

Testis diameters

longitudinal

(length)

L

lateral-medial

(width)

W

anterior-posterior

(height)

H

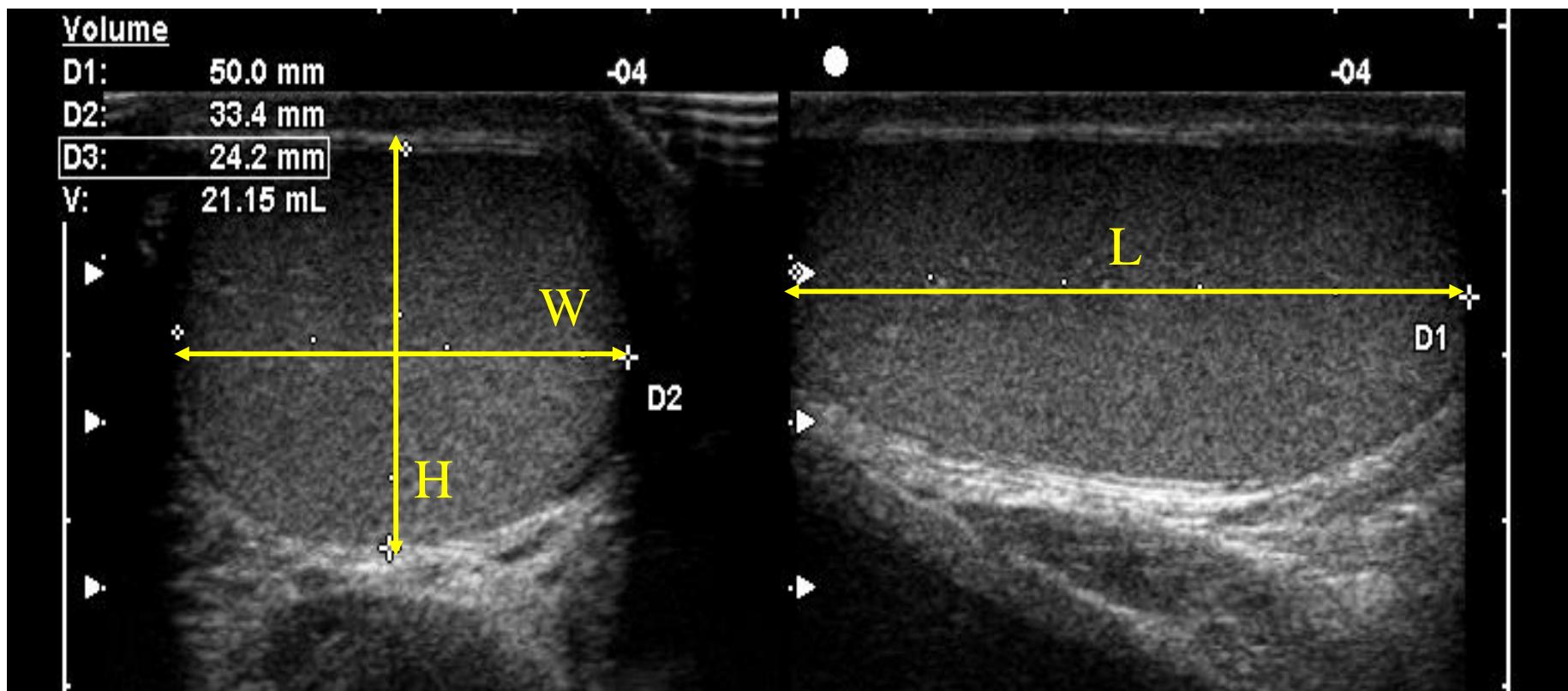
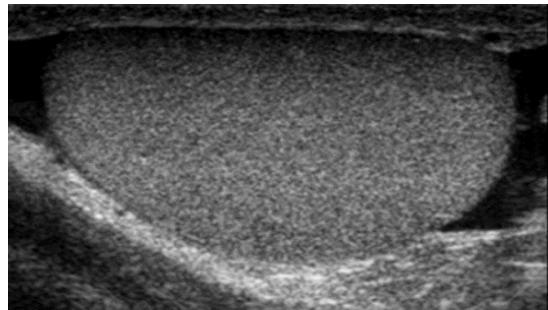
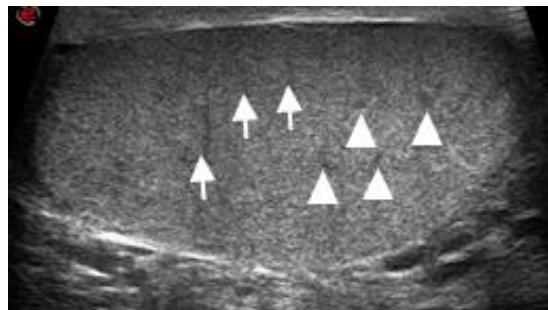


Fig. 1

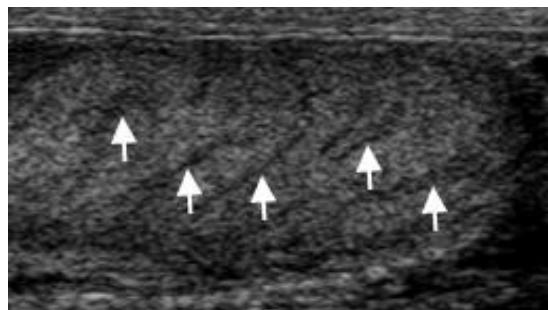
Testis homogeneity



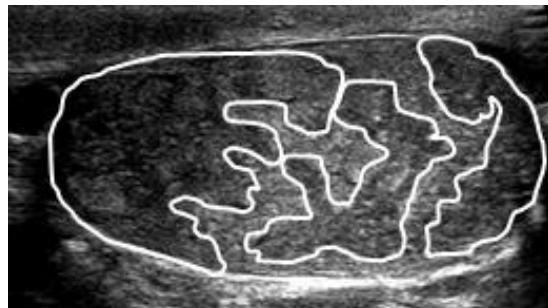
0.Homogeneous



1.Mild inhomogeneity
(little hypoechoic areas –arrows- /
thin hypoechoic striae –arrowheads-)



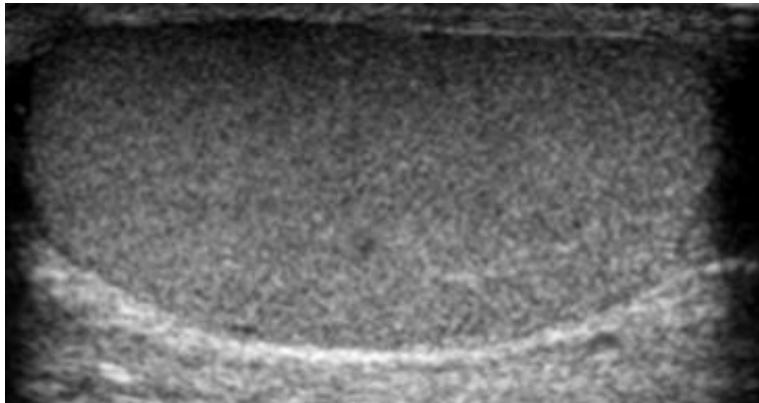
2.Moderate inhomogeneity
(thick hypoechoic striae –arrows-)



