulare progresivă pot fi ușor de recunoscut. Prezența fluidului acumulat progresiv la nivelul FSD postinjectare dovedesc, indirect, pasajul tubar.

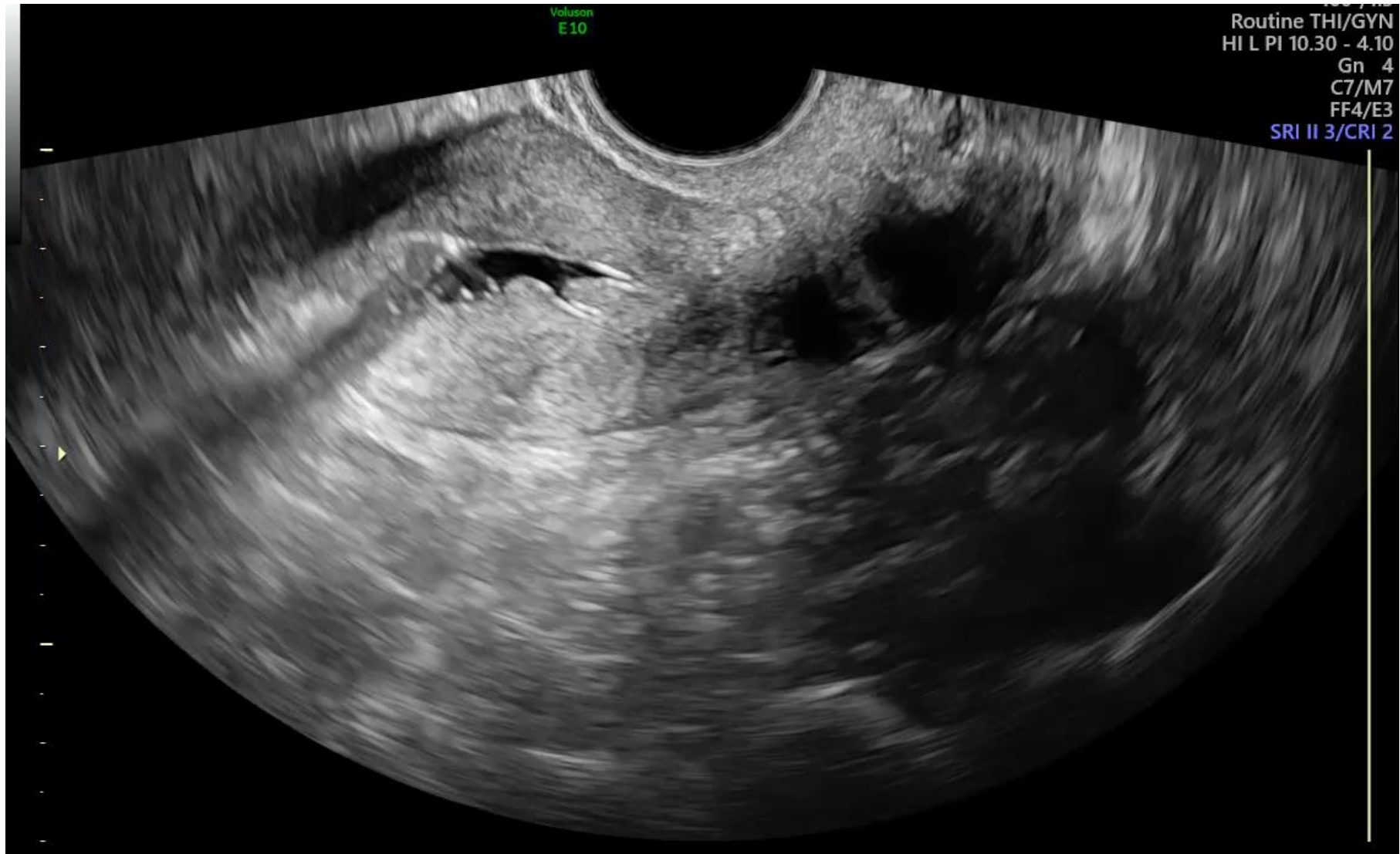
HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



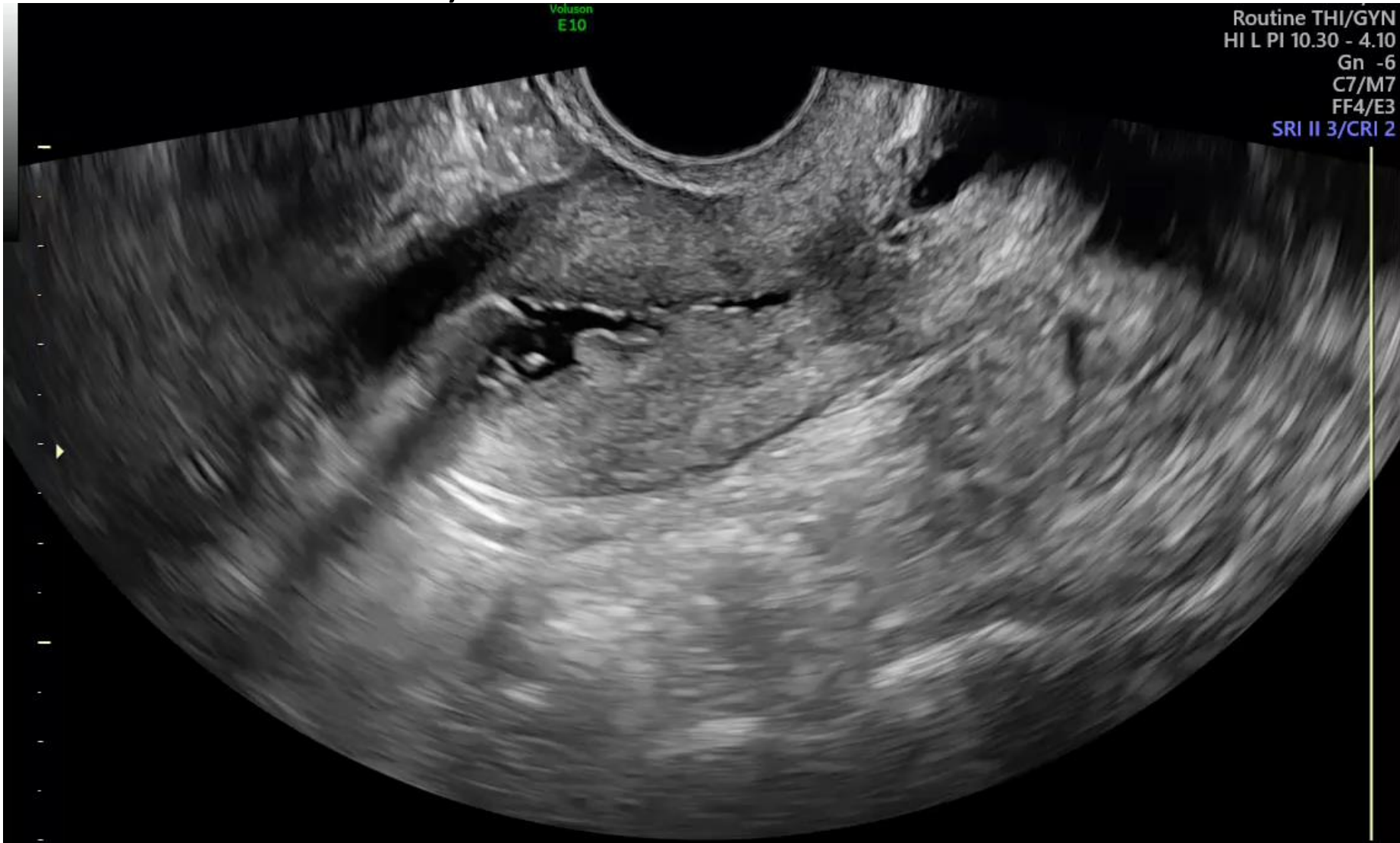
HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



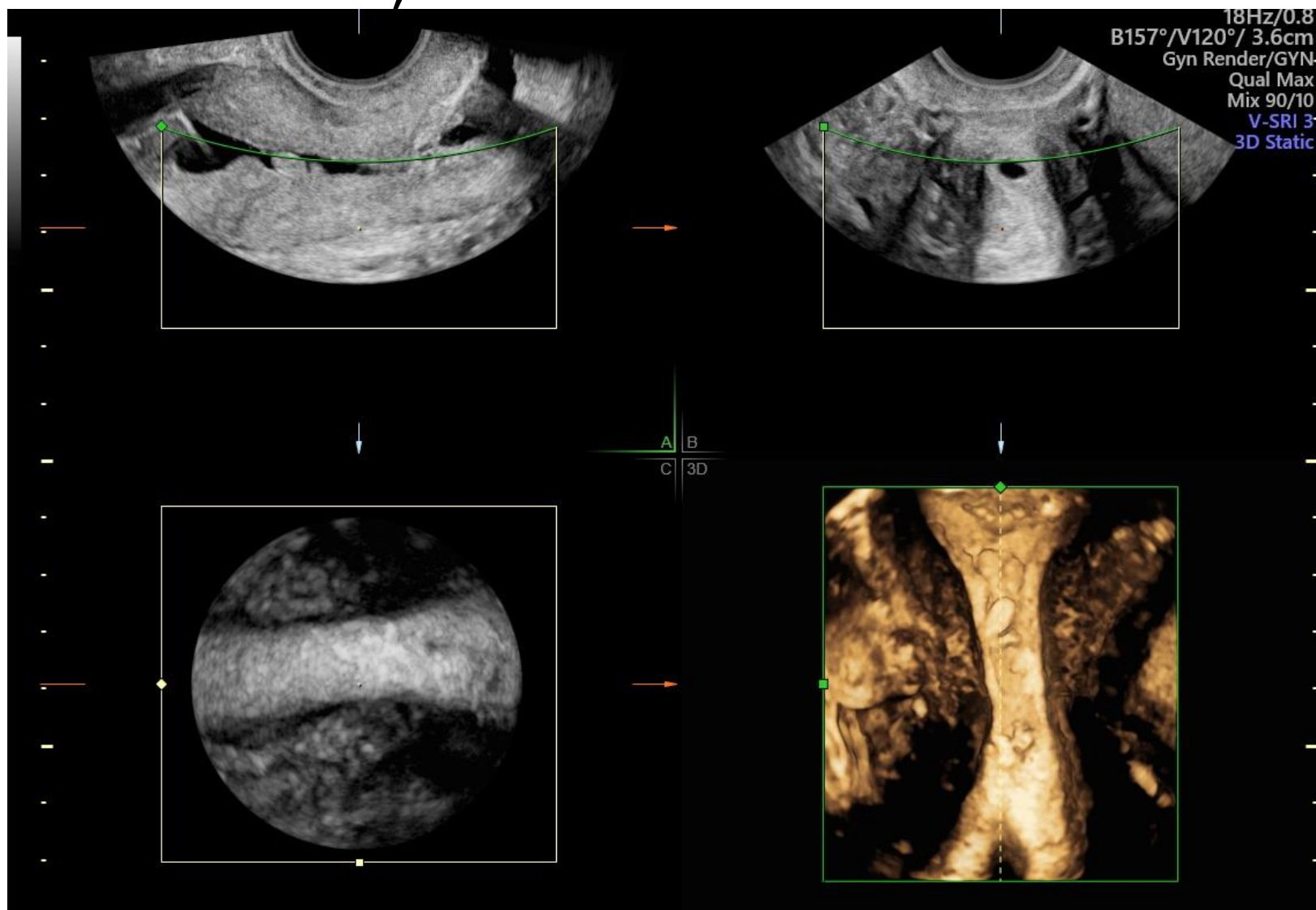
HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



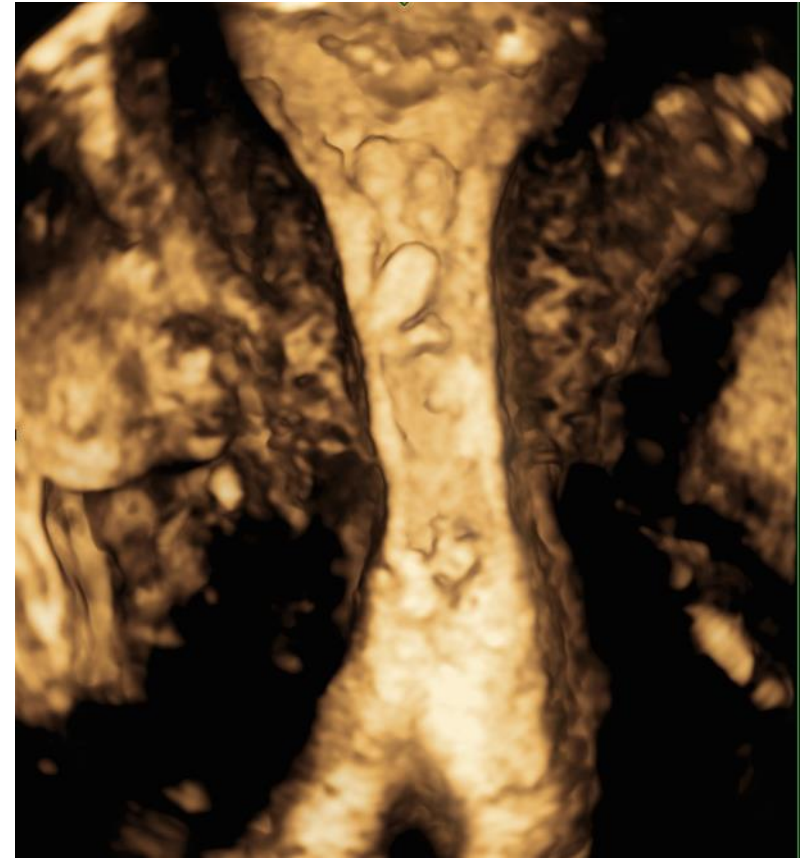
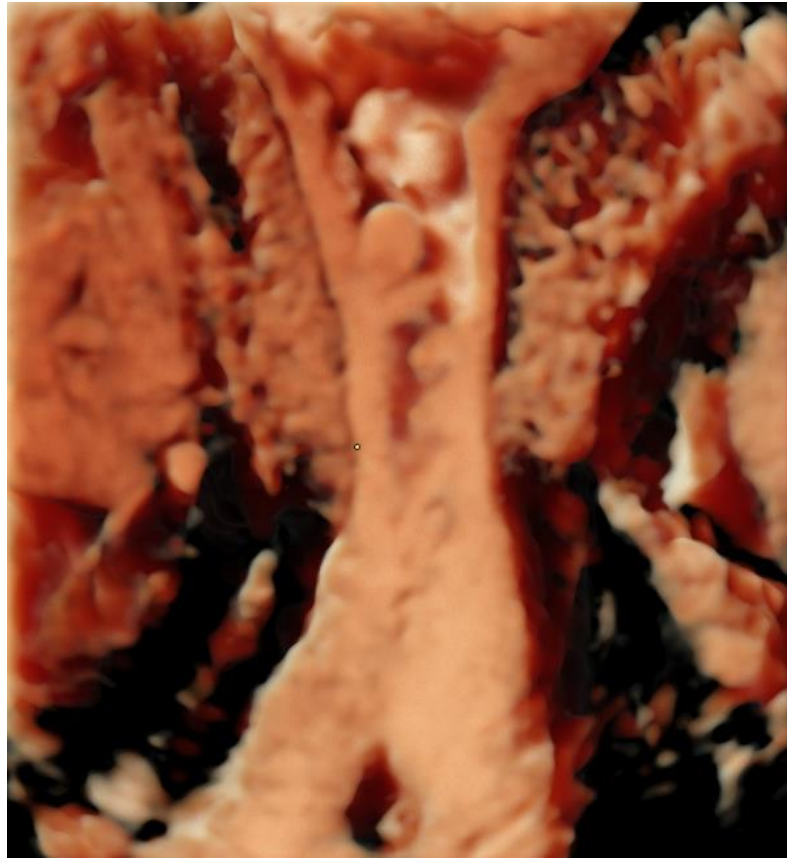
HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



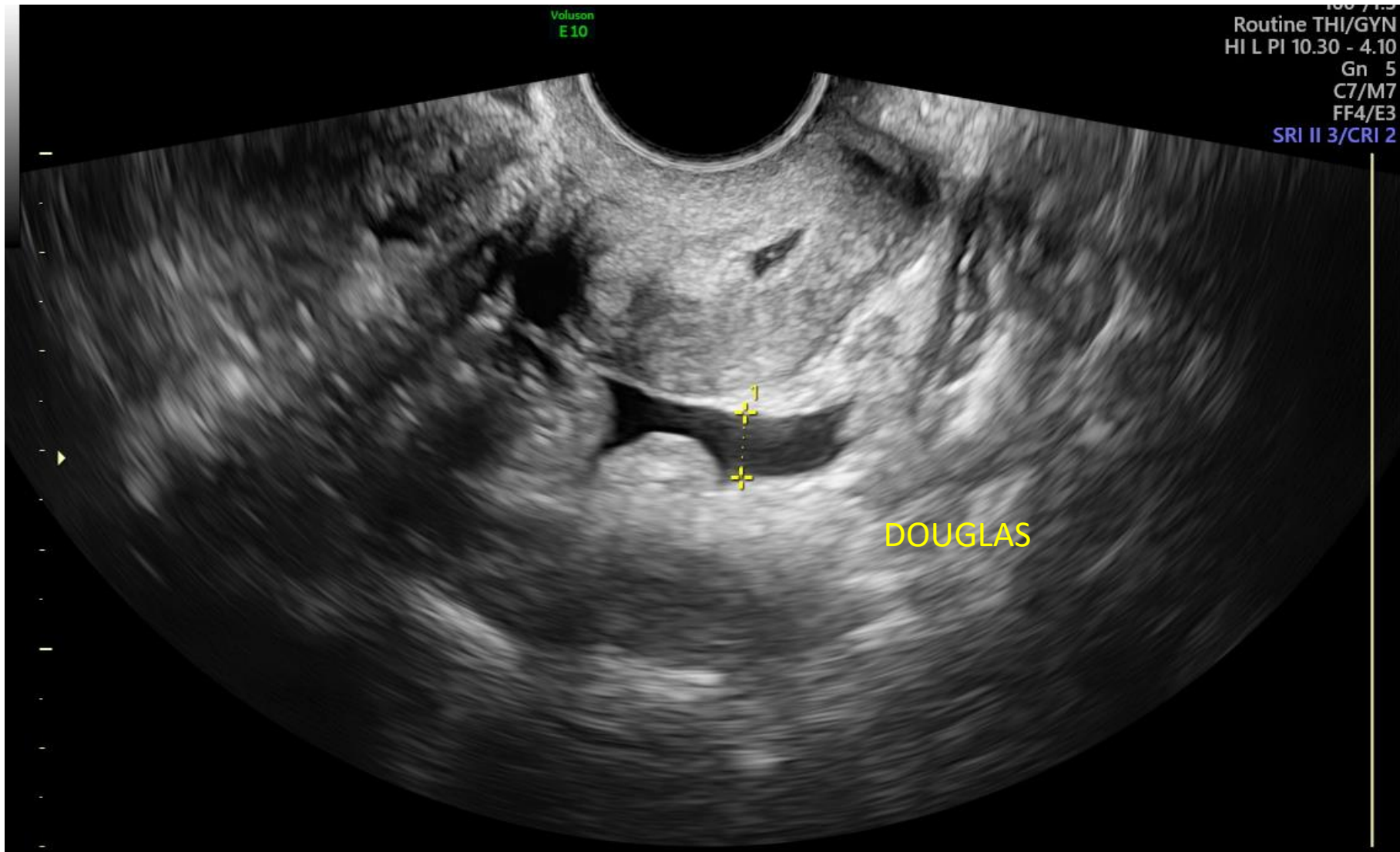
HISTEROSONONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ



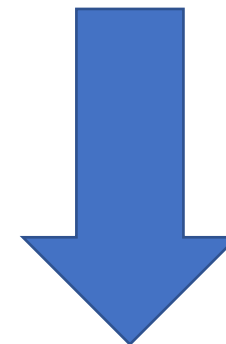
HISTEROSONOGRAFIE CU INSTILARE DE SOLUȚIE SALINĂ IZOTONĂ

AVANTAJE:

- Fara internare
- Fara iradiere
- Nu folosește substanța iodată
- Risc redus de infecții
- Disconfort minim
- Non invaziv
- Ușor de efectuat
- Folosește ecografia - disponibilă pe scară largă
- Clinicianul este cel care o efectuează – si cel care va aplică tratamentul ulterior
- Nu necesită anestezie sau sedare
- Nu sunt descrise complicații severe sau efecte adverse
- Multiple incidente; stocare si postprocesare a volumului achiziționat

DEZAVANTAJE:

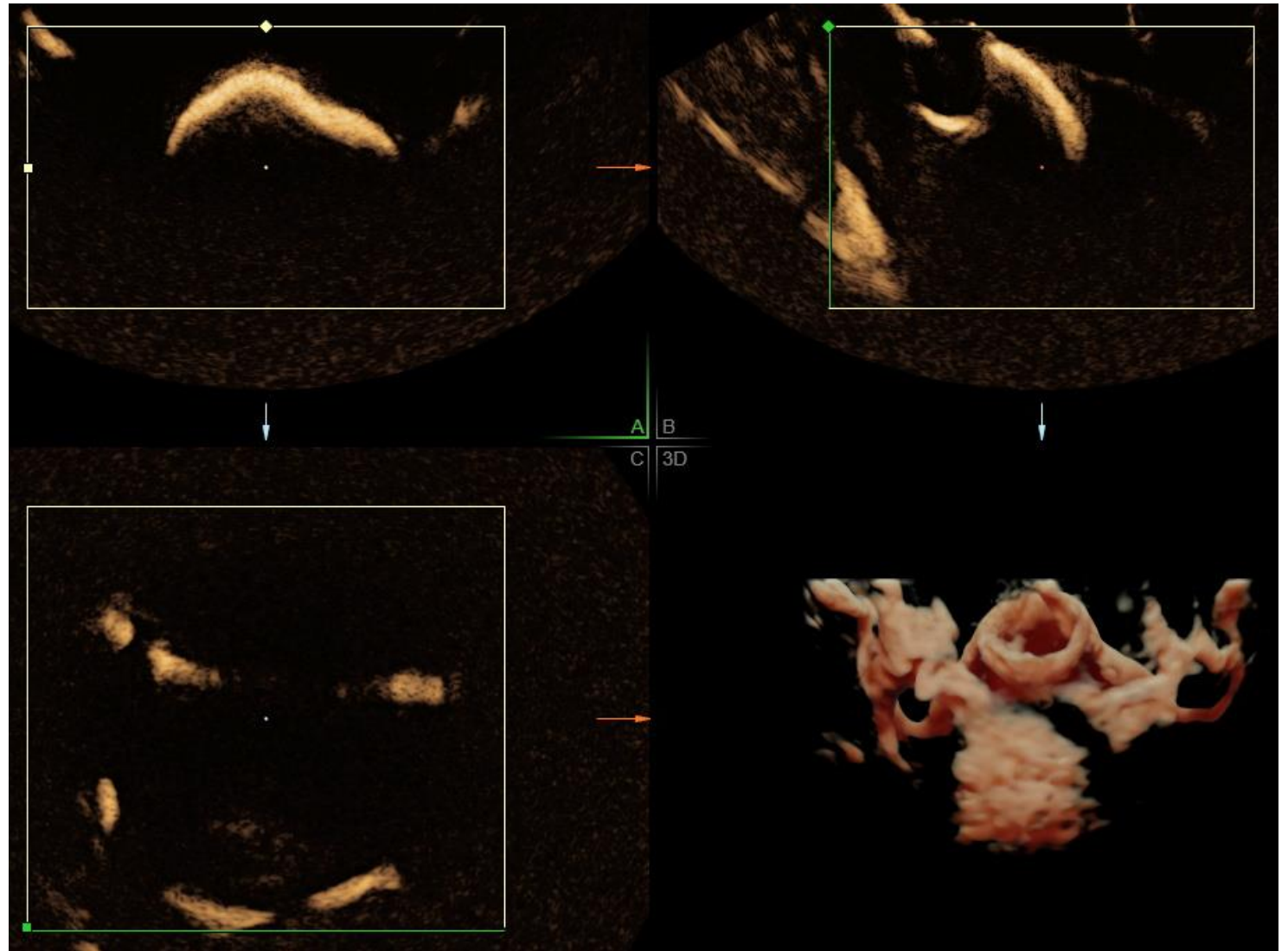
- Pasaj rapid prin trompe
- Evaluare deficitară a traiectului tubar
- Nu poate fi stabilit raportul trompelor cu ovarele



Substanță cu un contrast ecografic puternic la nivelul tractului utero-tubar

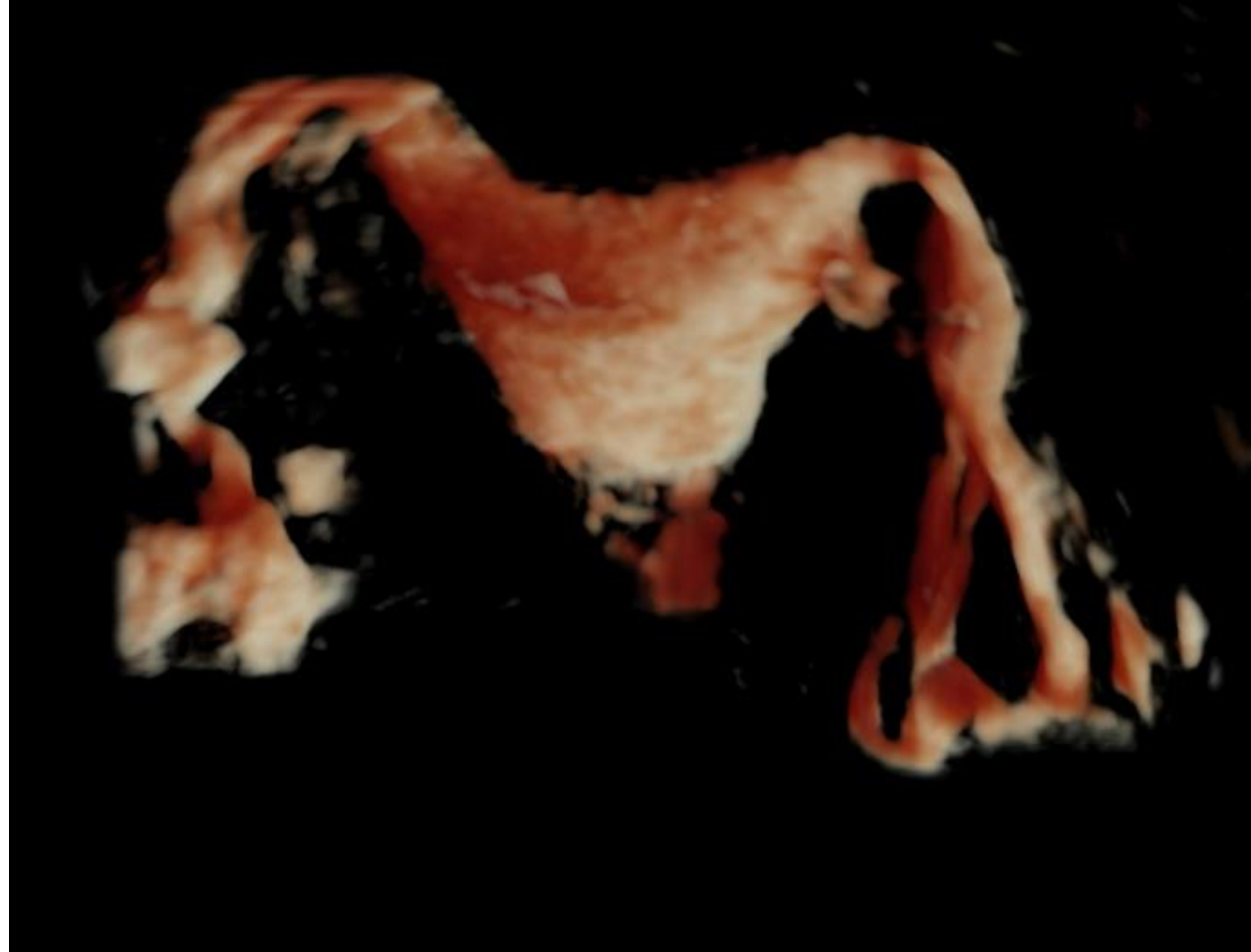
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚA DE CONTRAST (HyCoSy/HyFoSy)

- Transductorul este poziționat transversal
- Achiziții 3D seriate, pe măsură ce se injectează substanța de contrast
 - Se poate evalua progresia în mod 2D, cu urmărirea pasajului de o parte și de cealaltă individualizat (traiect tubar incomplet evaluat)

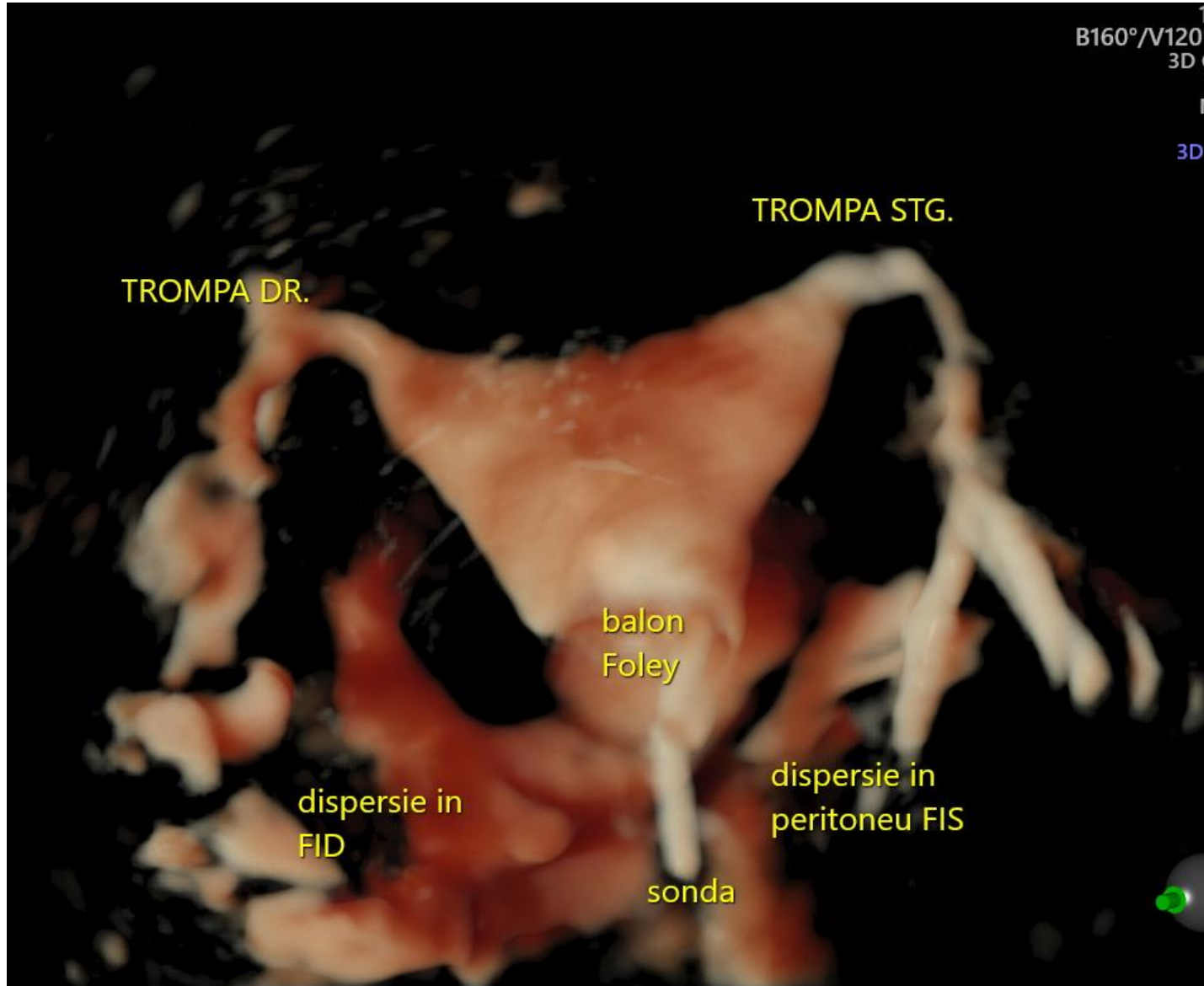


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)

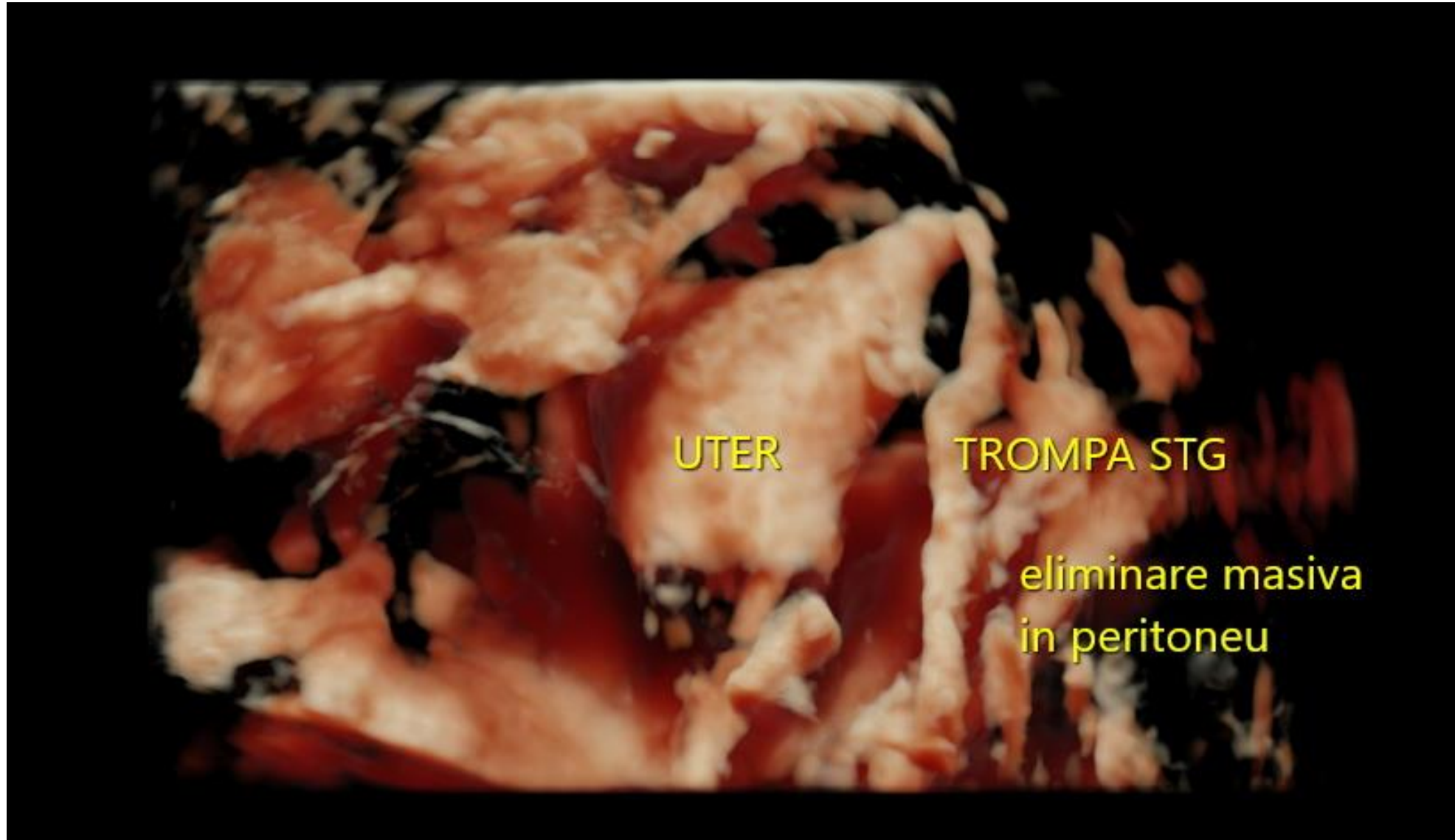
- Se prelucrează volumele achiziționate
- Analiza volumului oferă multiple incidențe



HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)

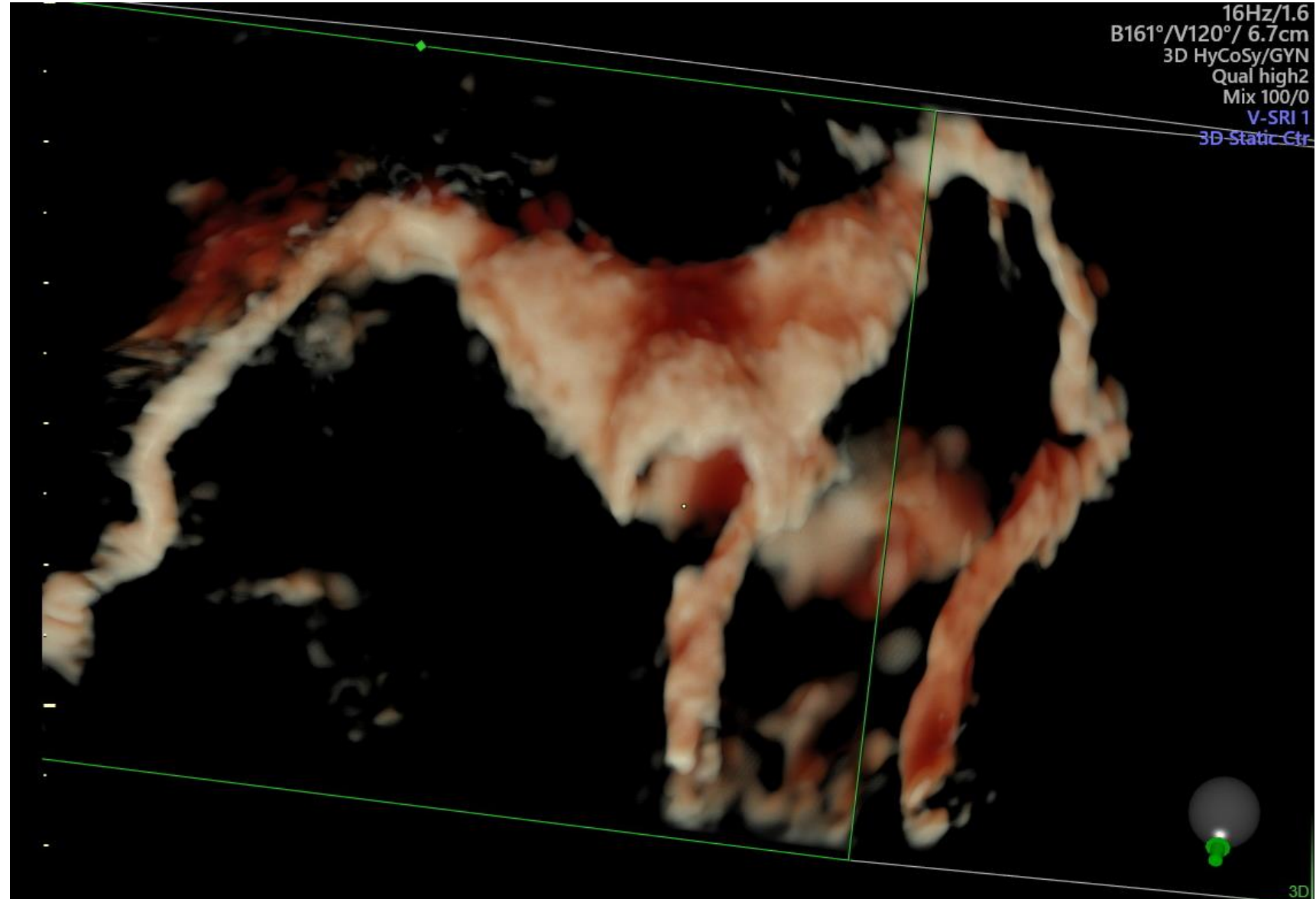


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)



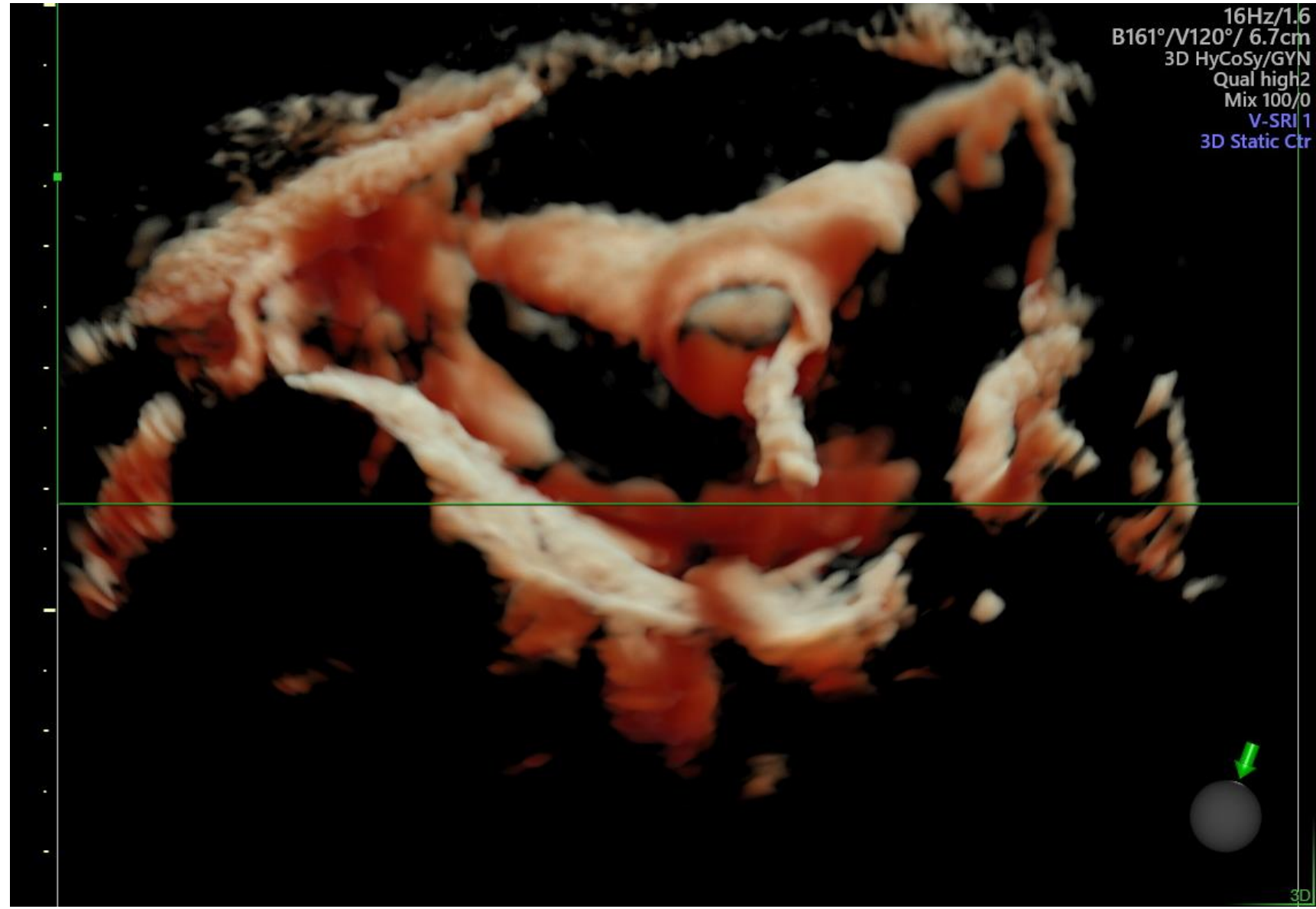
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) **CAZ 1**