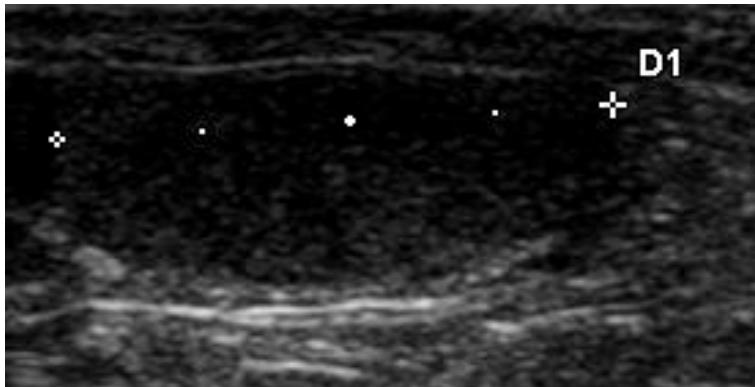
3.Severe inhomogeneity
(diffuse, «netting» / «geographical map»
appearance)

Fig. 2

Testis echogenicity



0.Normal echogenicity



1.Hypoechoic

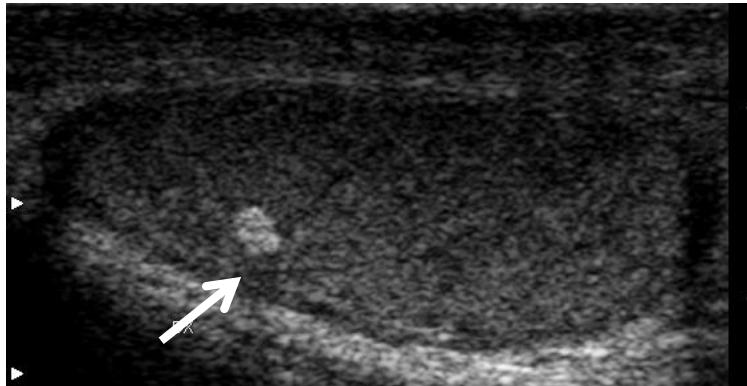


2.Hyperechoic

Fig. 3

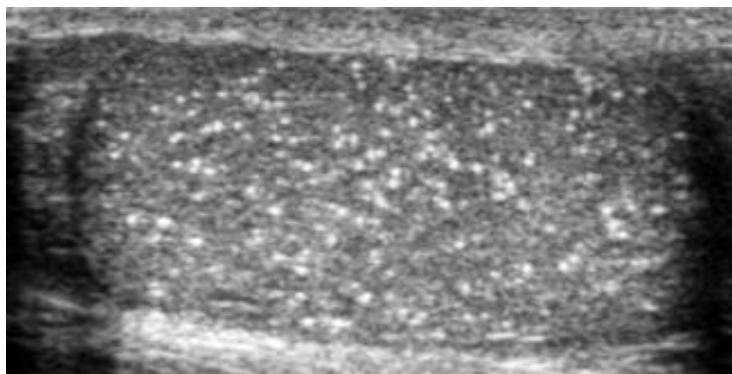
Testis calcifications

A



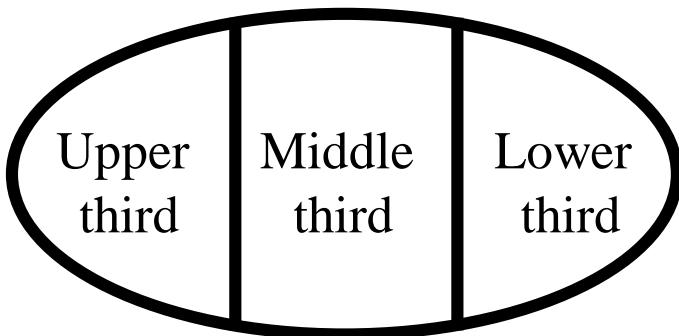
Single calcification,
macro-calcification (> 3 mm),
one calcification/US field

B



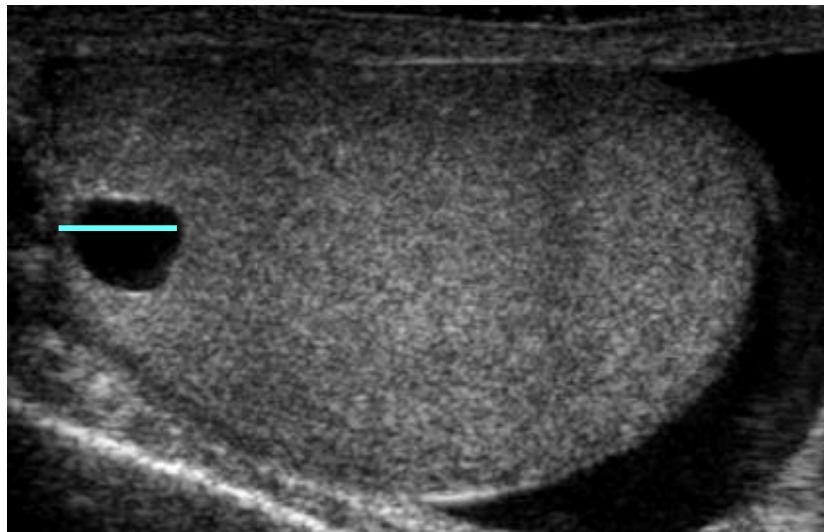
Diffuse micro-calcifications

C



Arbitrary division of the testis
in three areas,
to localize the calcification

Fig. 4



A. Testicular **cyst**,
upper lobe,
longitudinal diameter

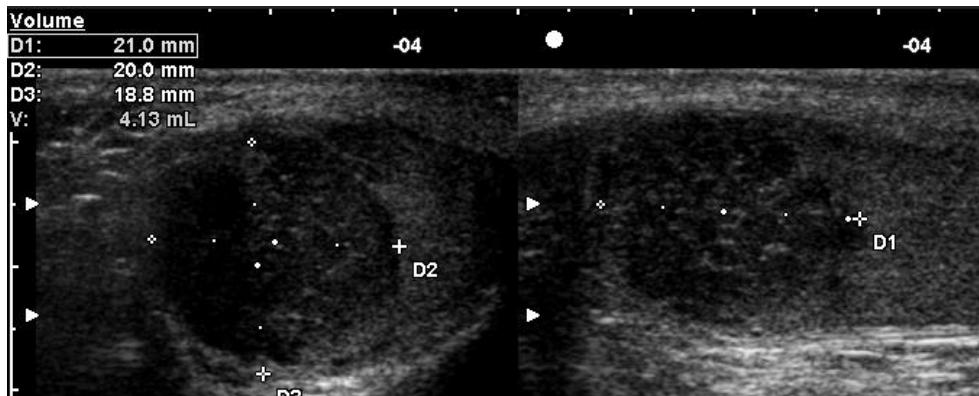


B. Dilated
rete testis,
3 diameters

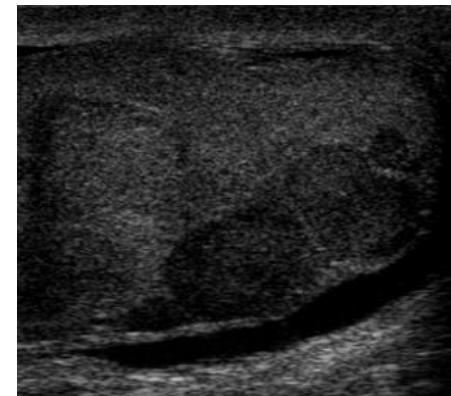
Fig. 5

Nodules:

-3 diameters



-Homogeneity (*left*) or
inhomogeneity/cysts (*right*)

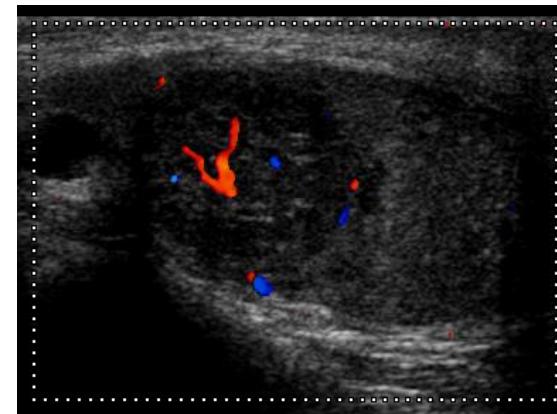


-Echogenicity (normal, hypo or hyper)



-Calcifications

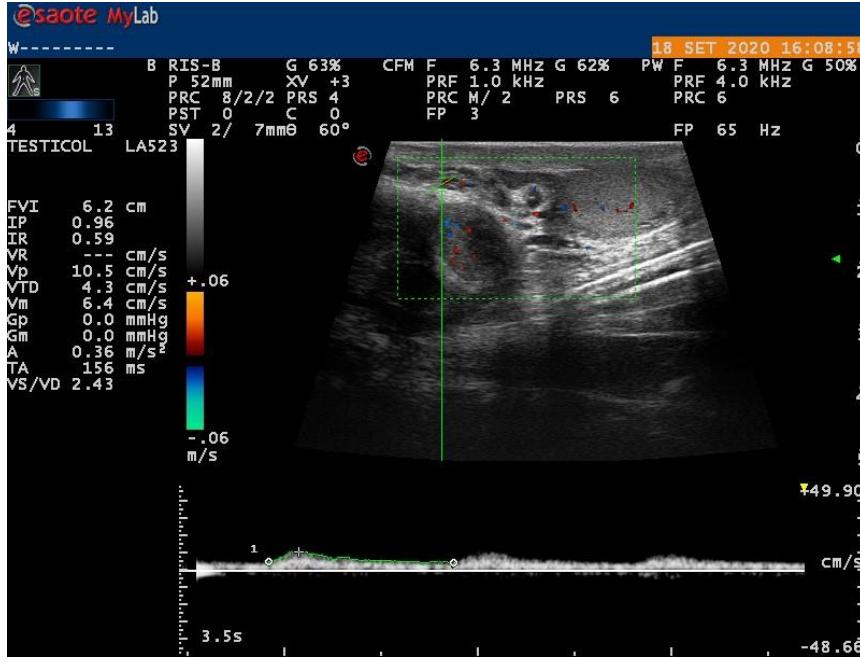
-Shape { -regular
-irregular



- Vascularization
 - absent
 - peripheral/«basket»
 - intranodular

Fig. 6

Testis vascularization

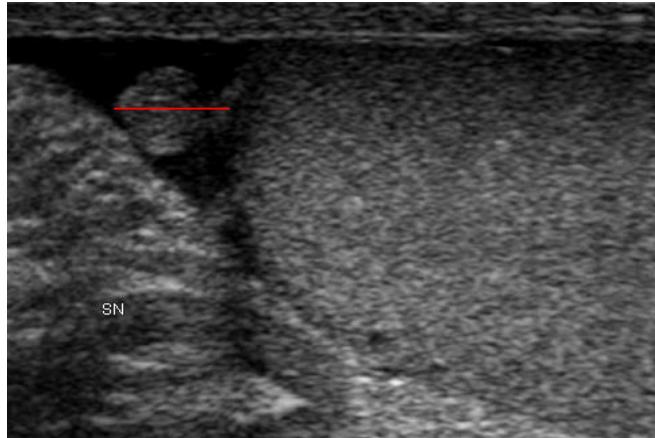


- A. Testicular artery, in the spermatic cord**
- peak systolic velocity (PSV) (Vp)
 - acceleration
 - RI: resistive index
 - PI: pulsatility index



- B. Intratesticular artery,**
- peak systolic velocity (PSV) (Vp)
 - acceleration
 - RI: resistive index
 - PI: pulsatility index

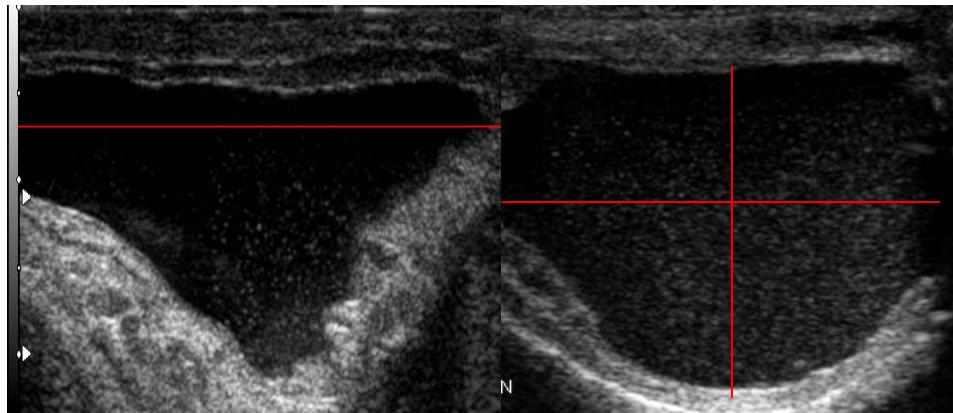
Fig. 7



A. Testicular **appendix**,
longitudinal diameter



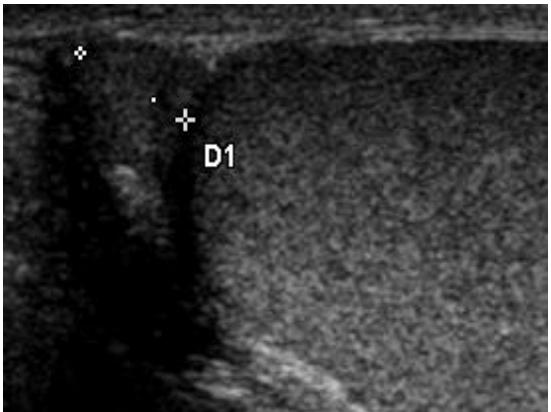
B. Extratesticular **calcification**,
longitudinal diameter