NORMAL



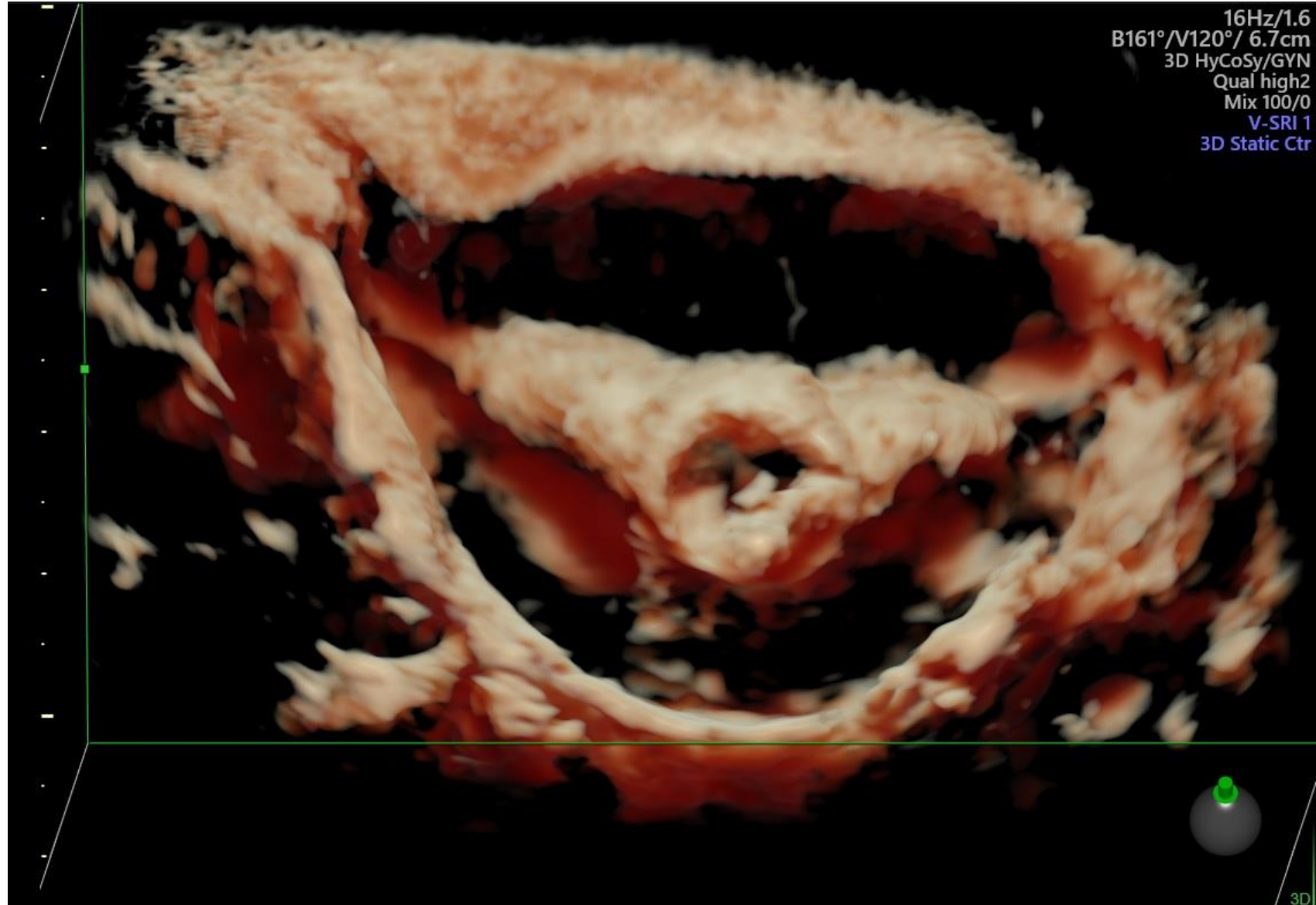
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) **CAZ 1**

NORMAL -
DIFUZIUNE
PERITONEU

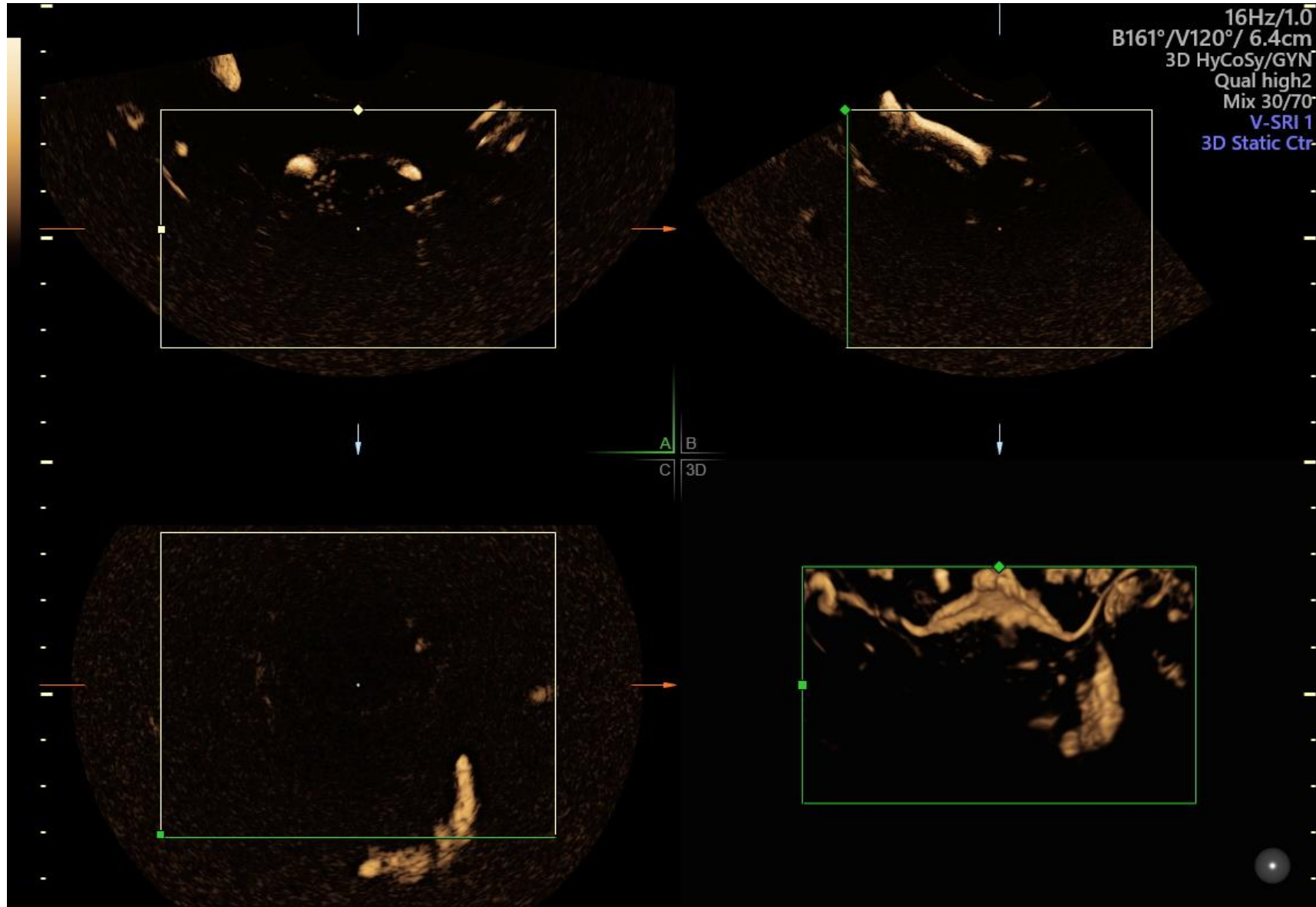


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) **CAZ 1**

- NORMAL
- DIFUZIUNE MASIVĂ PERITONEU
- D. UNIFORMĂ PERIUTERIN

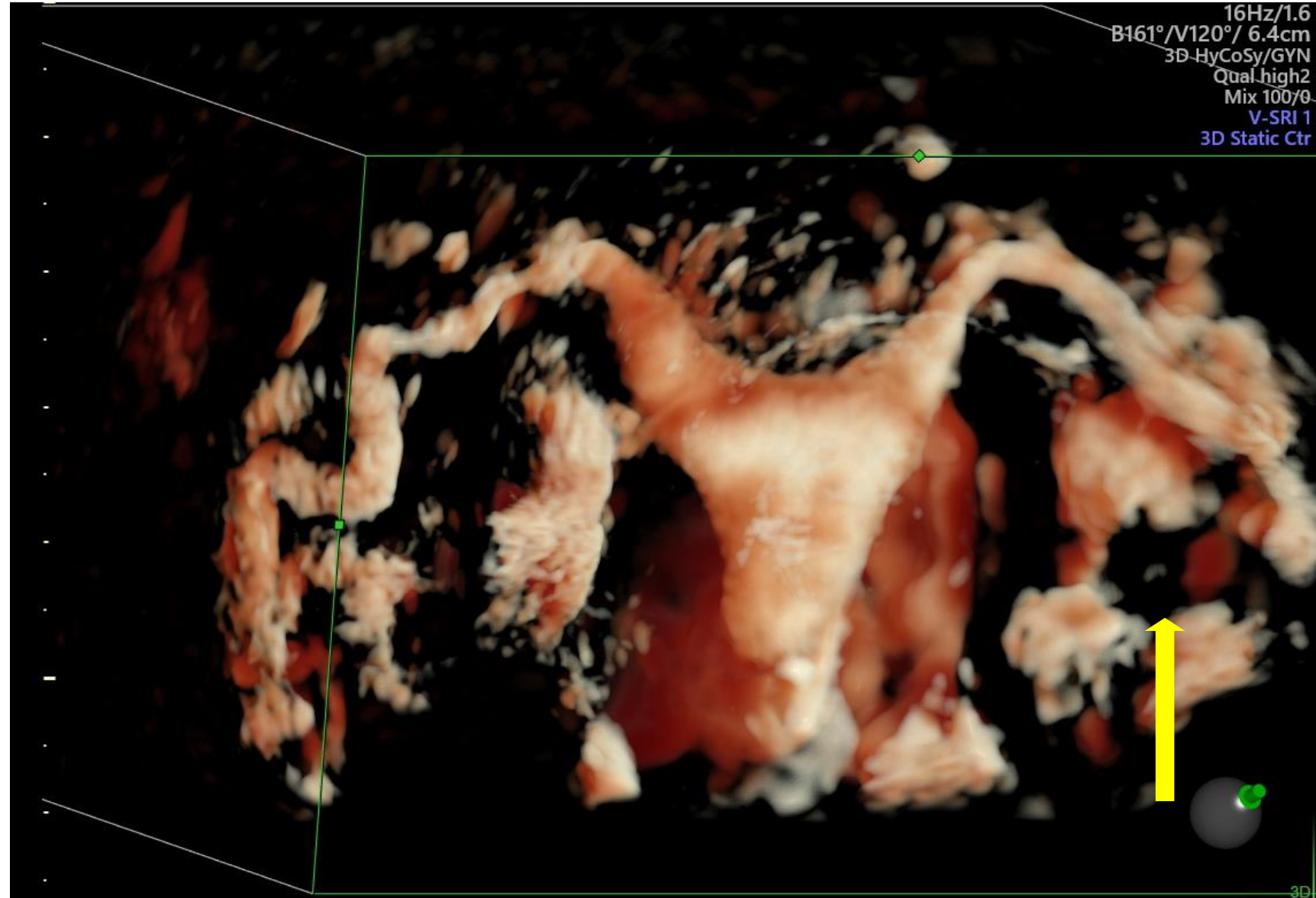


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) **CAZ 2**



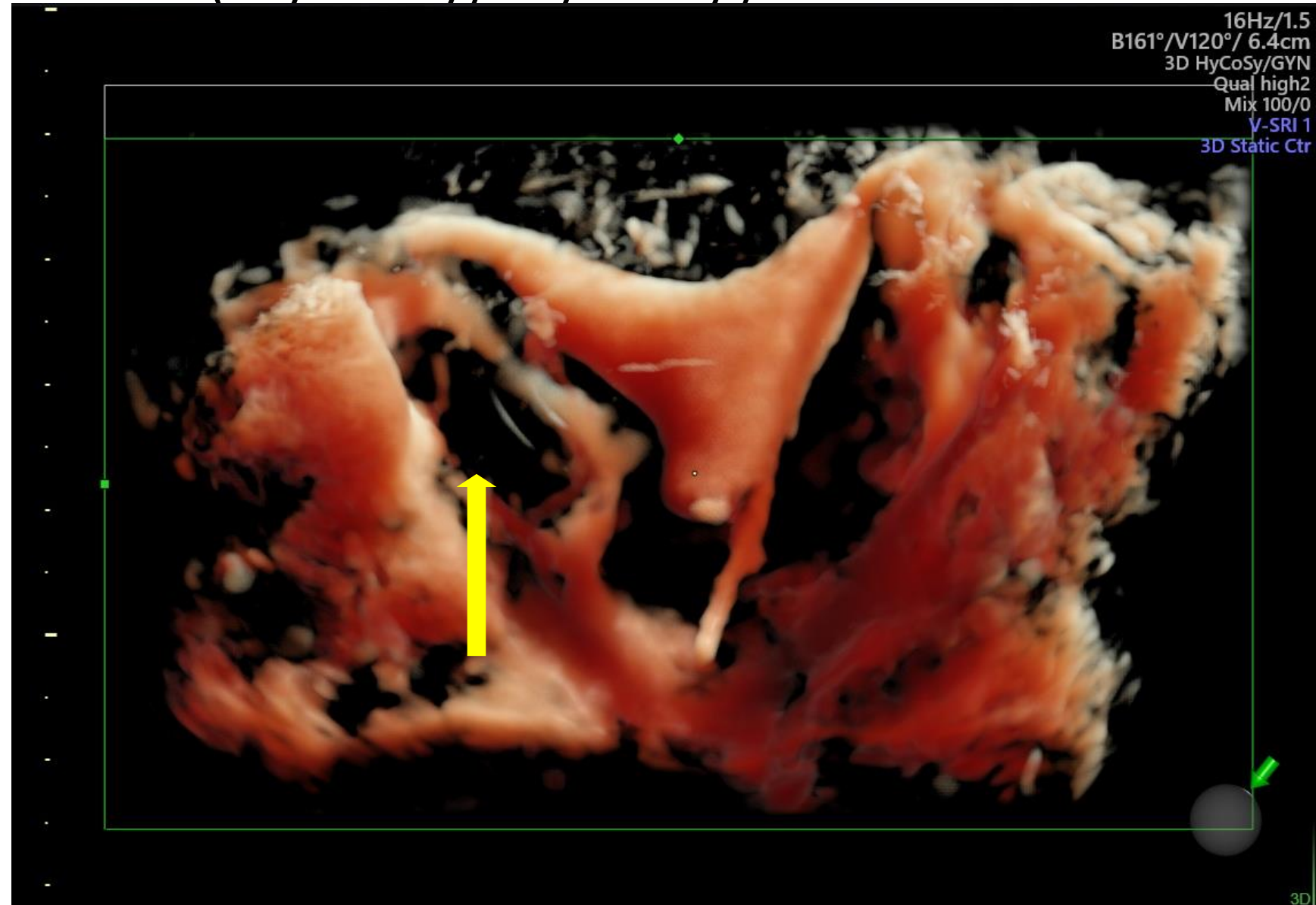
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) **CAZ 2**

- NORMAL
- DIFUZIUNE MASIVĂ PERITONEU
- RELATIA TUBO OVARIANĂ POATE FI APRECIATĂ - STG



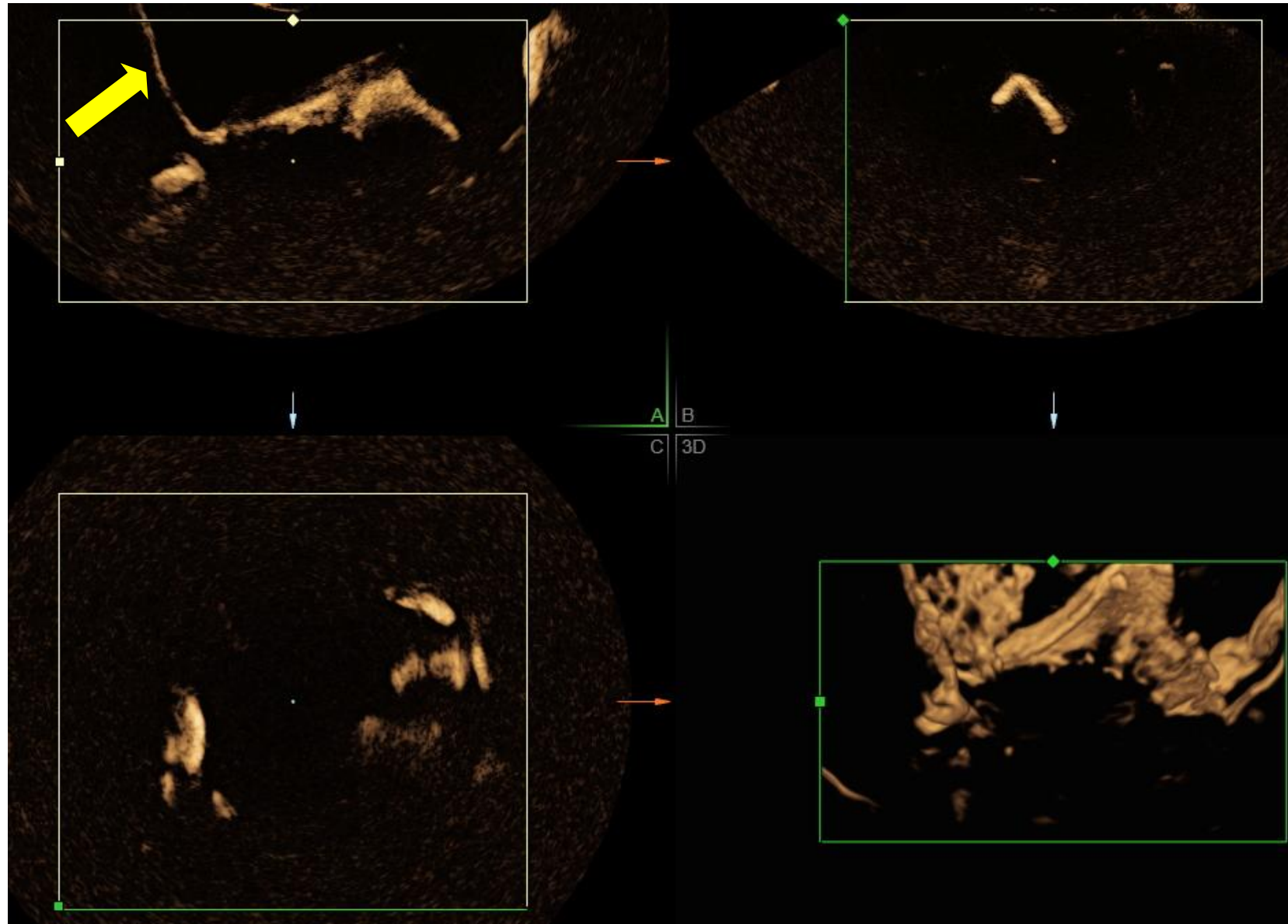
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) **CAZ 2**

- RELATIA TUBO OVARIANĂ - DR



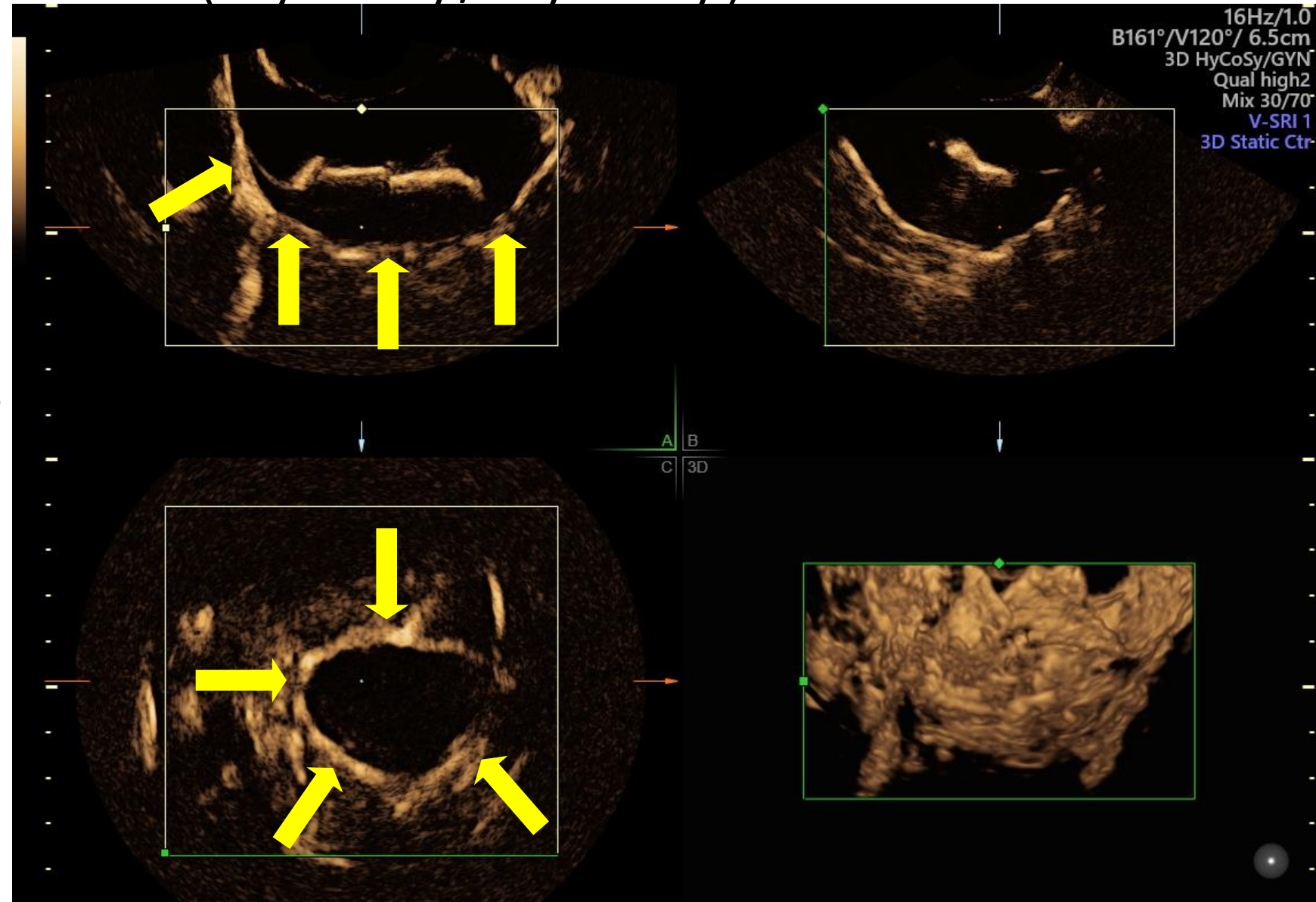
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 3

- Achiziție 3D
- Pasaj tubar drept ce nu poate fi urmărit în planul A



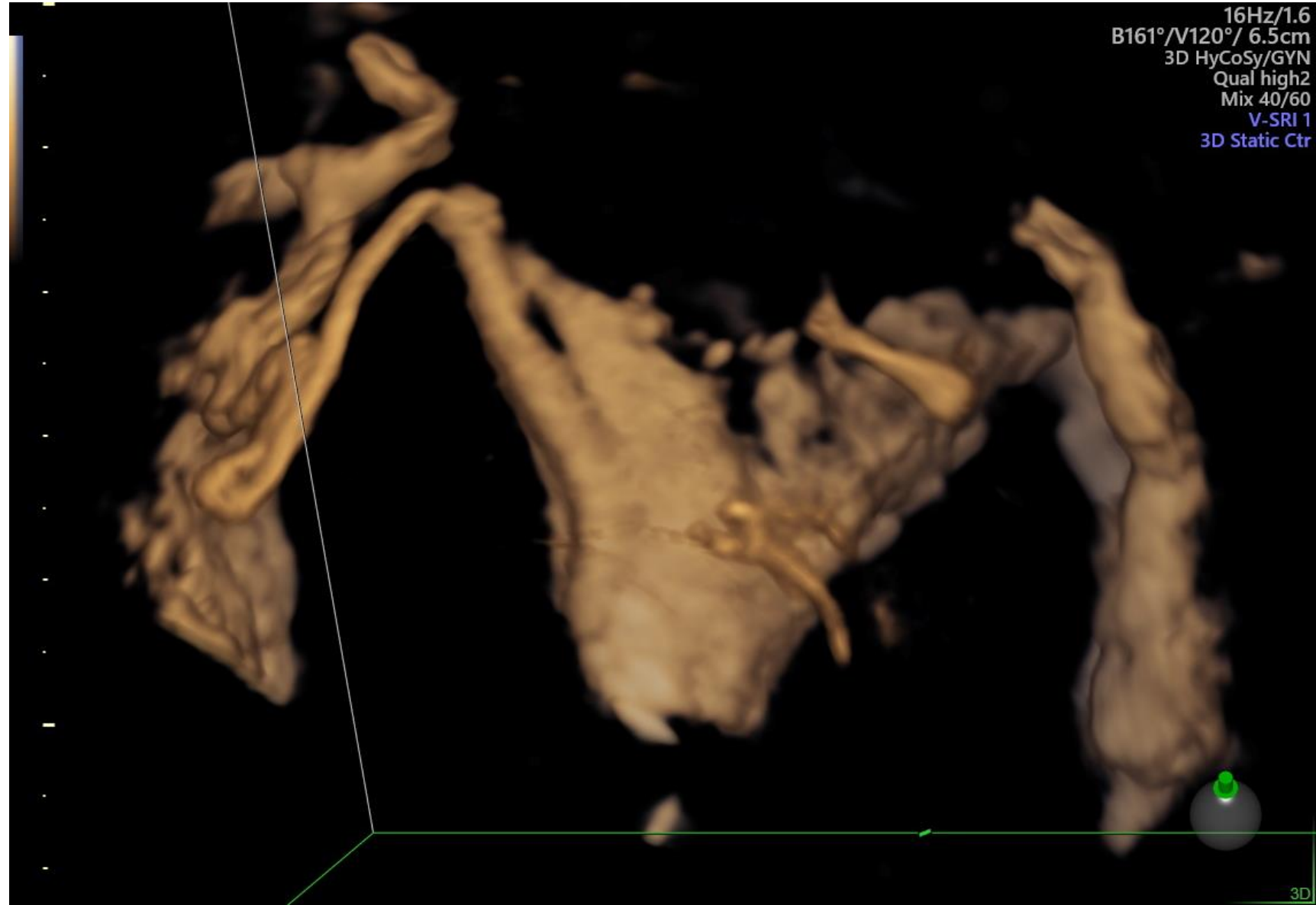
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 3

- Difuziune a substanței de contrast periuterin în toate cele 3 planuri

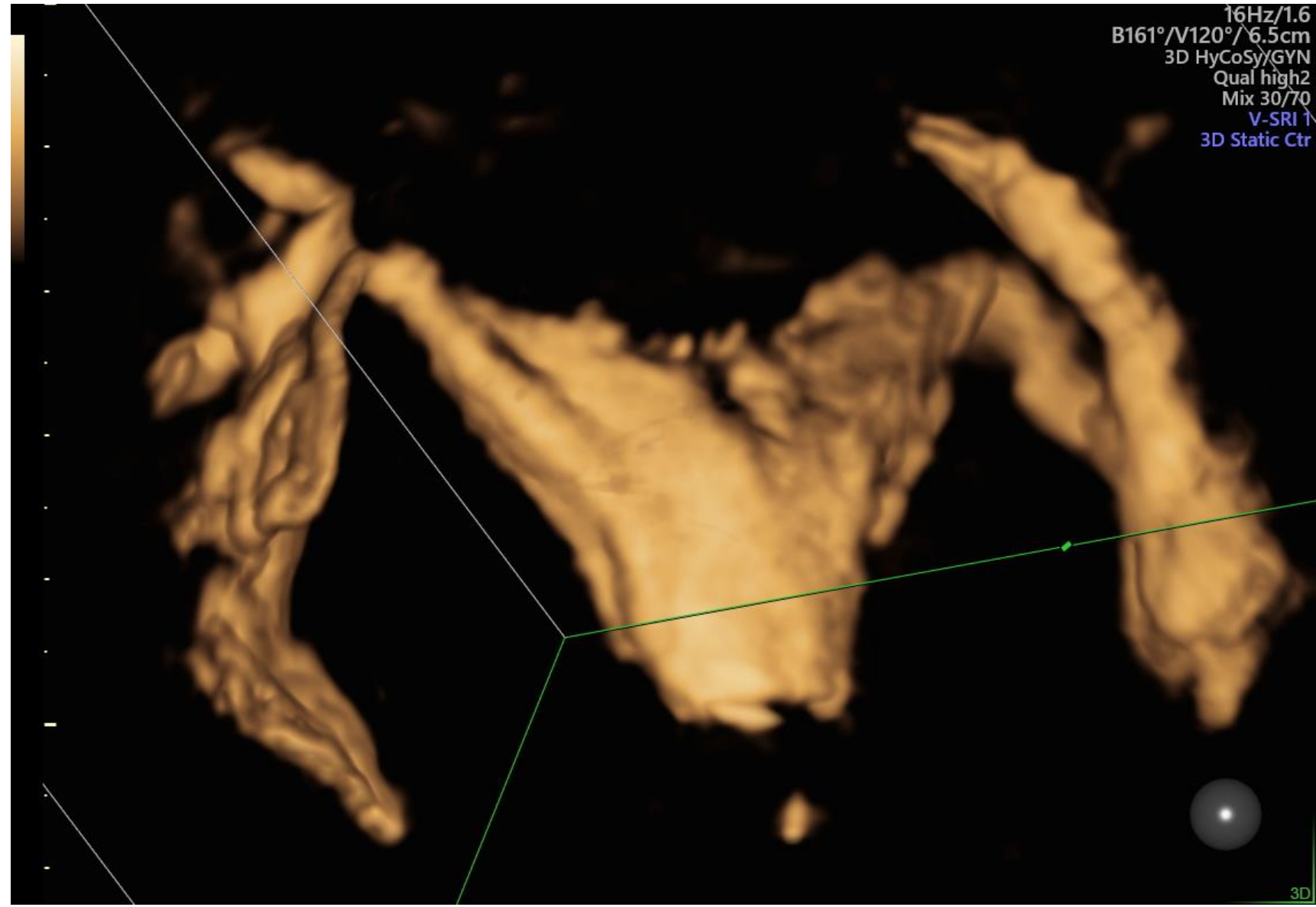


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 3

- Traiect tubar drept sinuos

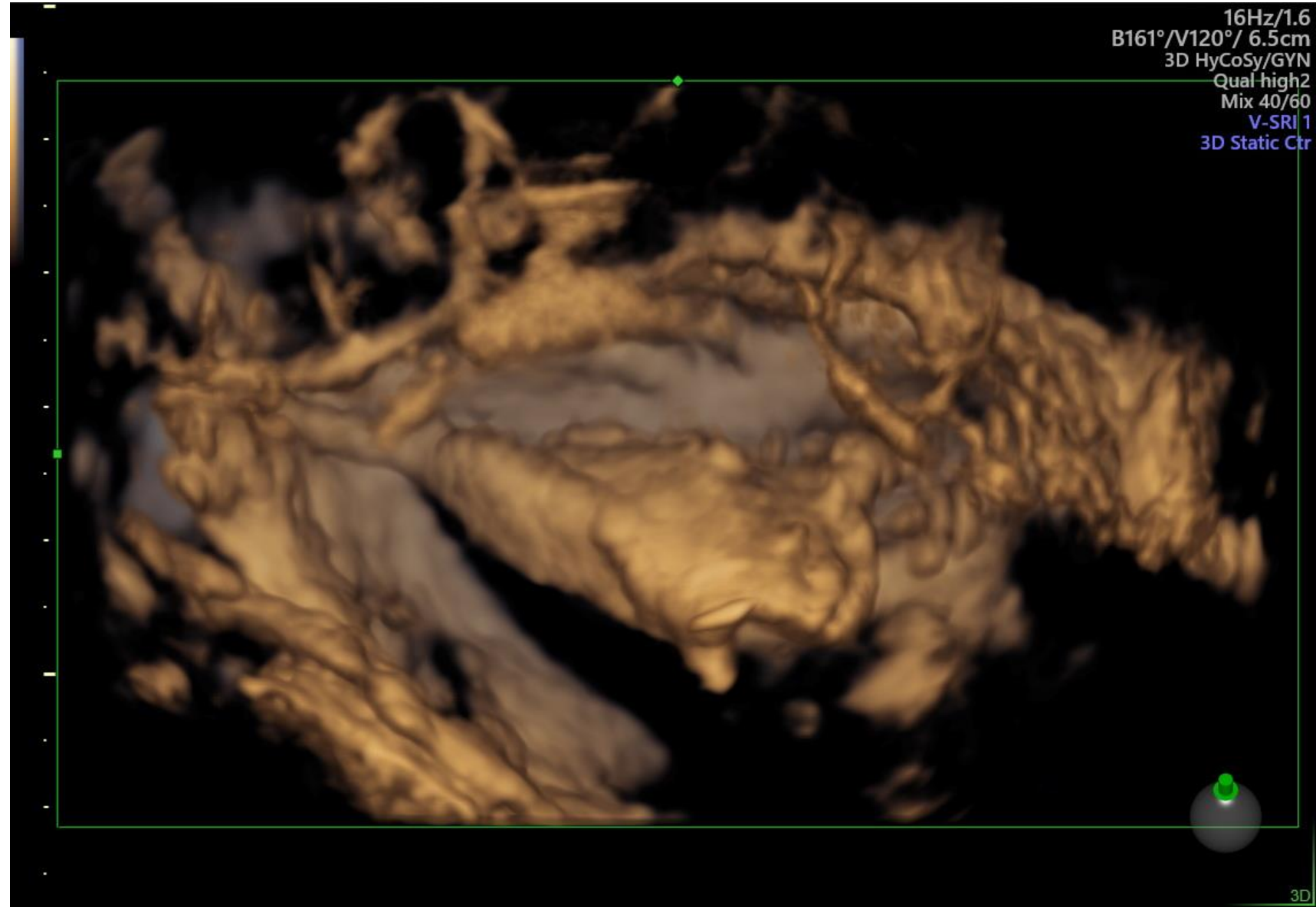


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 3



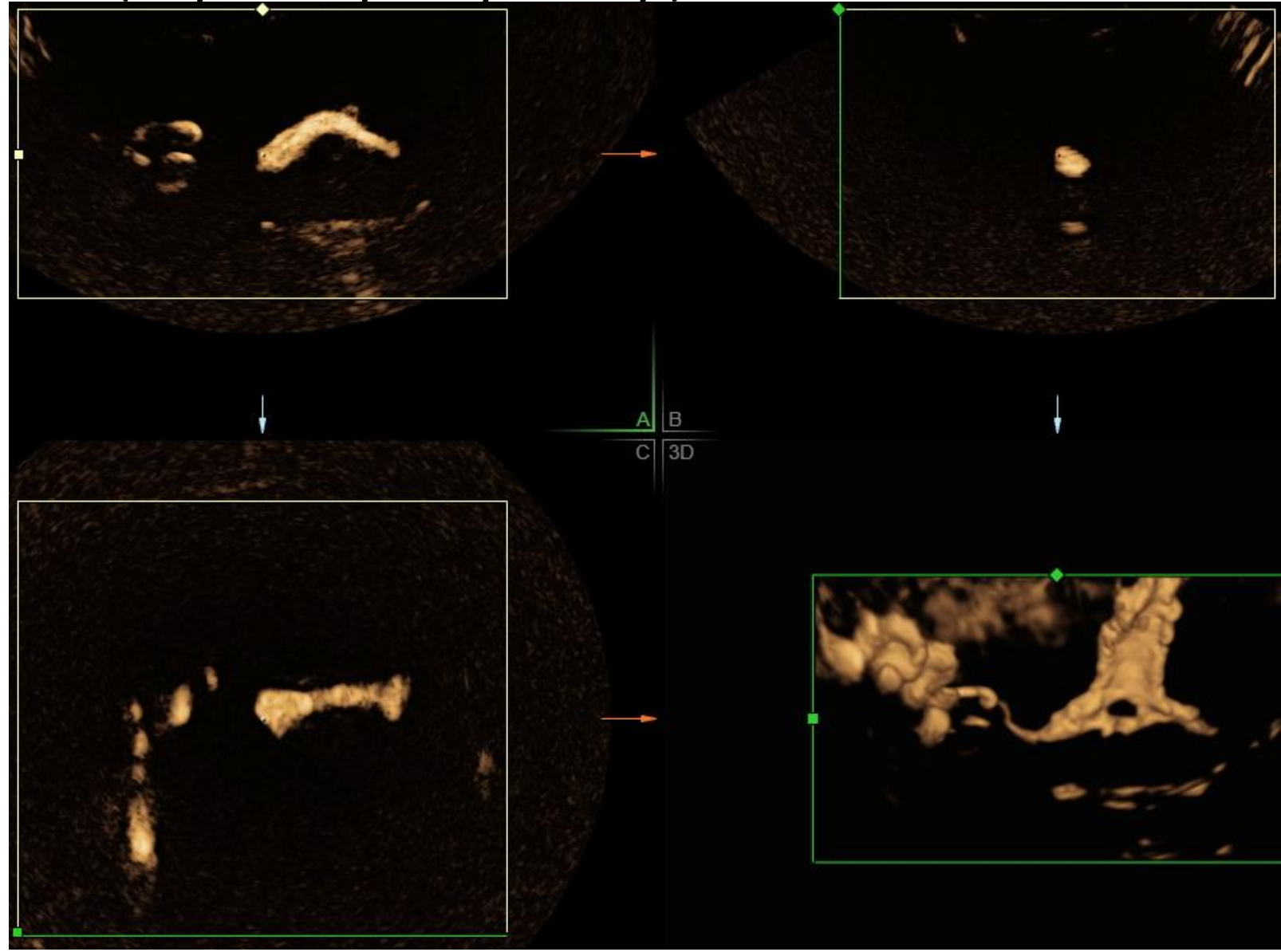
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 3