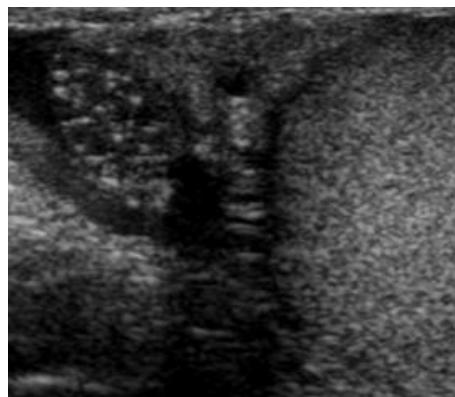
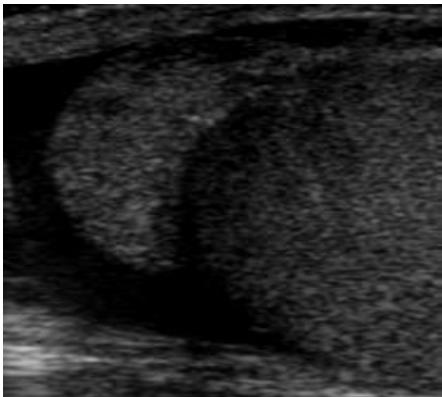
C. **Hydrocele**,
3 diameters

Fig. 8

Epididymal head

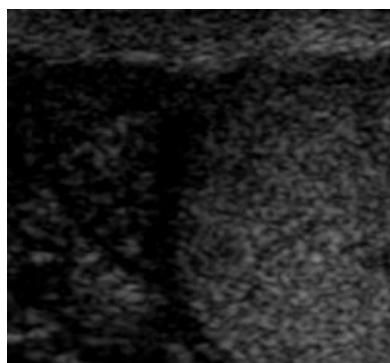


A. Longitudinal diameter



B. Homogeneous (*left*)

Inhomogeneous (*right*)



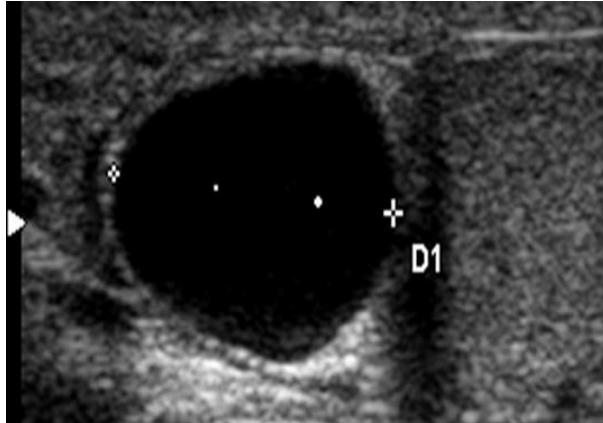
C. Normal echogenicity
(*left*)

Hypoechoic (*middle*)

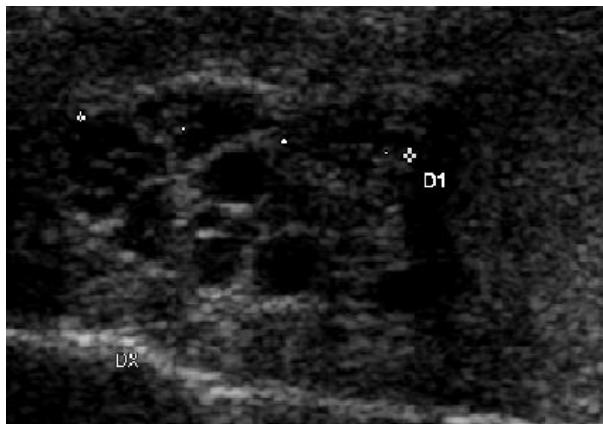
Hyperechoic (*right*)

Fig. 9

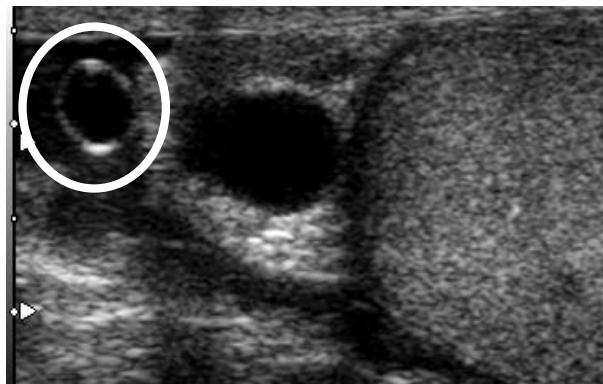
Epididymal head cysts and appendices



A. Epididymal head,
longitudinal diameter of a cyst



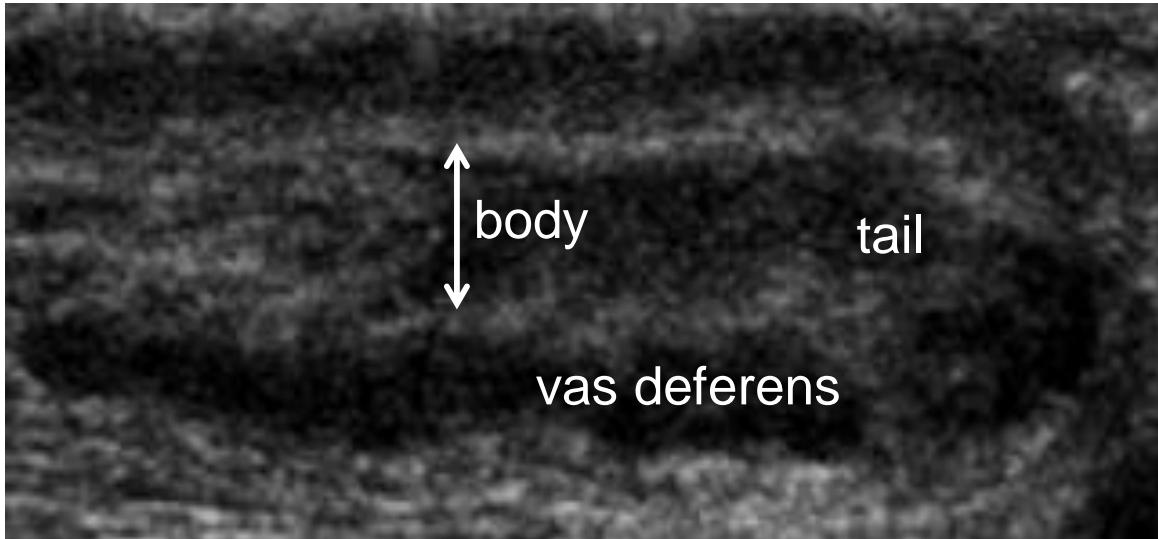
B. Epididymal head,
policystic pattern



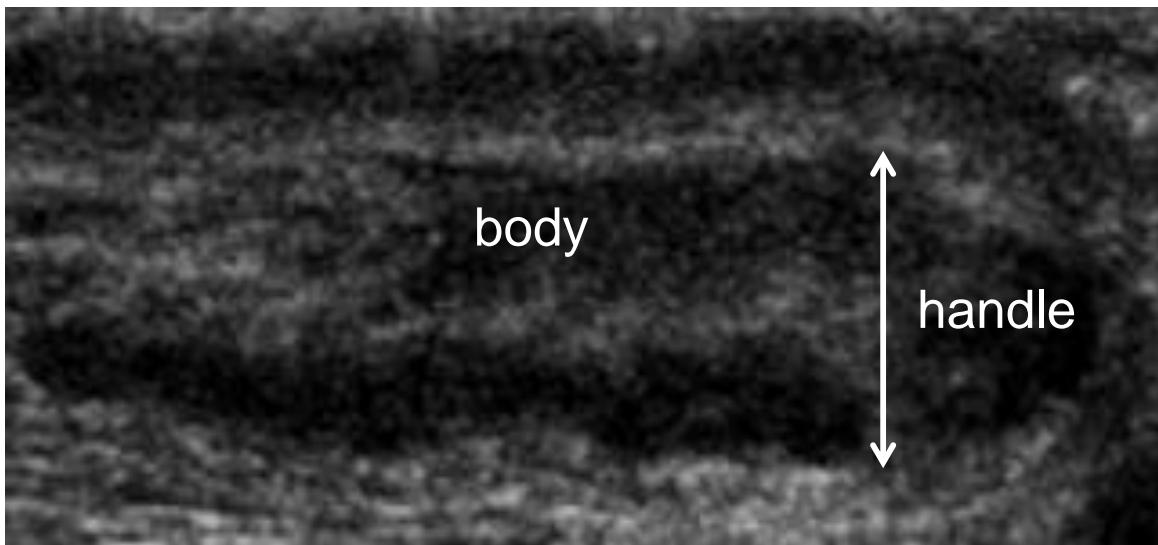
C. Cyst of the epididymal head
and cystic appendix (*white circle*)

Fig. 10

Epididymal body, tail, vas deferens



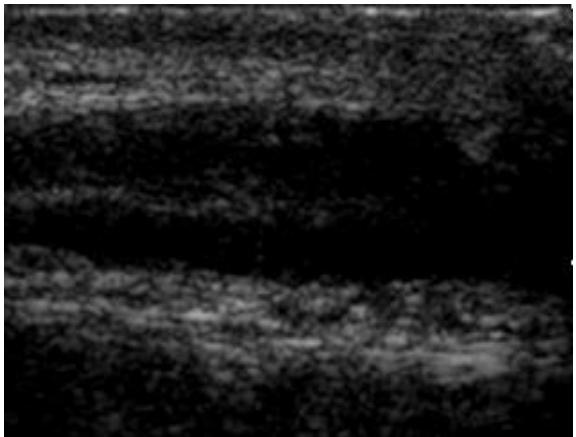
A. anterior-posterior diameter
of the body



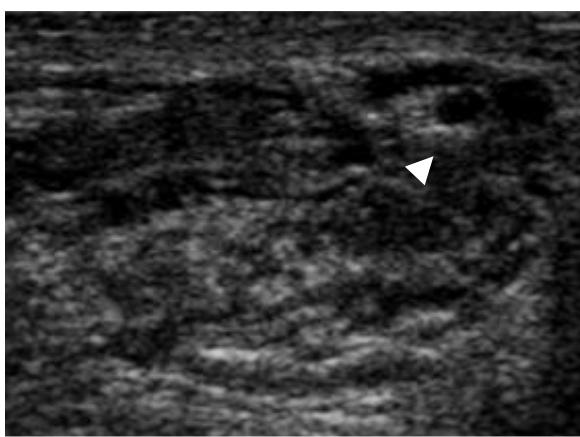
B. anterior-posterior diameter
of the handle
(tail + proximal vas deferens)