- DIFUZIUNE MASIVĂ PERITONEU

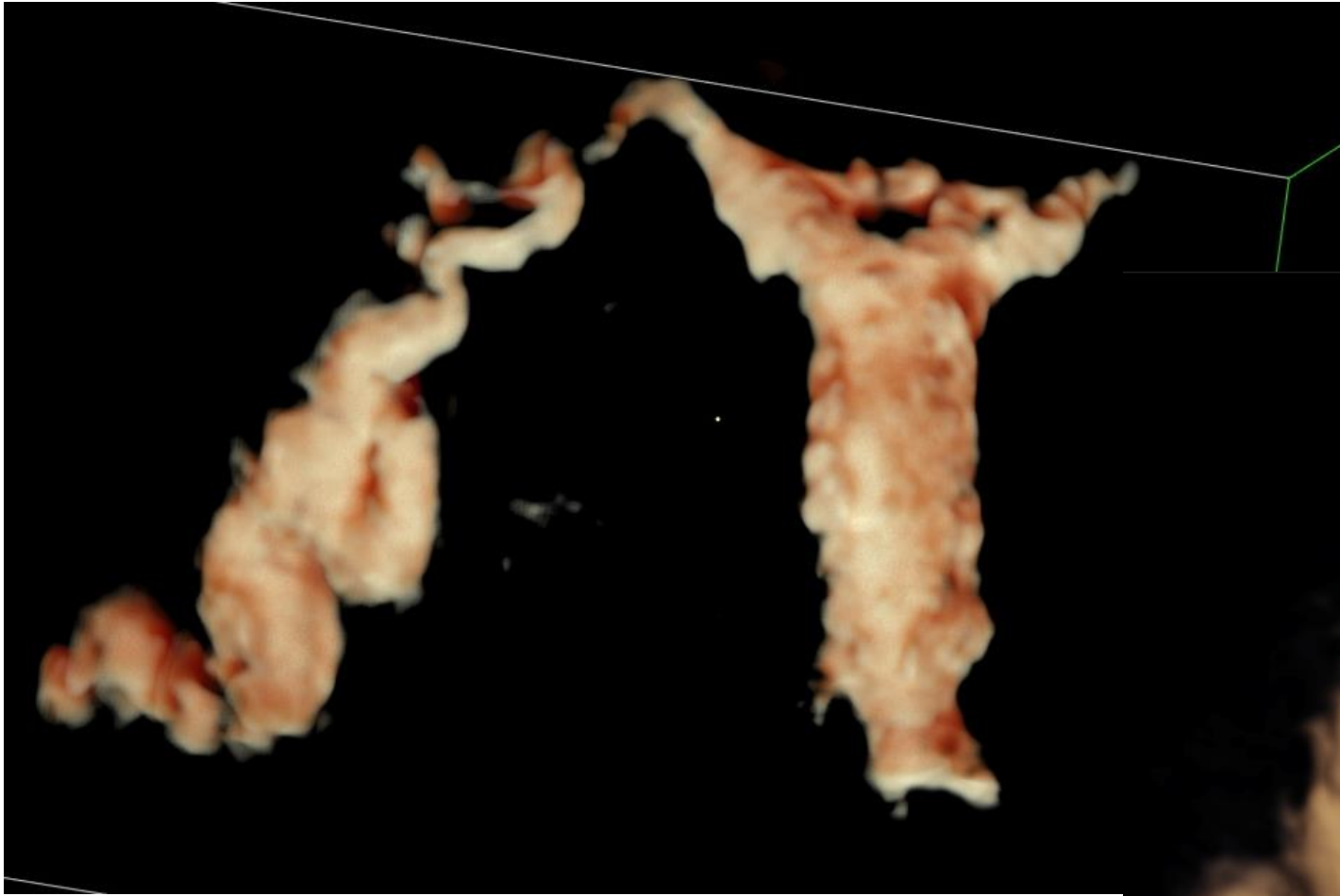


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 4

- TROMPA UNICA
- STG ABSENTA CHIRURGICAL



HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 4

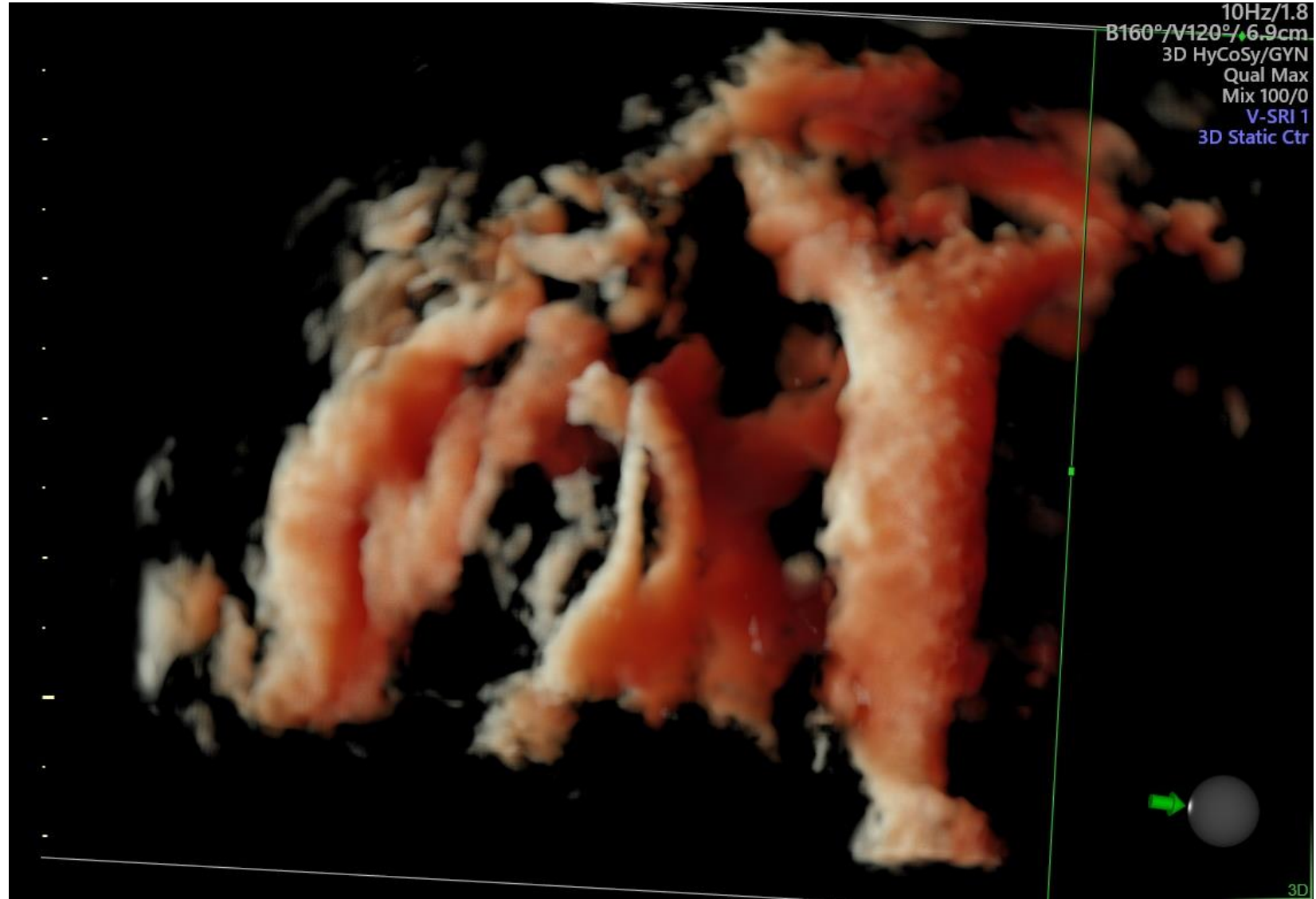


- TROMPA DREAPTĂ CU
TRAIECT SINUOS

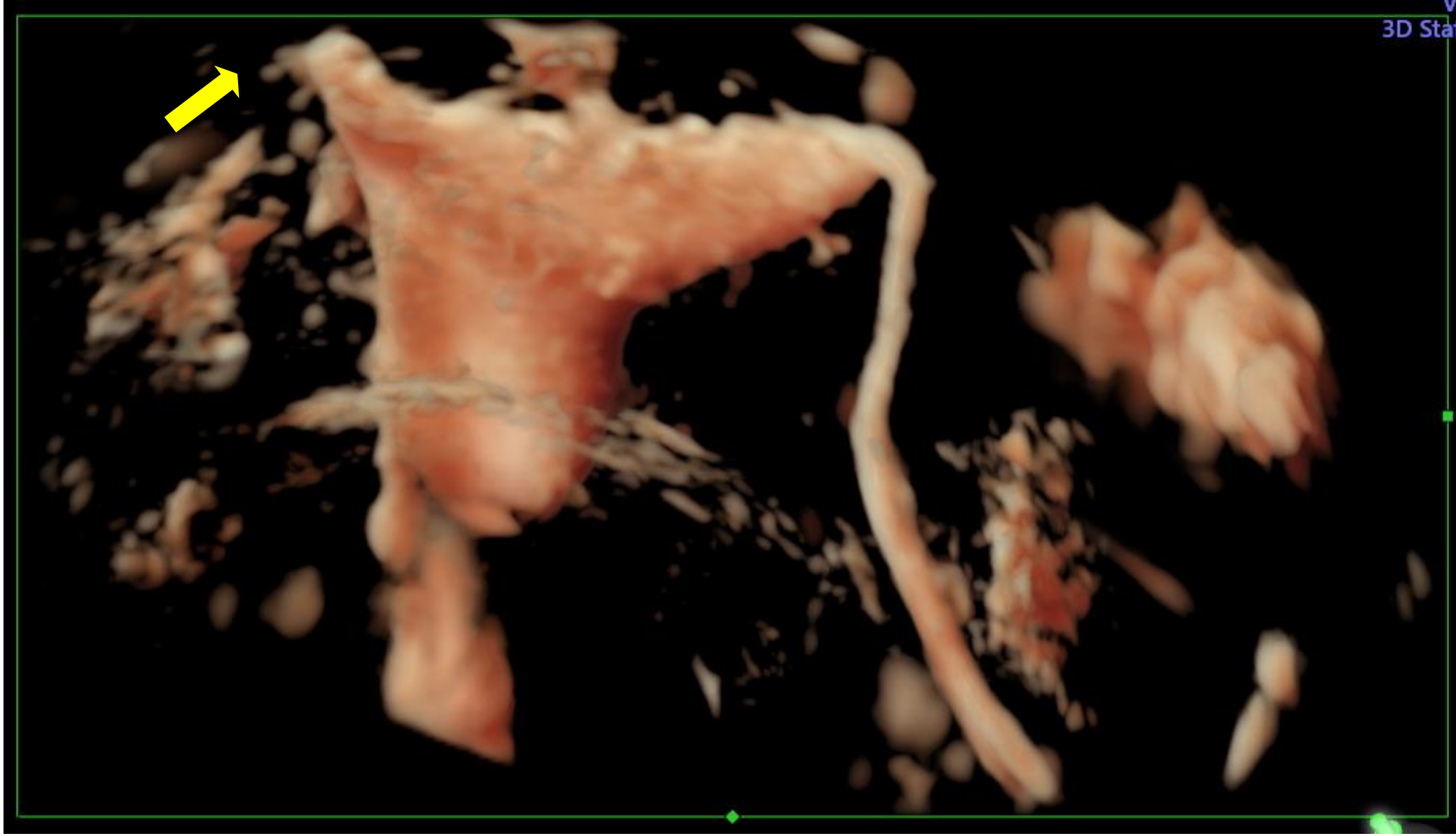


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 4

- DIFUZIUNE PERITONEALĂ



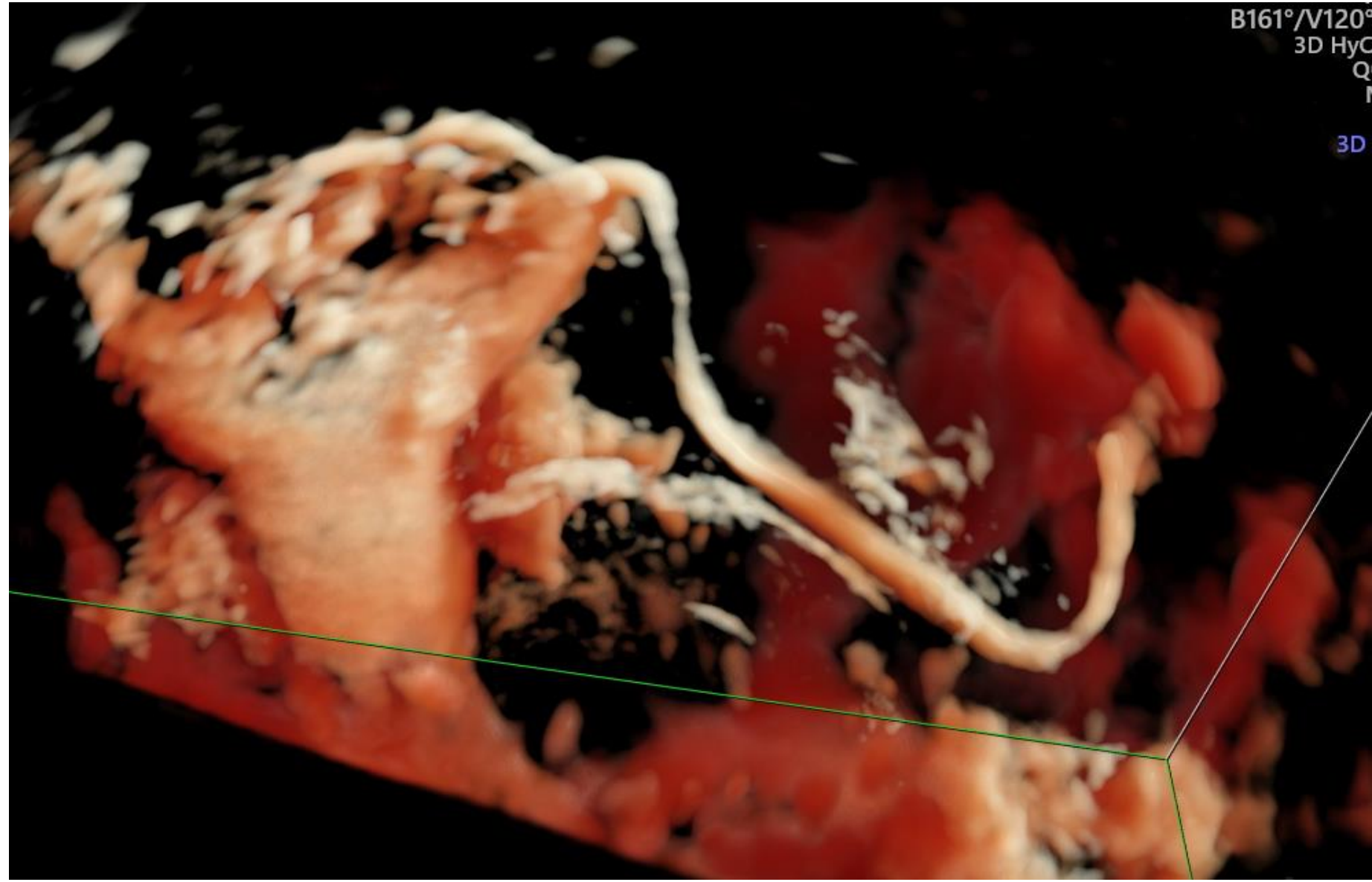
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 5



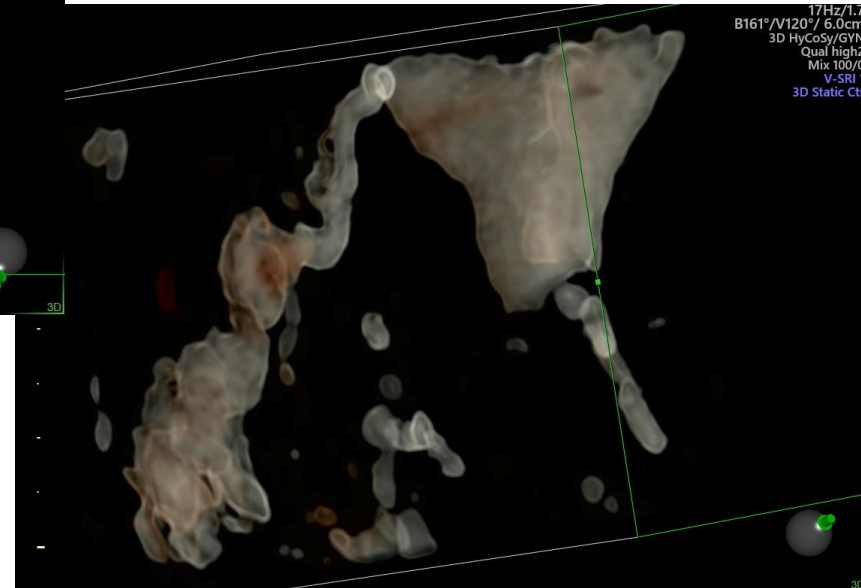
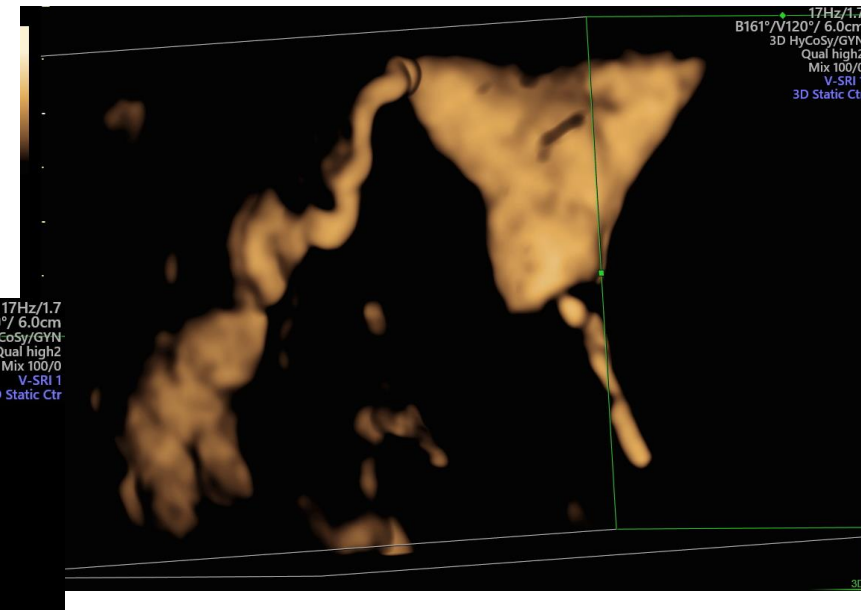
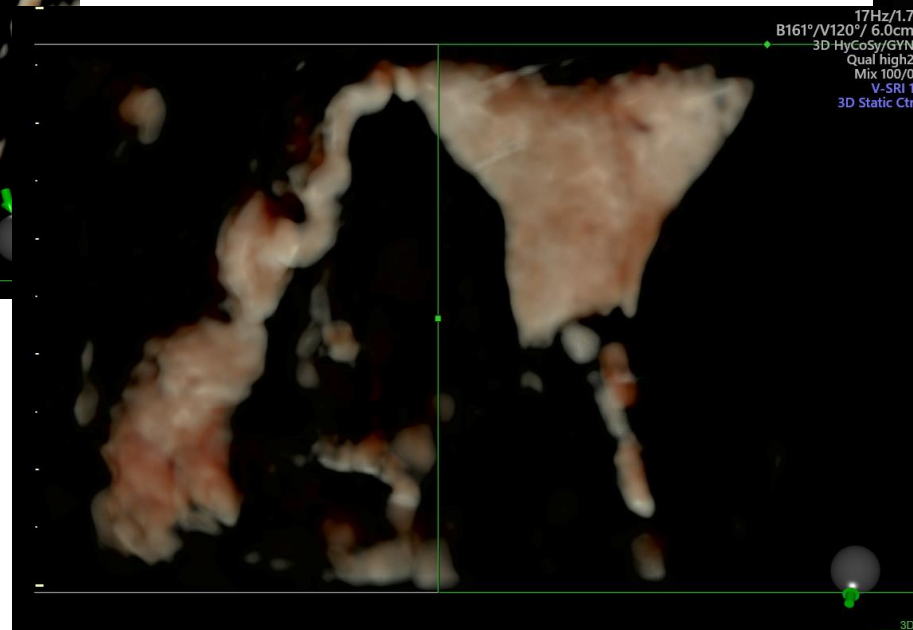
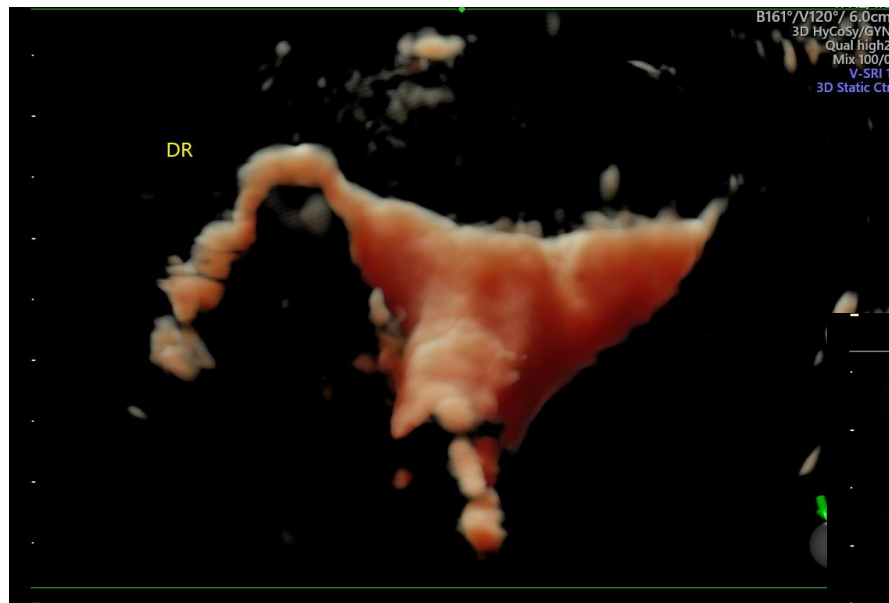
- OBSTRUCȚIE
TUBARĂ
PROXIMALĂ
DREAPTĂ

HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy)- CAZ 5

- OBSTRUCȚIE TUBARĂ PROXIMALĂ DREAPTĂ
- TROMPA STG PERMEABILĂ

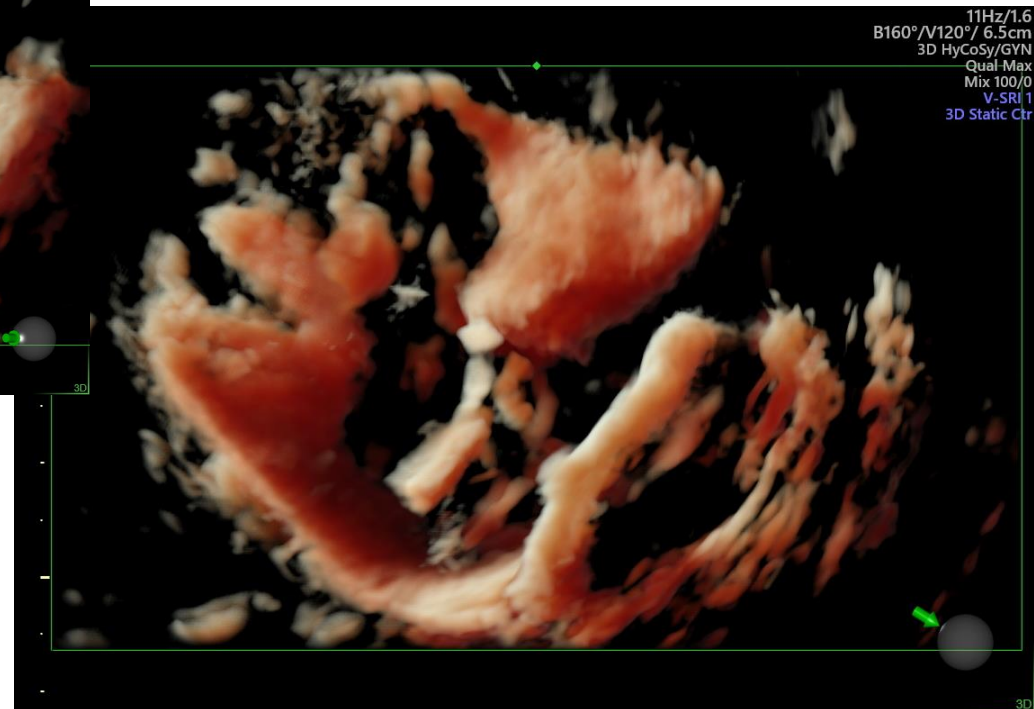
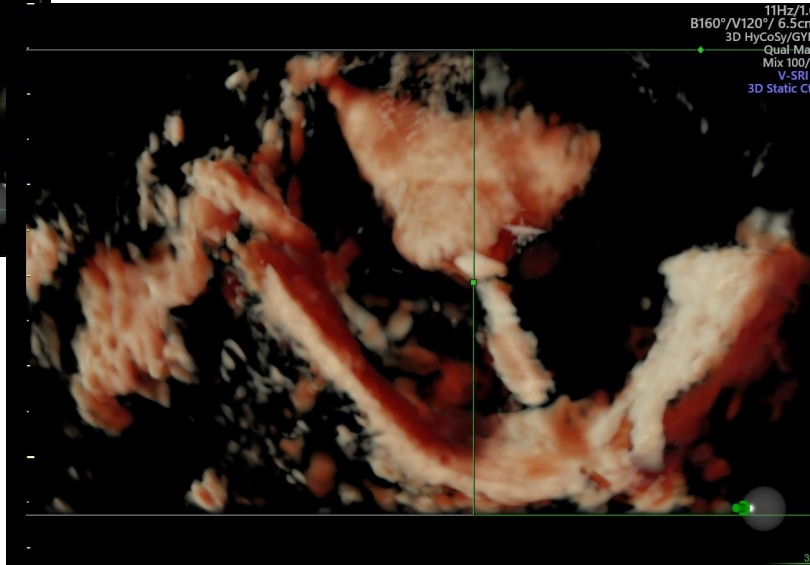
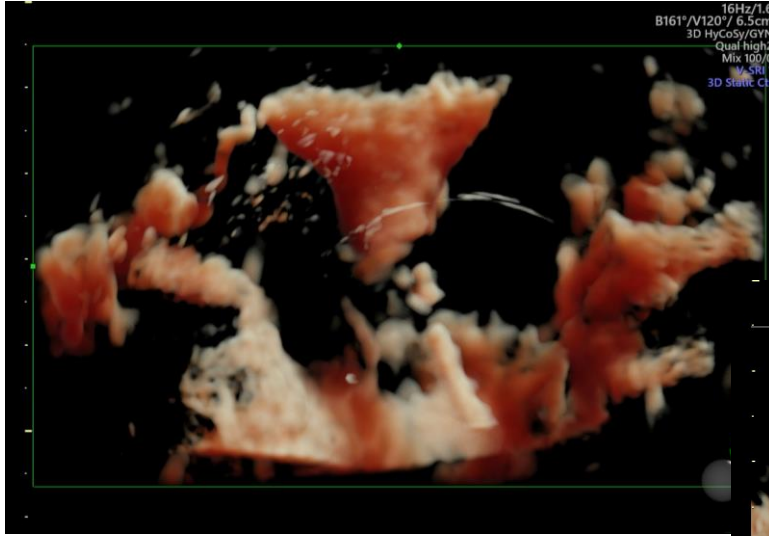