Fig. 11

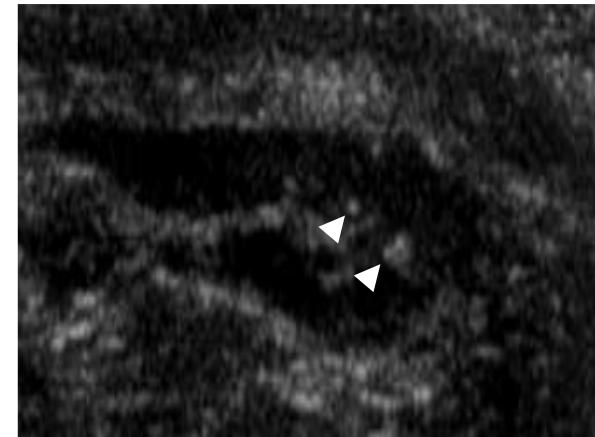
Epididymal tail homogeneity



Homogeneous

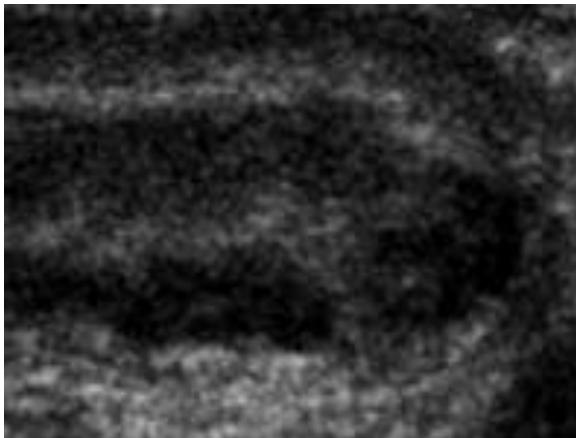


Inhomogeneous

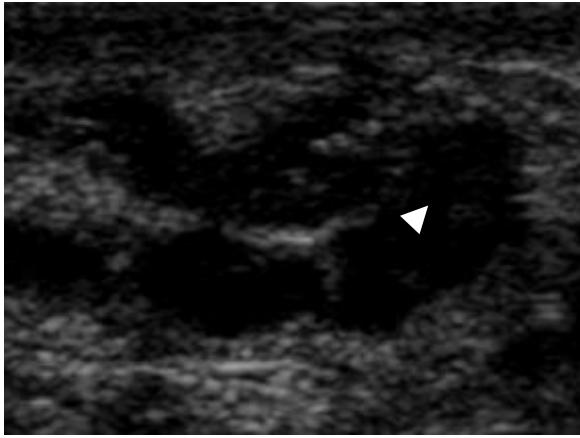


Course calcifications

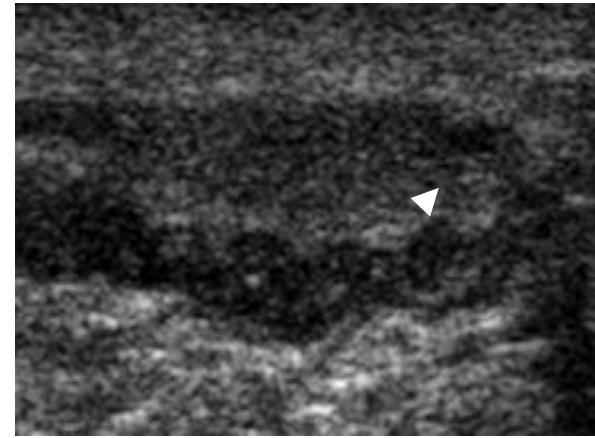
Epididymal tail echogenicity



Normal echogenicity



Hypoechoic



Hyperechoic
Fig. 12

Epididymal cysts

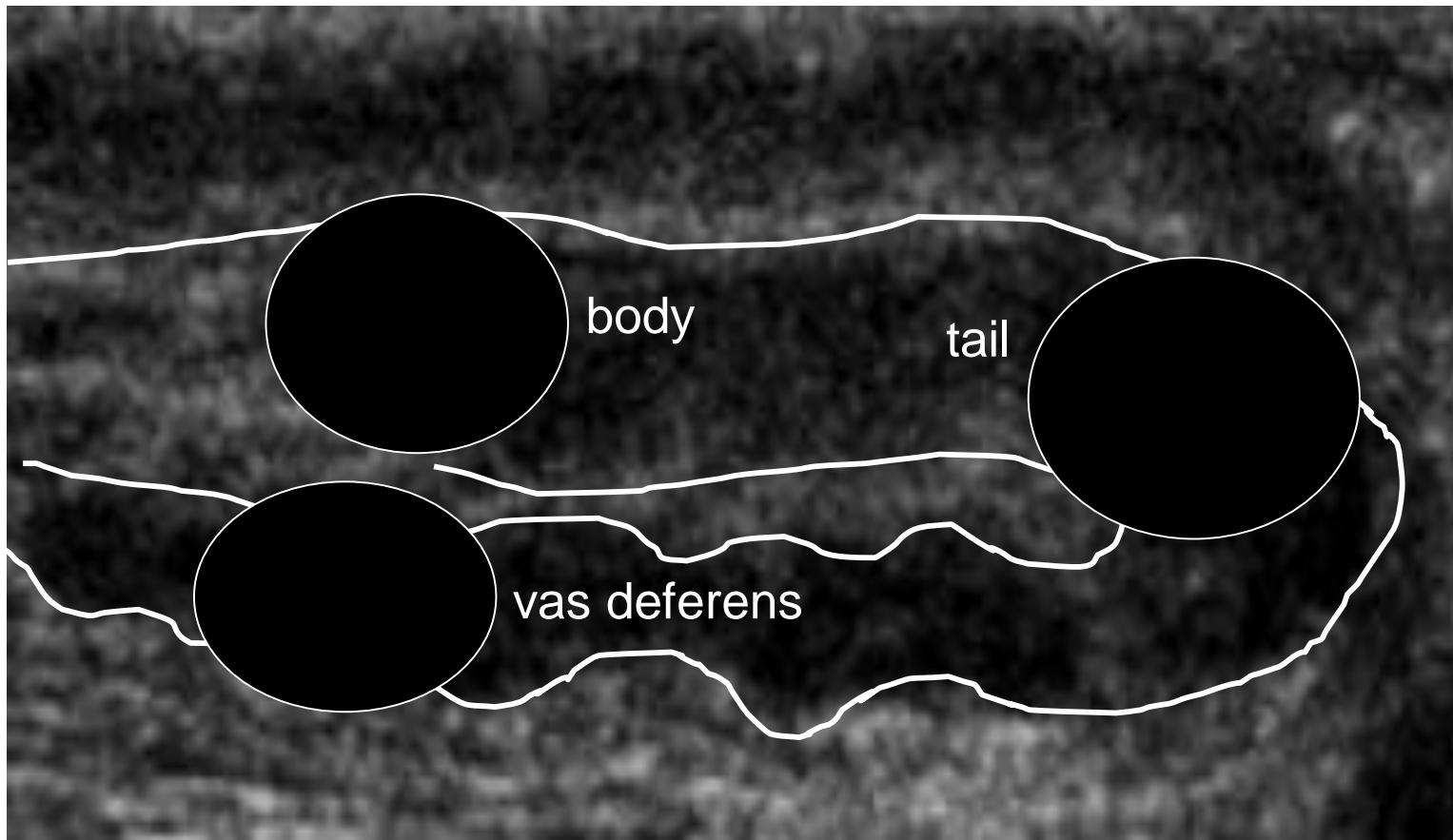
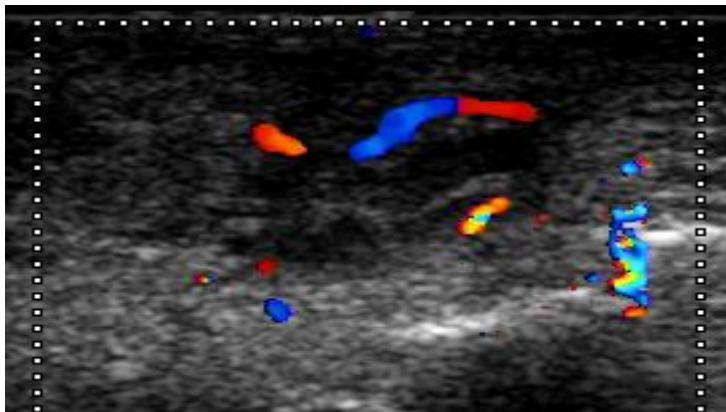
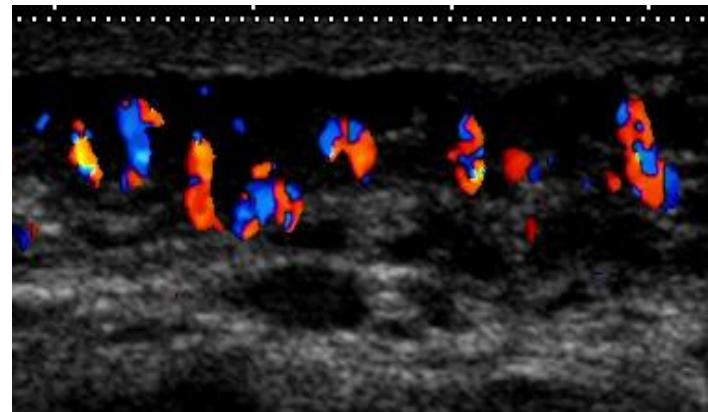