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) – CAZ 6



OBSTRUCȚIE TUBARĂ PROXIMALĂ STANGĂ

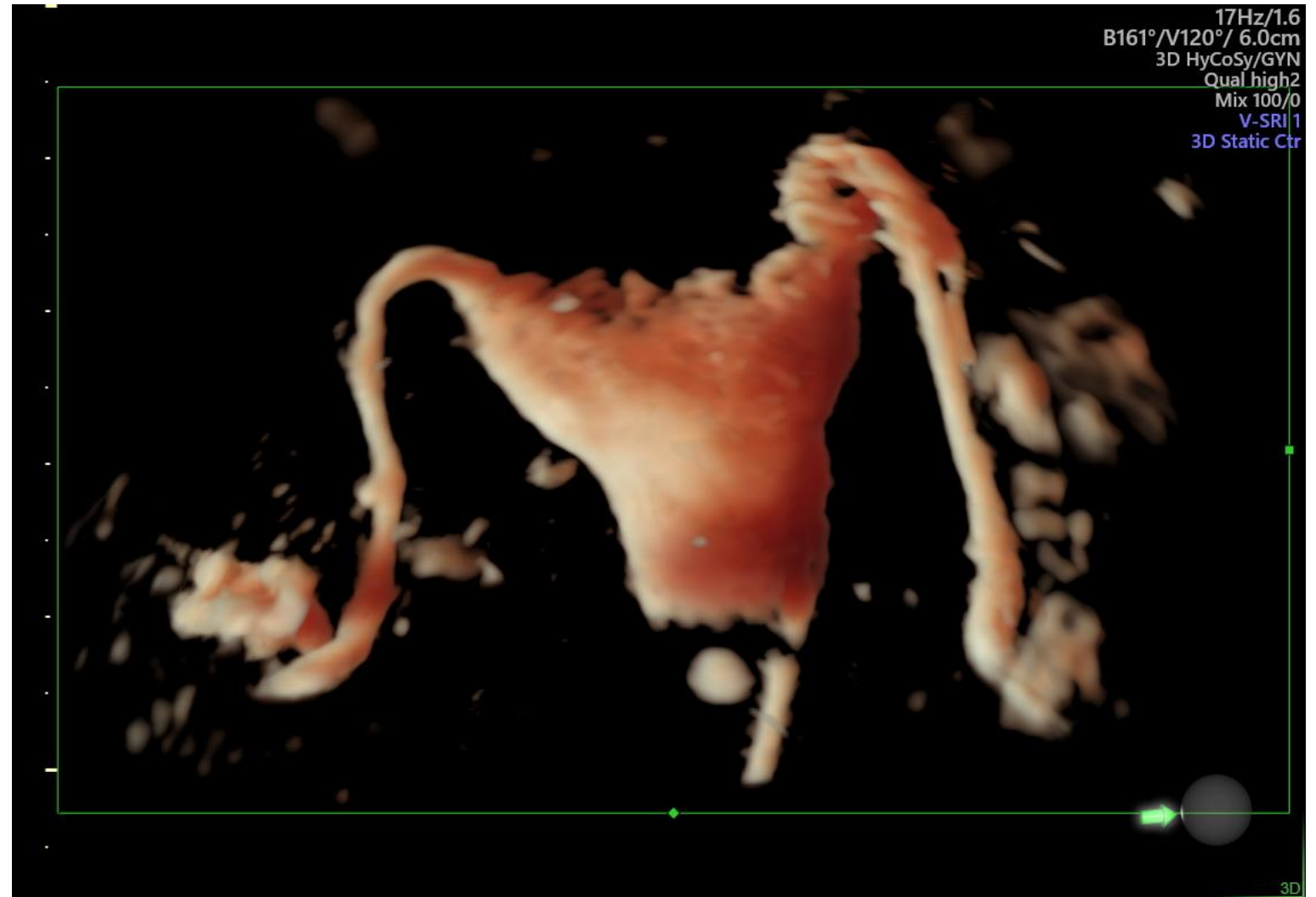
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 6



DIFUZIUNE MASIVĂ PERITONEALĂ

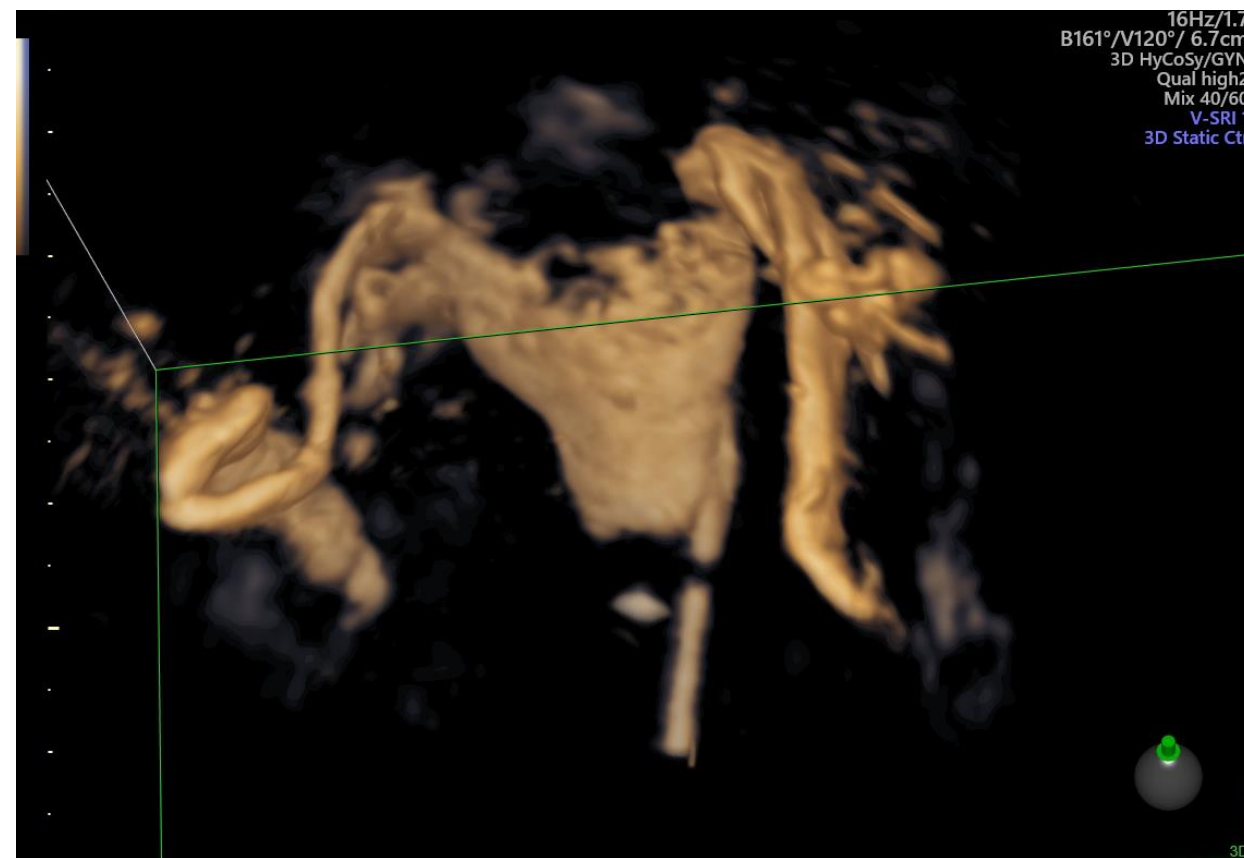
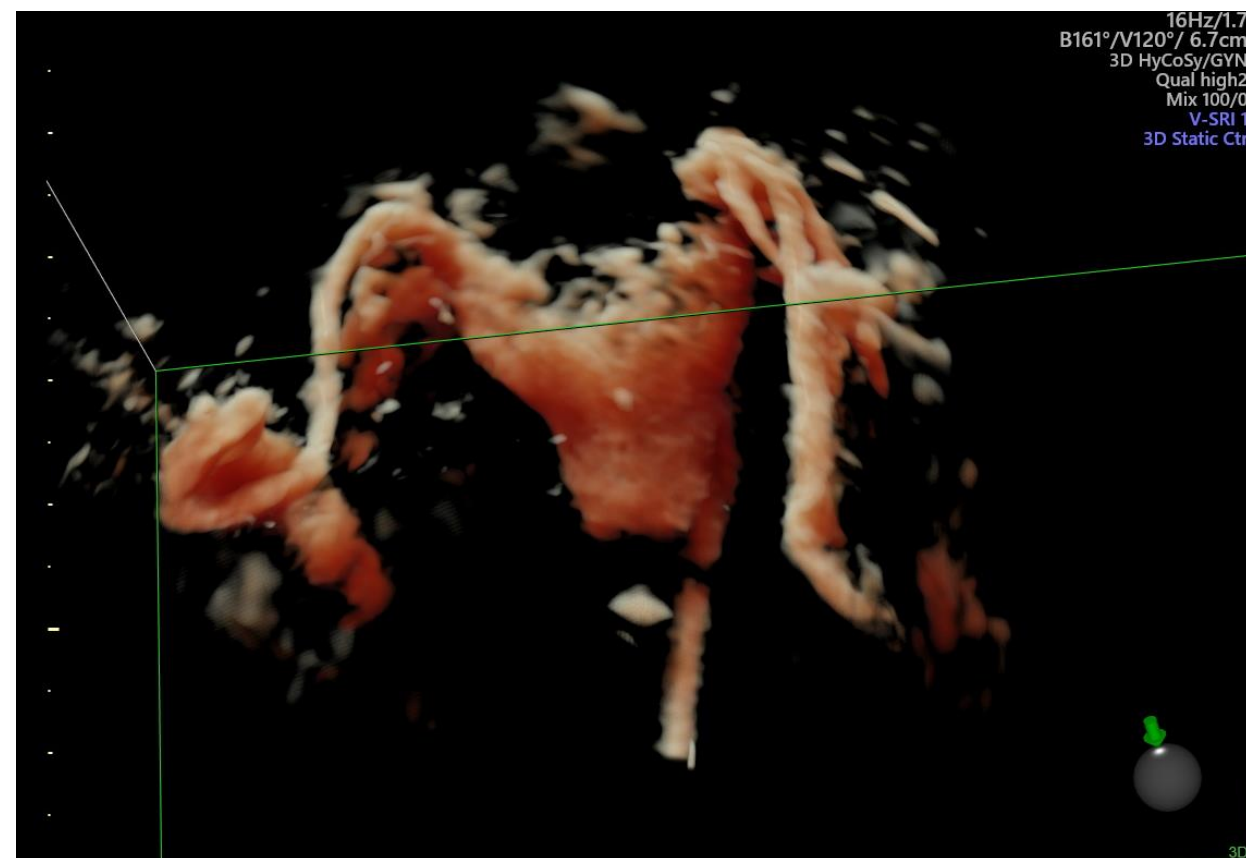
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 7

PERMEABILITATE TUBARA



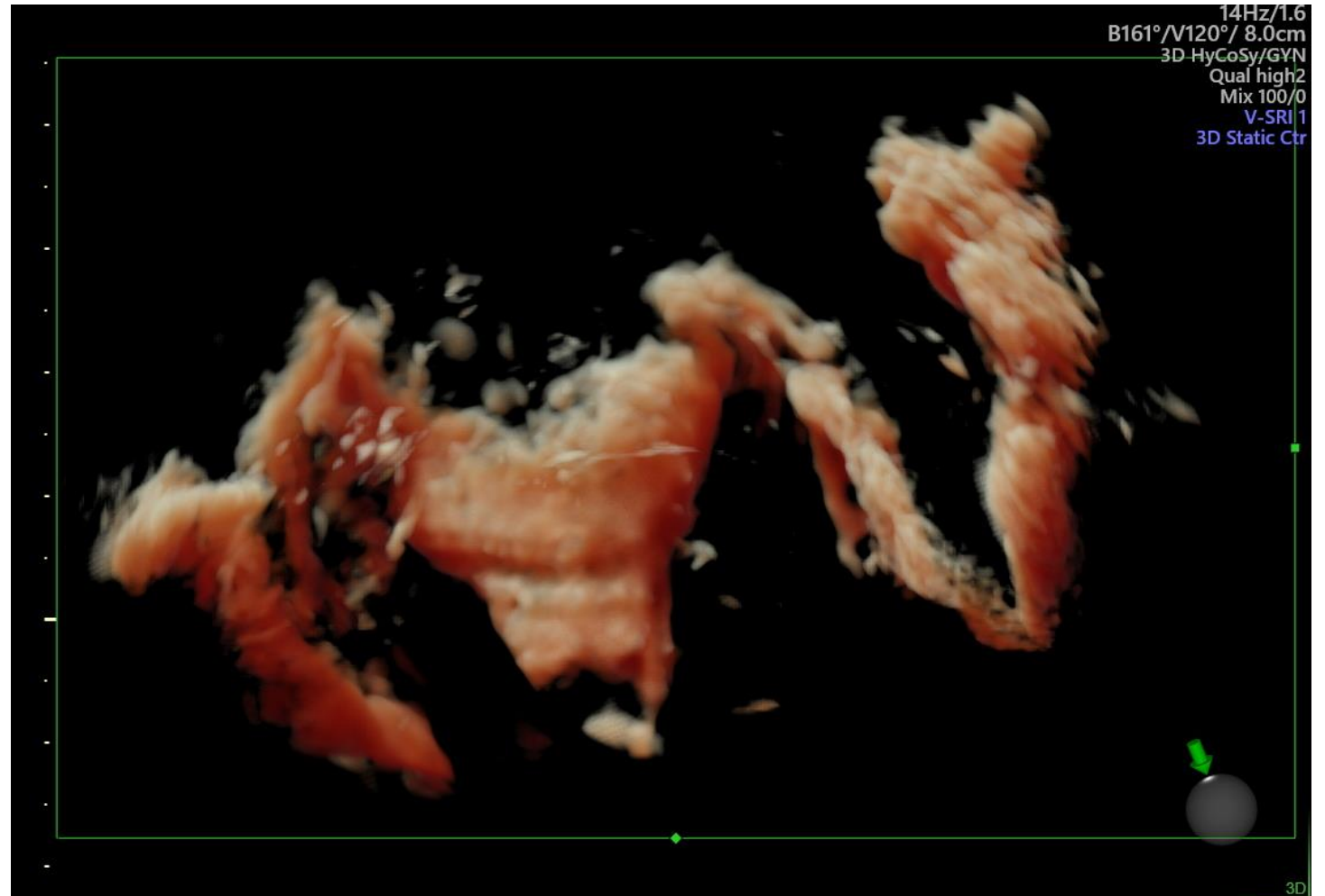
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 7

PERMEABILITATE TUBARĂ CU PROGRESIE
CĂTRE PORȚIUNEA PAVILIONARĂ



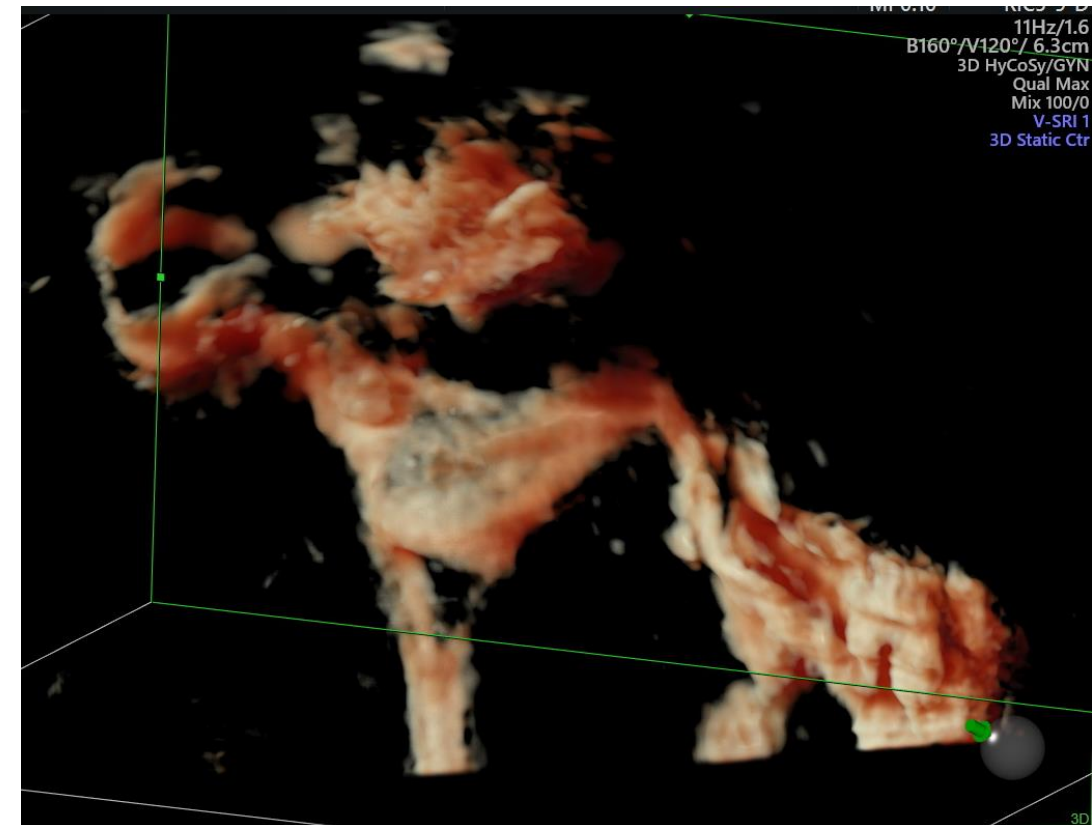
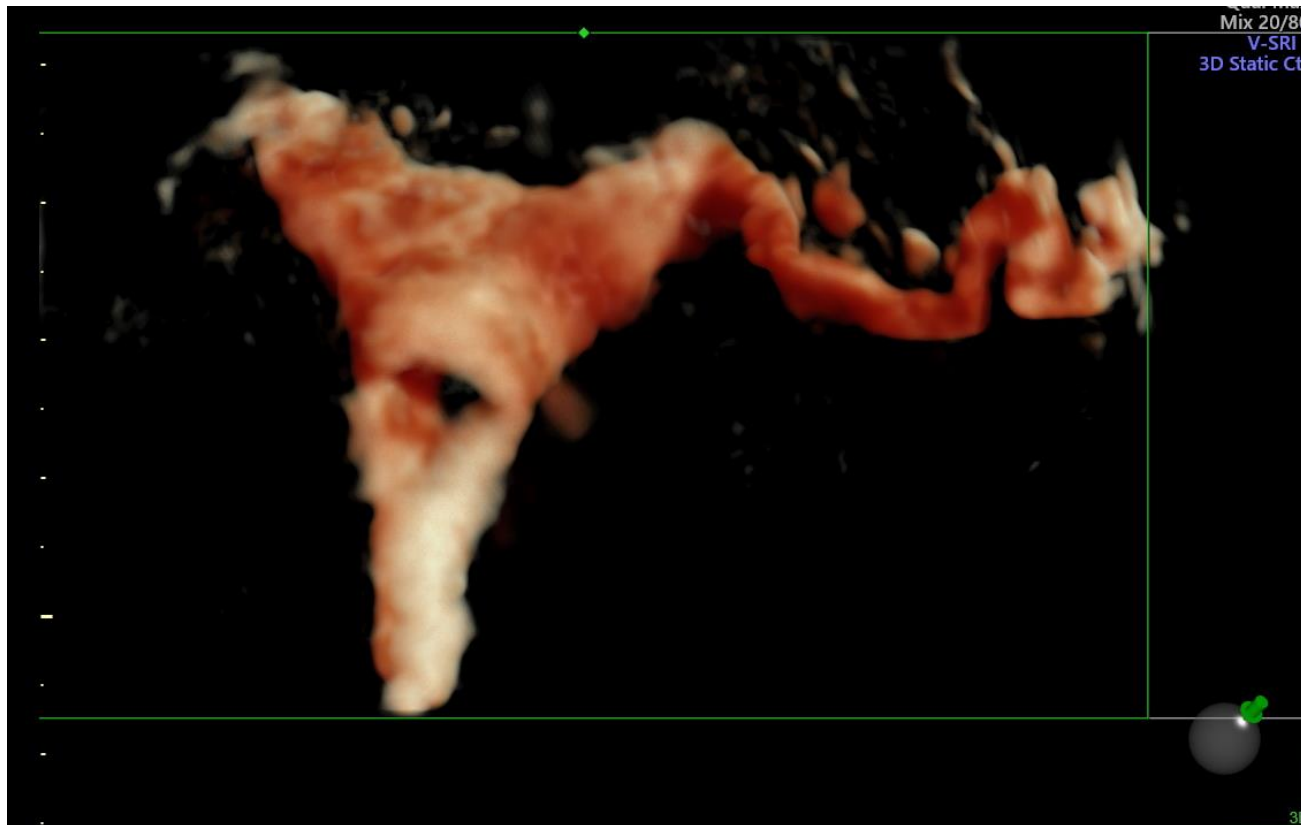
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 7

UMPLERE TUBARĂ PREZENTĂ, DAR FARĂ DIFUZIUNEA SUBSTANȚEI DE CONTRAST N PERITONEU



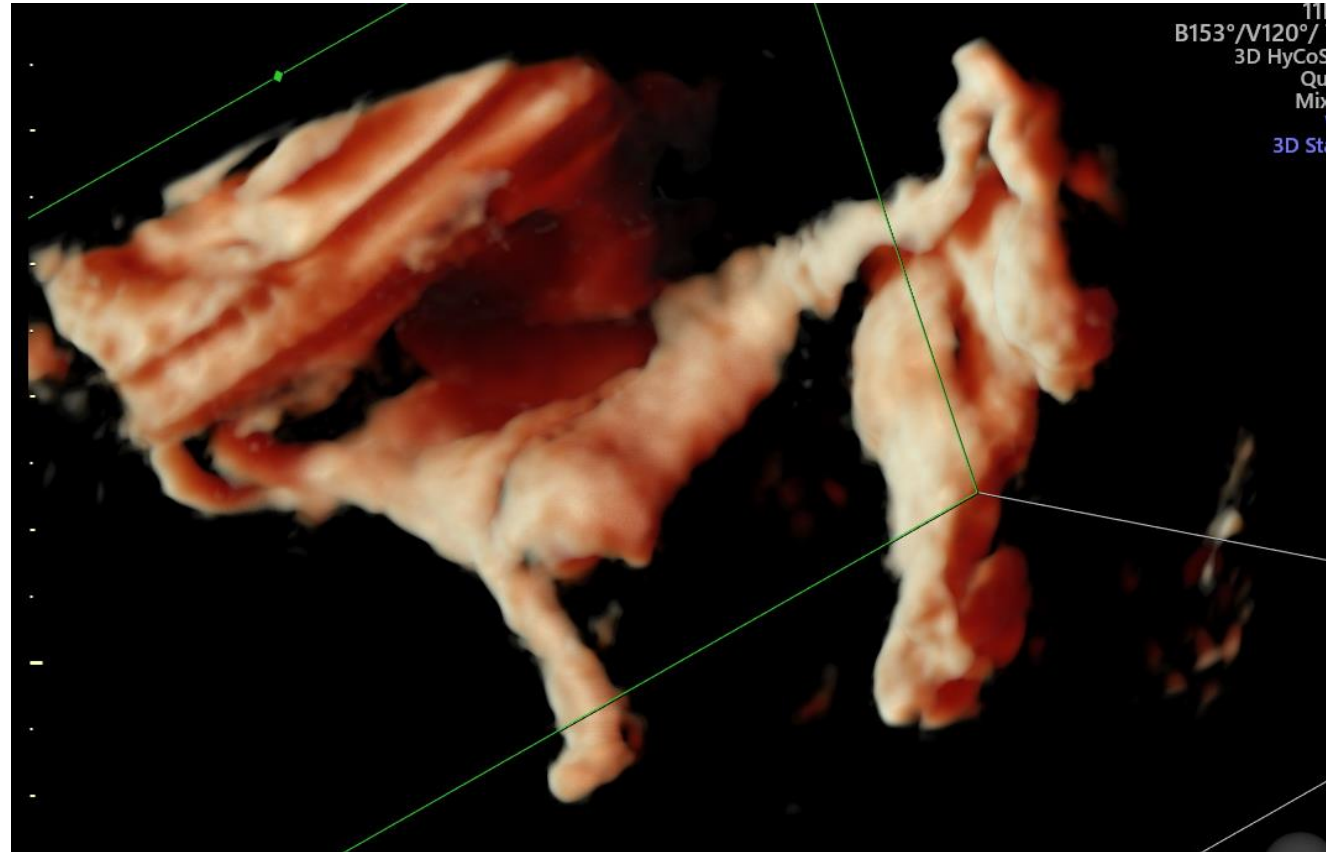
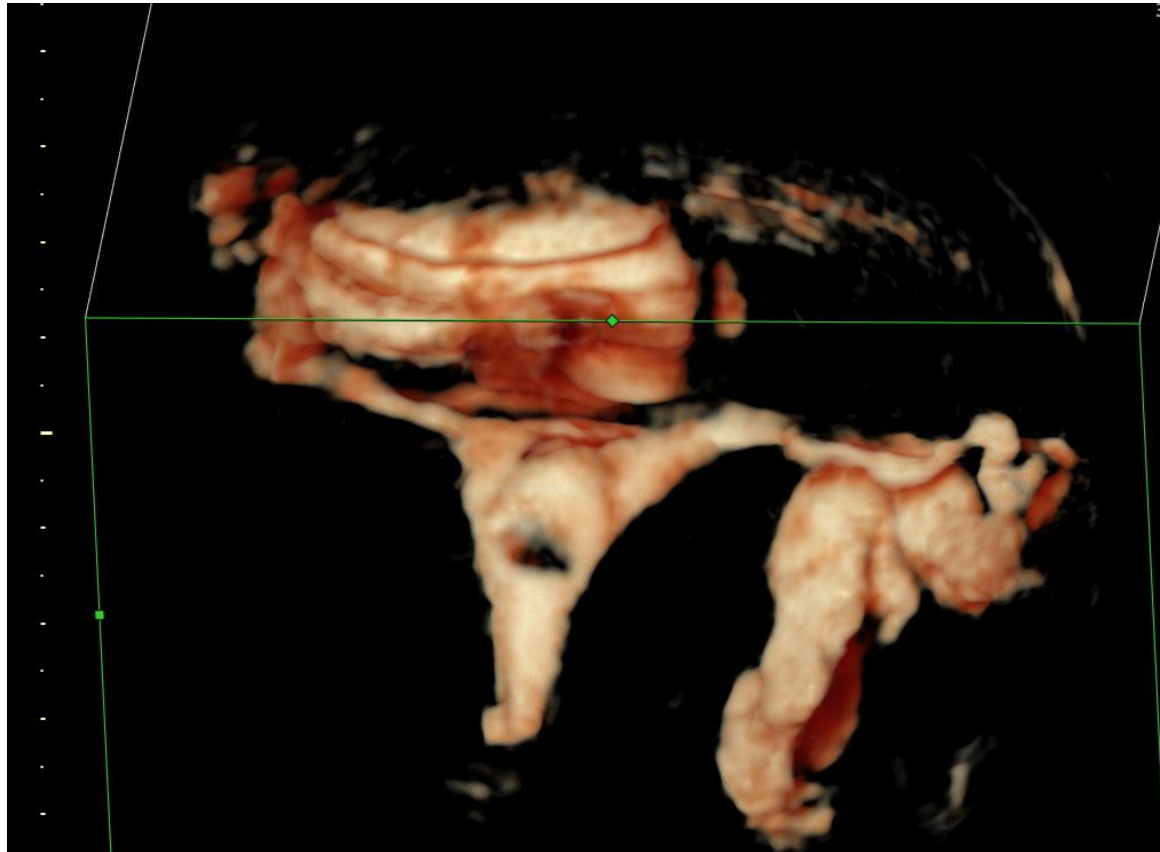
HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 8

OPACIFIEREA PROGRESIVĂ A TROMPEI STANGI INITIAL, APOI A TROMPEI DREPTE

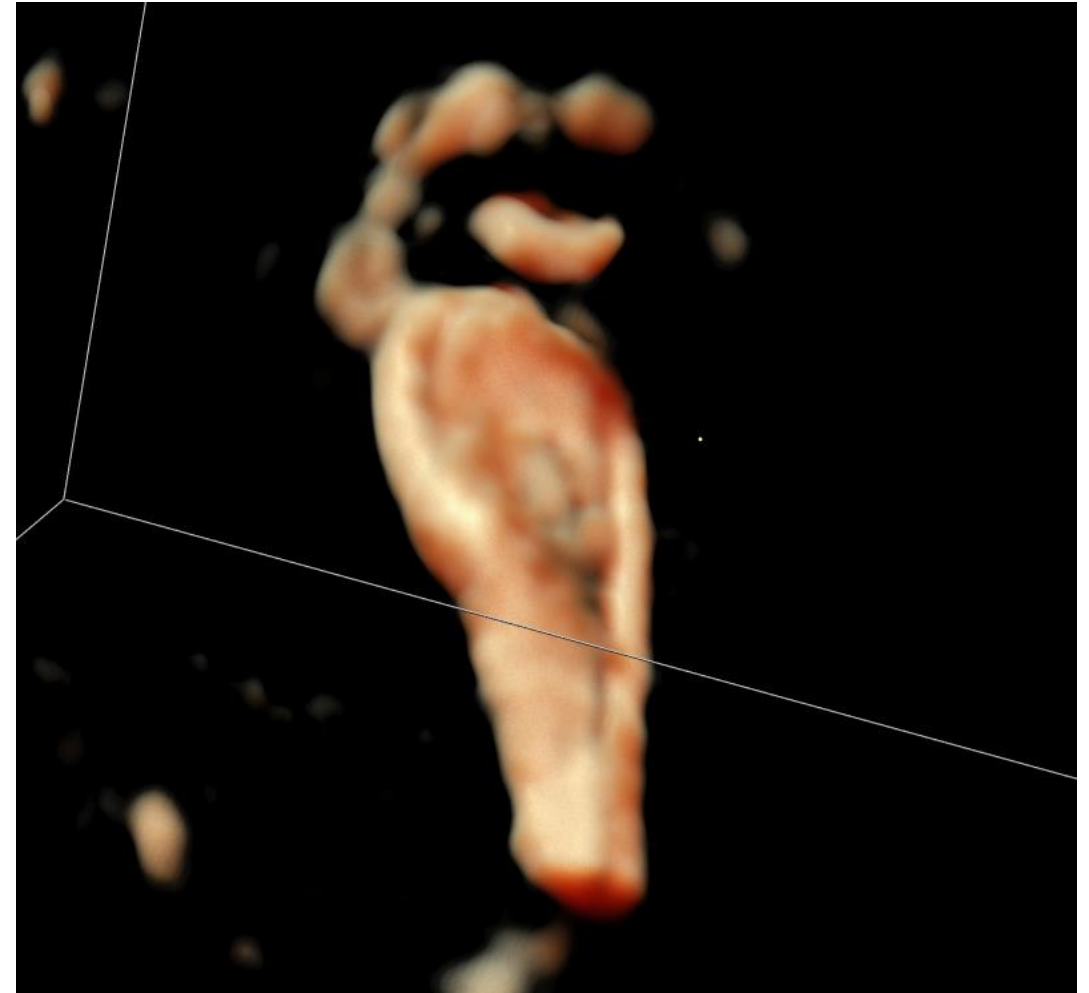


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 8

UMPLERE BILATERALĂ CU ACUMULARE PROGRESIVĂ AMPULO-PAVILIONARĂ, FĂRĂ DIFUZIUNE PERITONEALĂ
ASPECT DE HIDROSALPINX BILATERAL

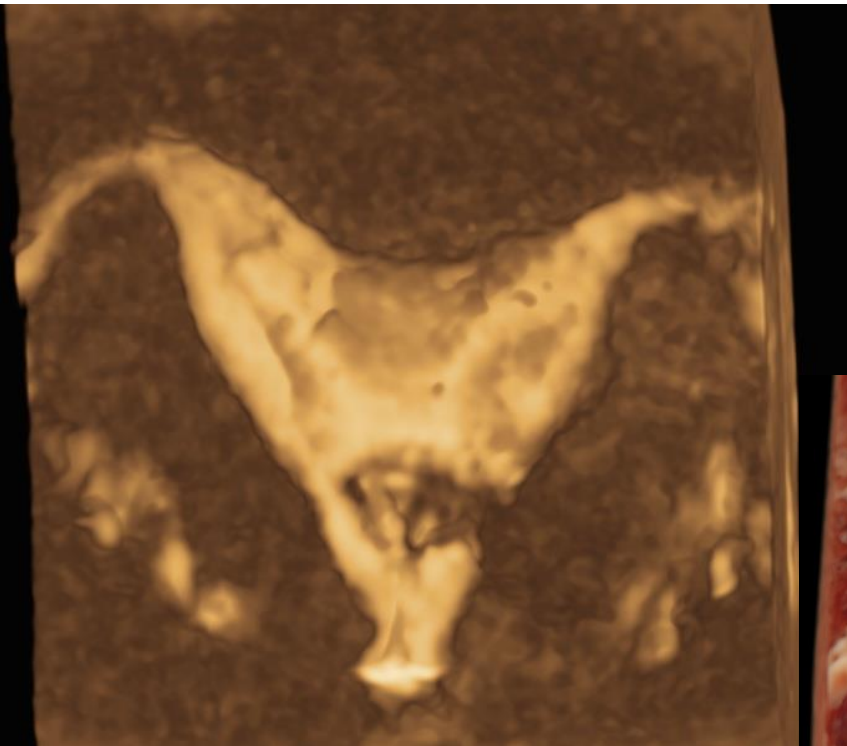


HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 9

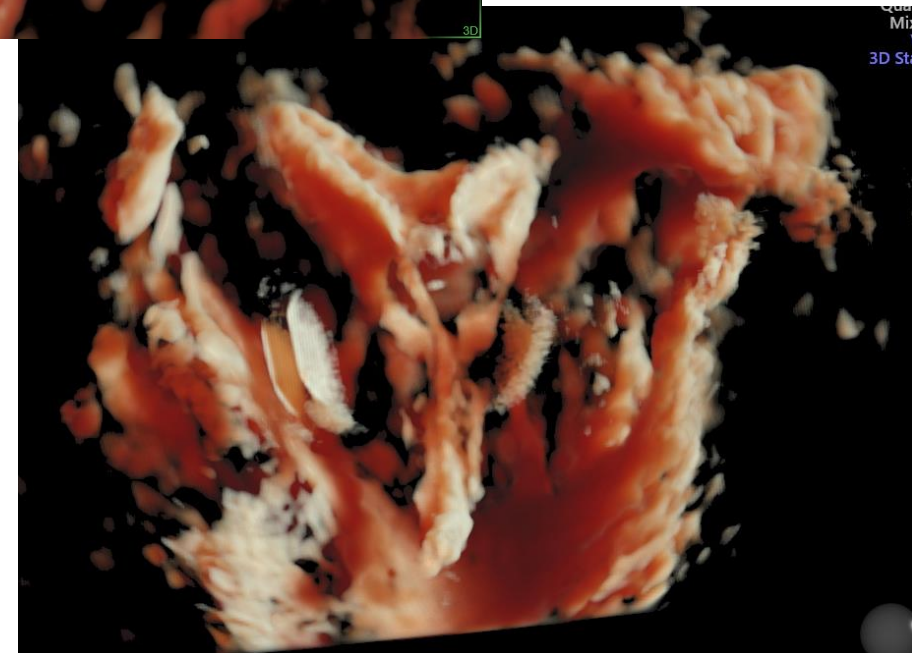
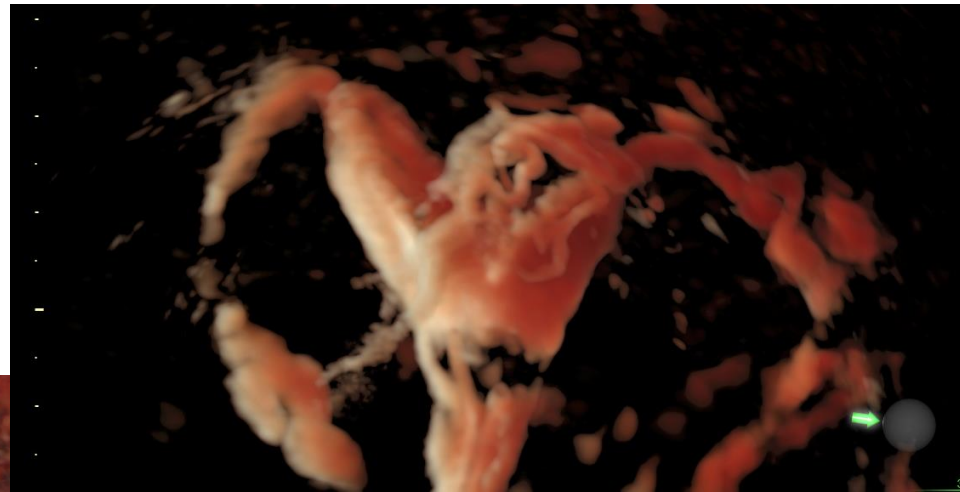


OBSTRUCTI TUBARA PROXIMALĂ BILATERALĂ

HISTERO SONO SALPINGO GRAFIA CU SUBSTANȚĂ DE CONTRAST (HyCoSy/HyFoSy) - CAZ 10

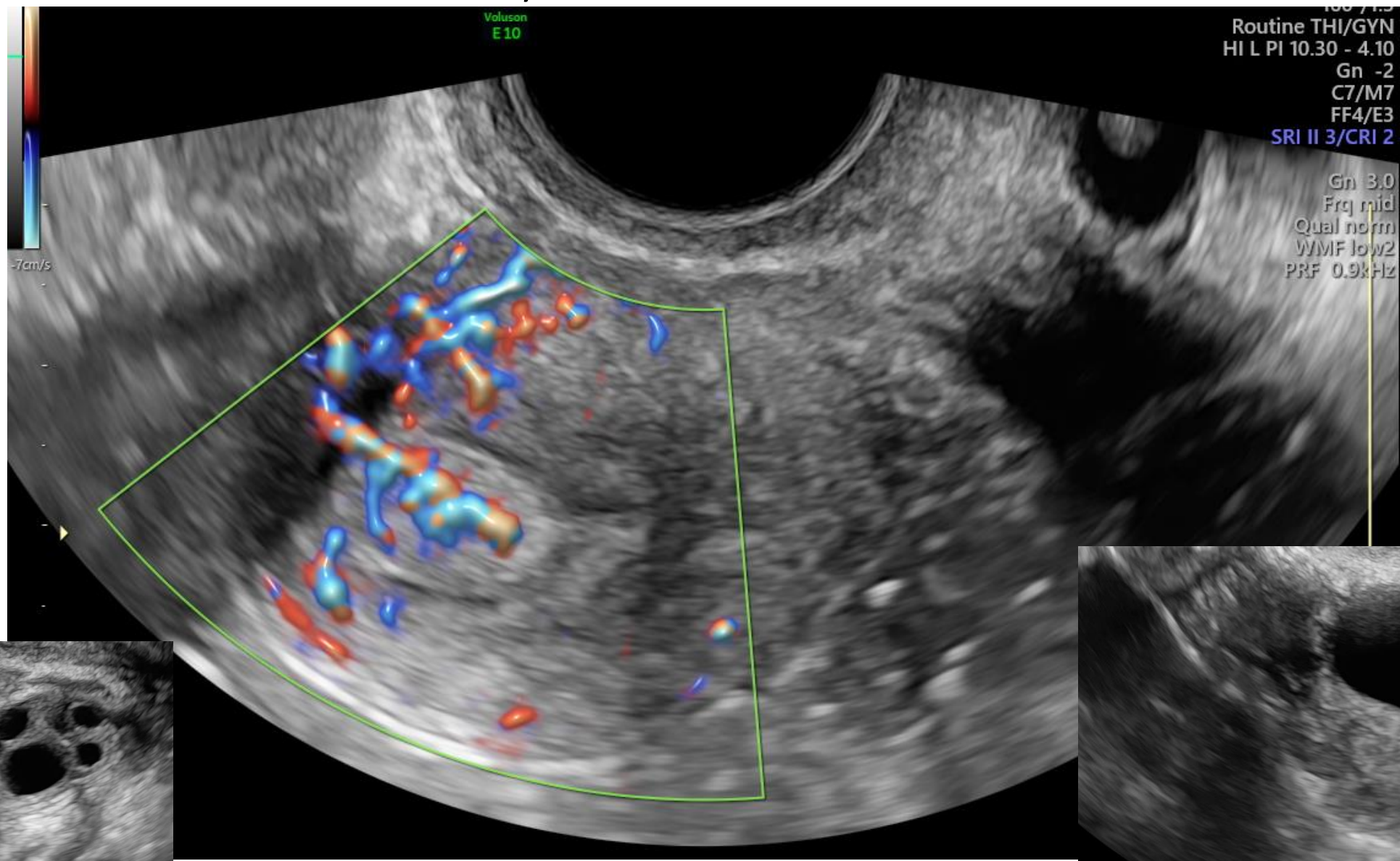


UTER ARCUAT



ULTIM CAZ

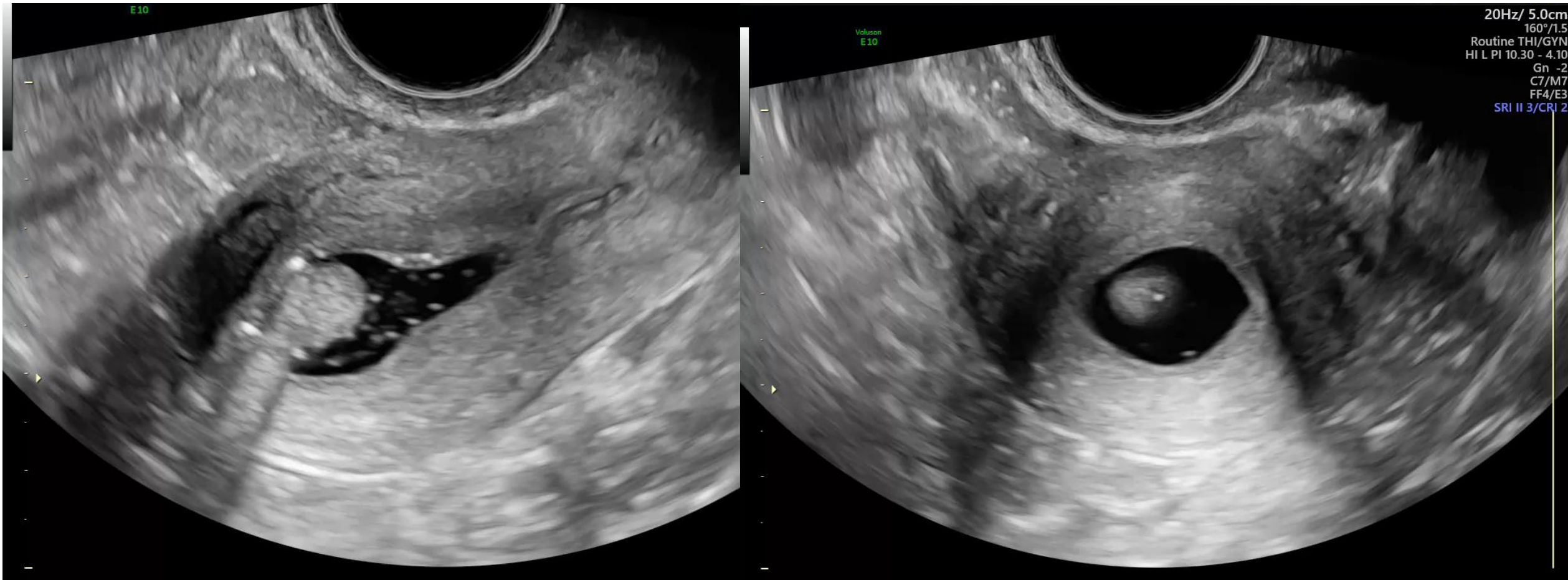
INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