Fig. 13

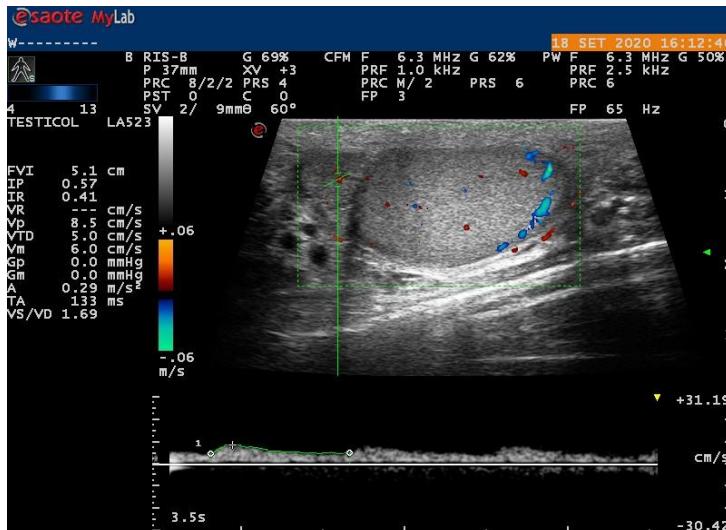
Epididymal vascularization



Normal vascularization

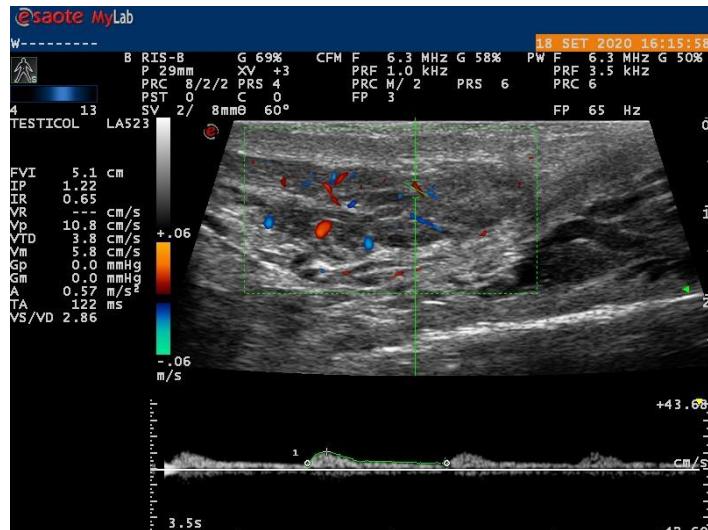


Hyperemia (diffuse Doppler spots)



Epididymal head artery
(branch of the testicular artery)

-peak systolic velocity (PSV) (Vp)
-RI: resistive index

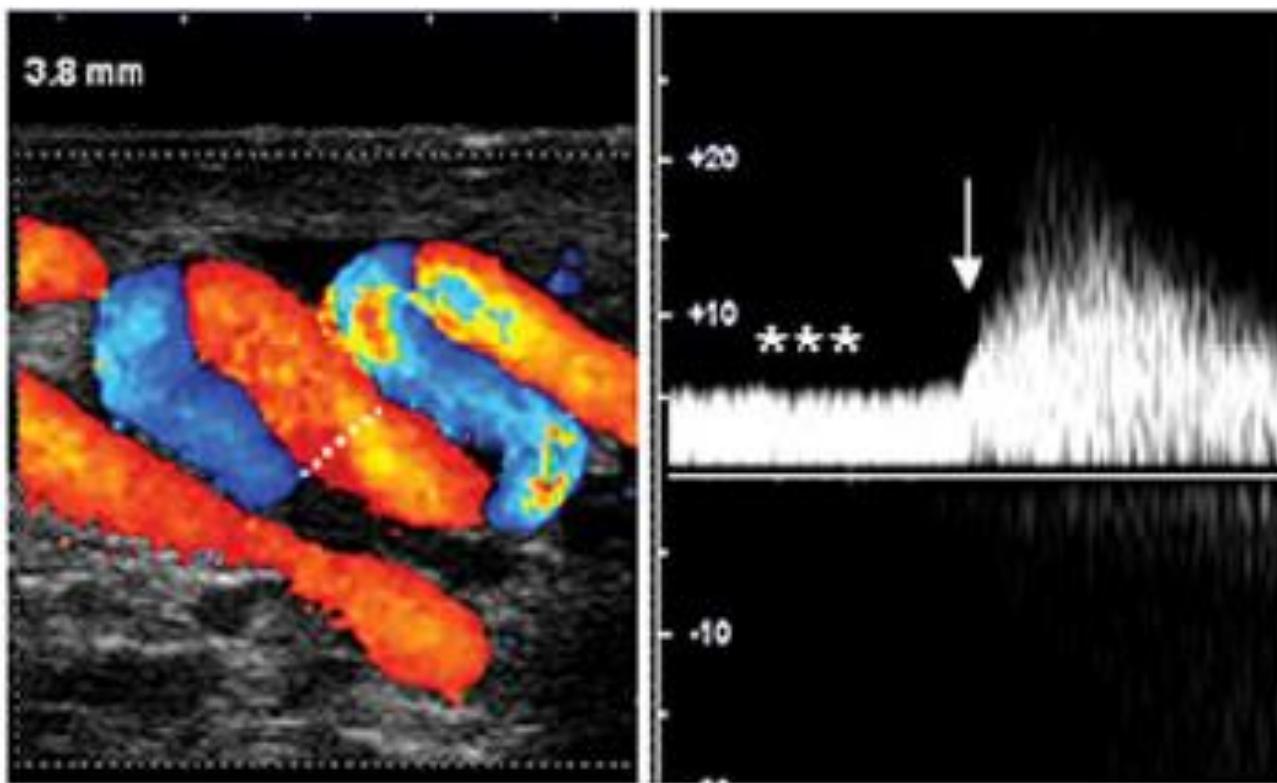


Epididymal tail artery
(branch of the deferential artery)