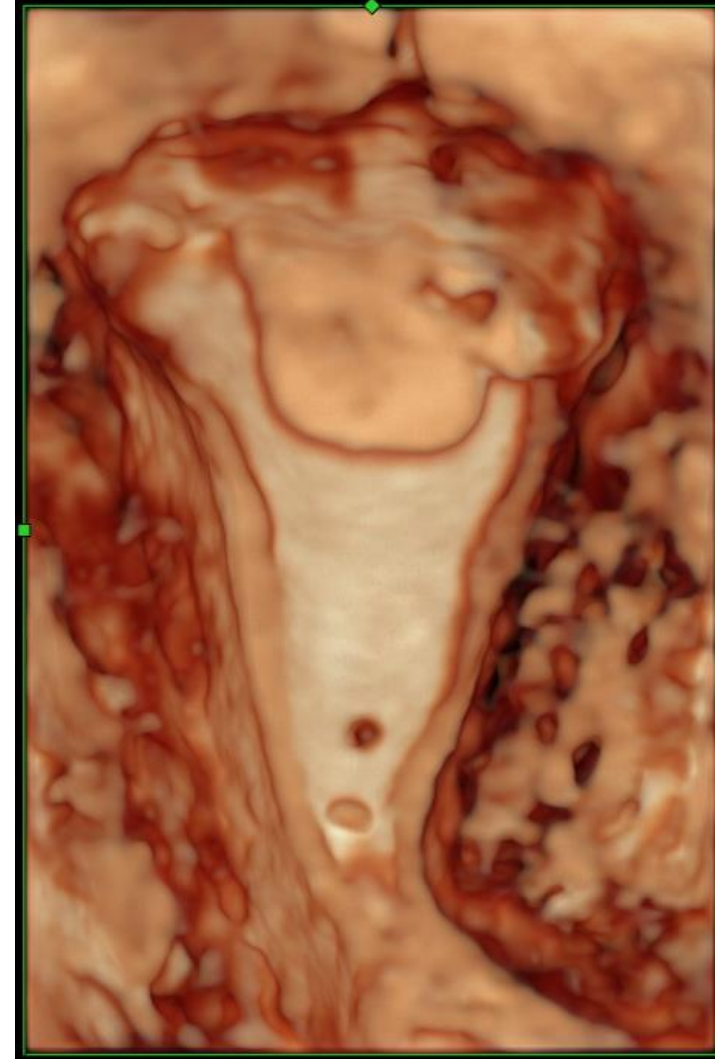
INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



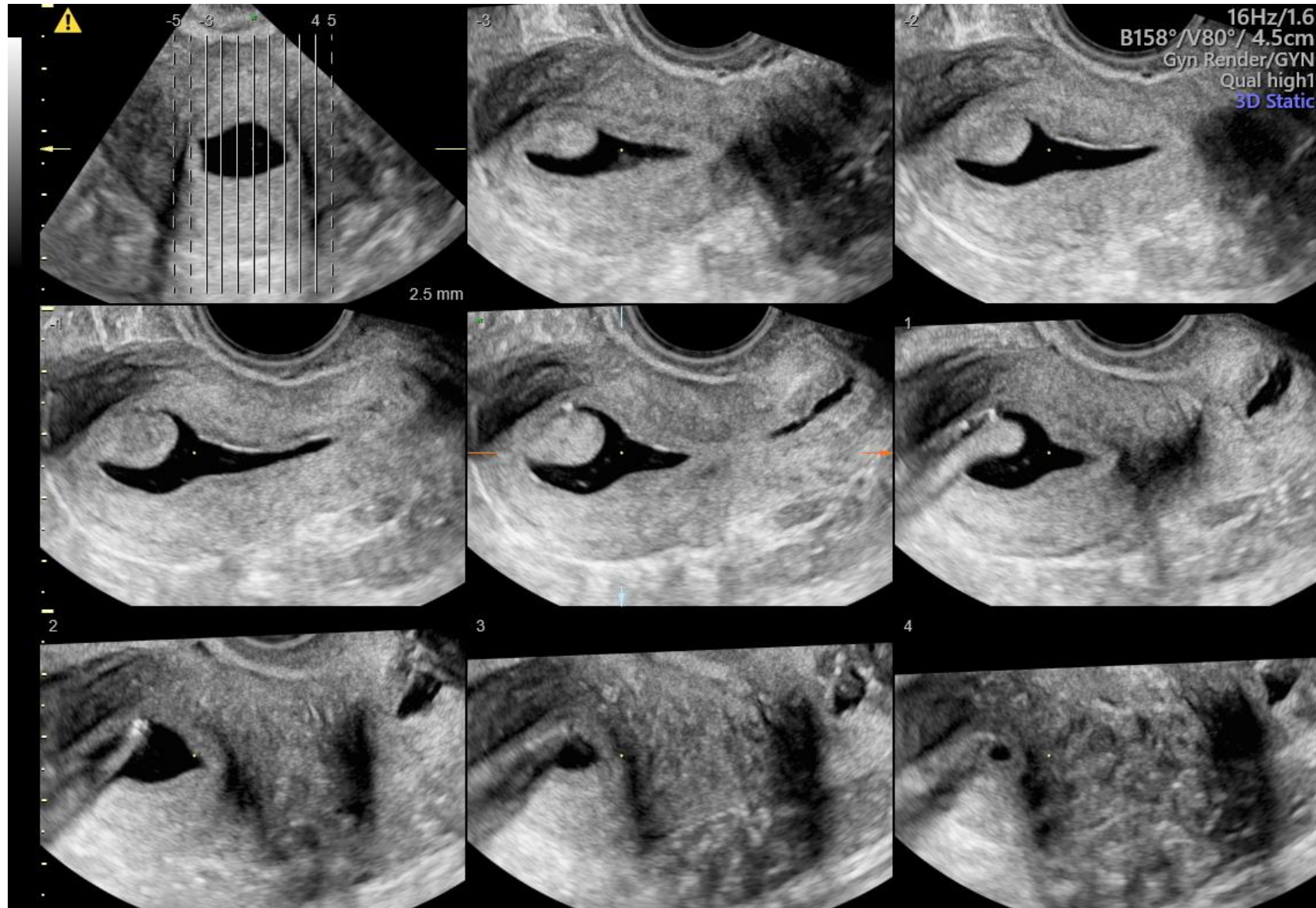
INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



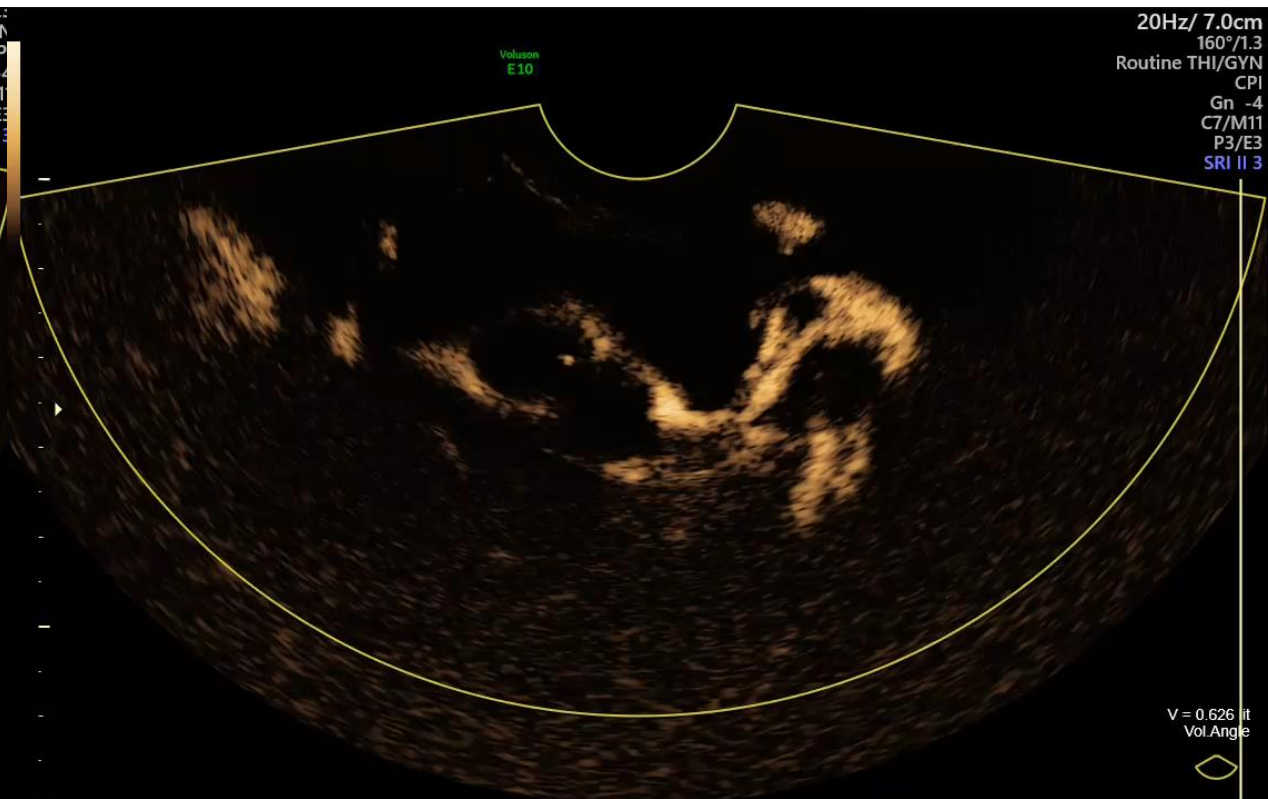
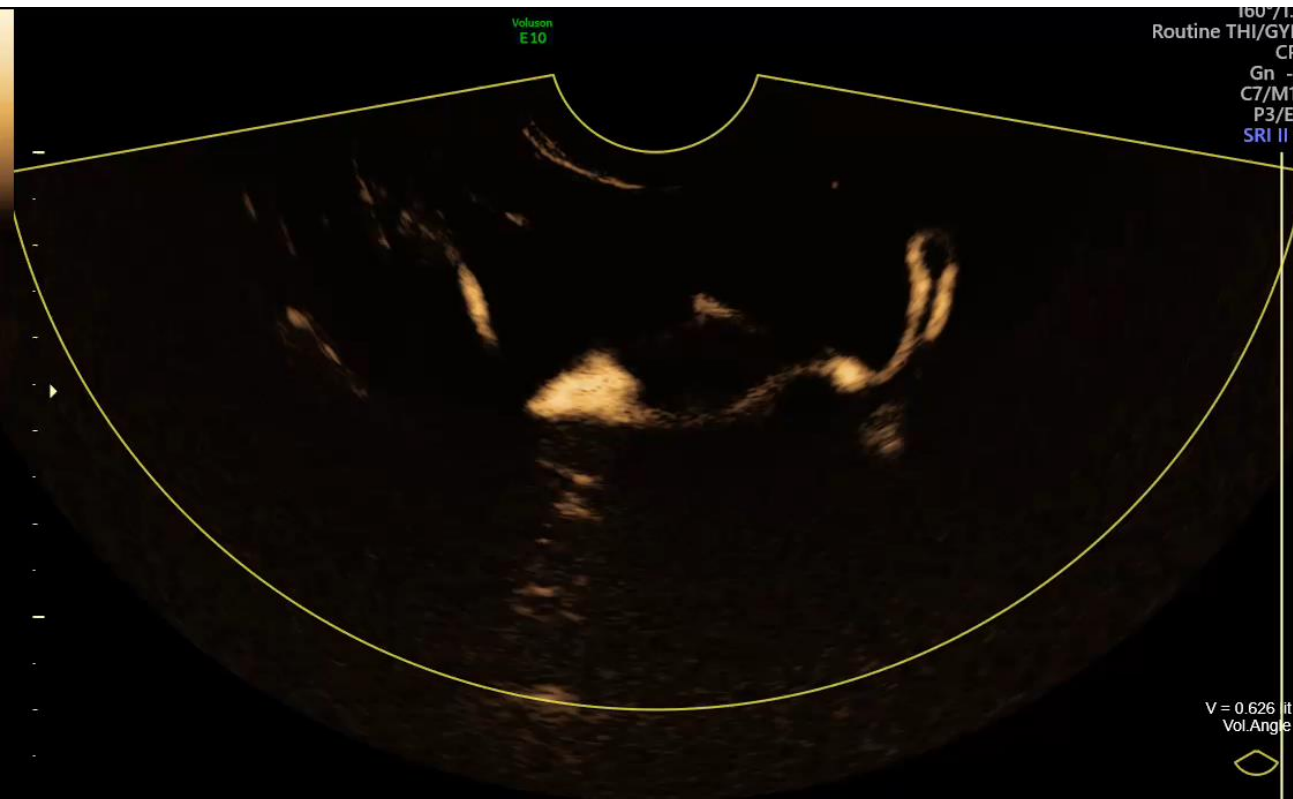
INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



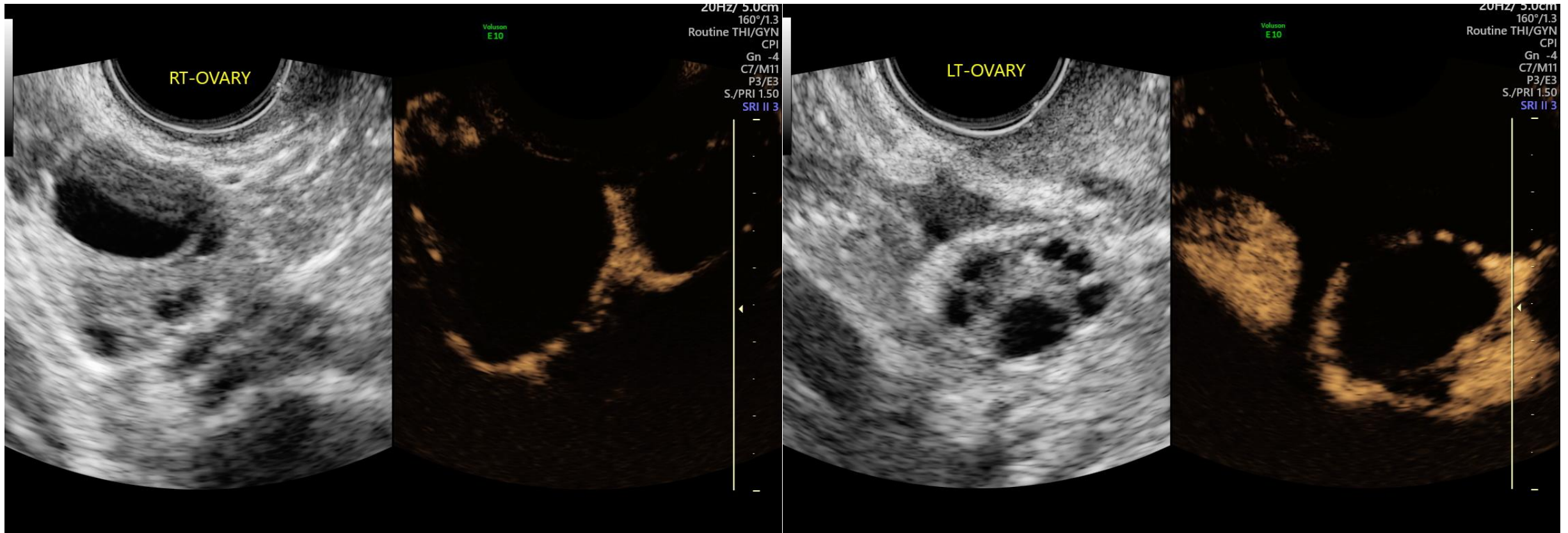
INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



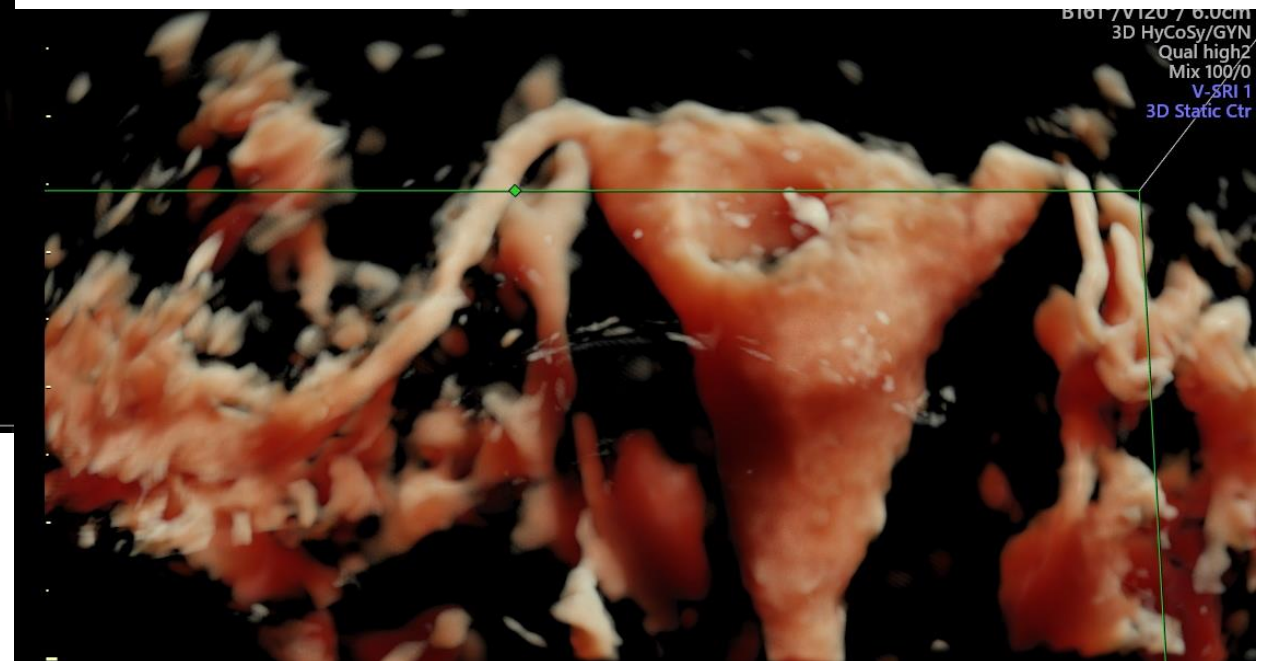
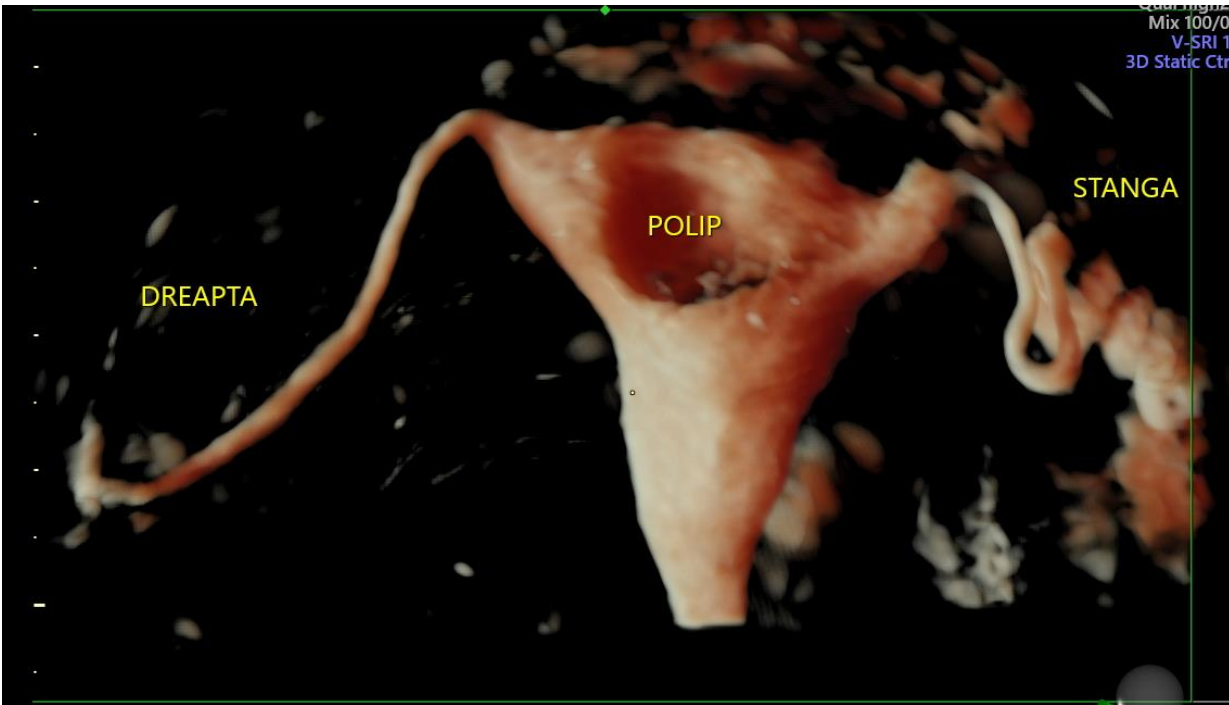
INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



INVESTIGAREA TRACTULUI UTERO-TUBAR CU SUBSTANȚĂ DE CONTRAST



VĂ MULȚUMESC!