-acceleration (A)
-PI: pulsatility index

Fig. 14

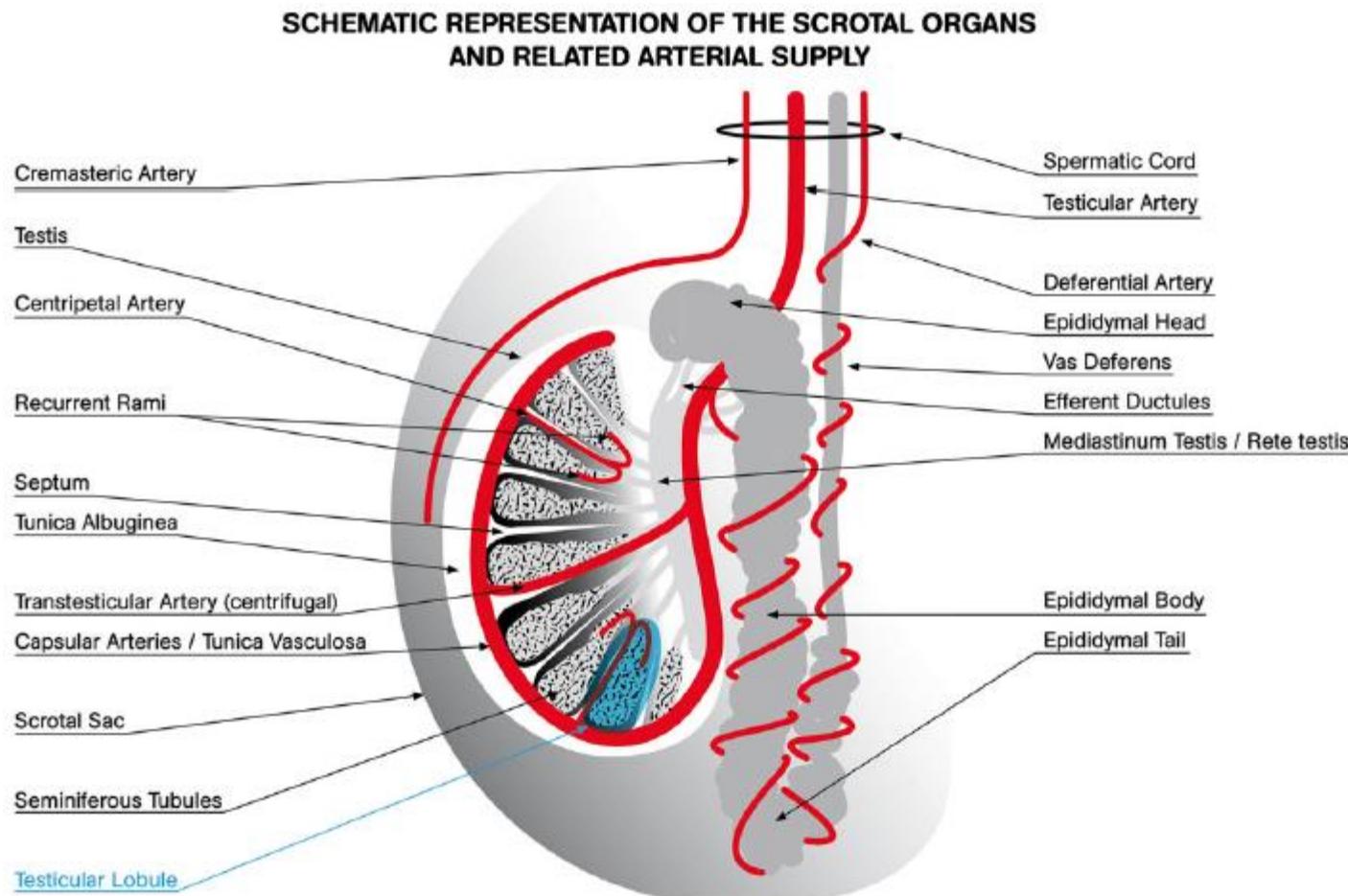
Severe varicocele



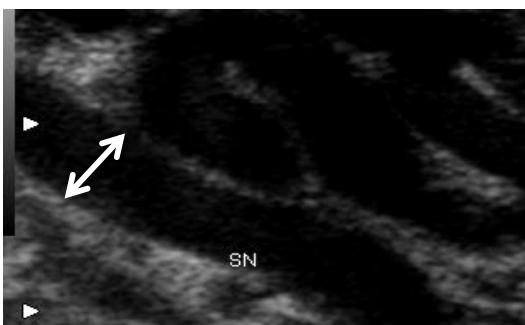
Venous vessel dilation (> 3 mm)
characterized by a continuous venous reflux at rest (***)
increasing or not during a Valsalva maneuver (arrow)

Fig. 15

Testicular and epididymal arterial vascularization



A

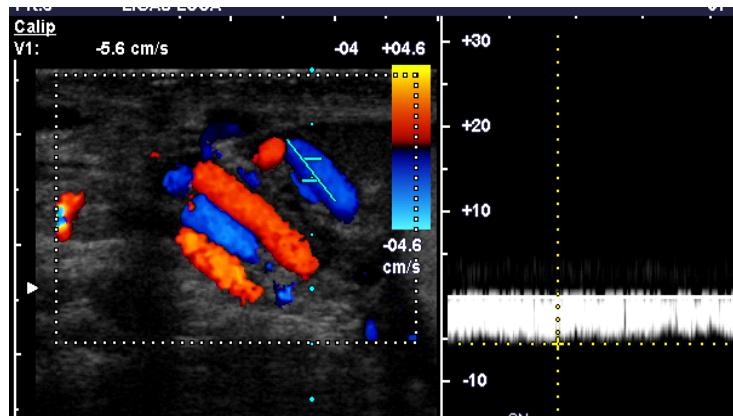
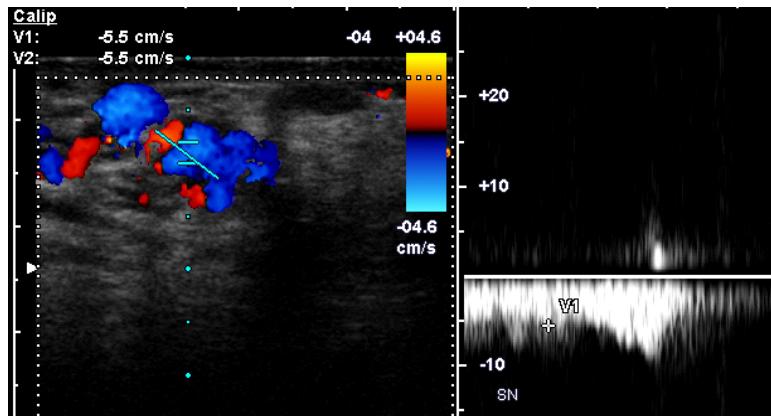


Internal spermatic
vein: diameter
(gray scale)

Pampiniform plexus

Retrograde venous flow (colour-Doppler)

B



C

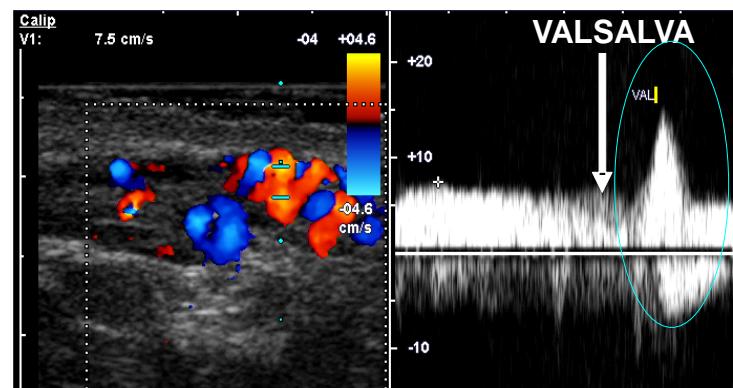
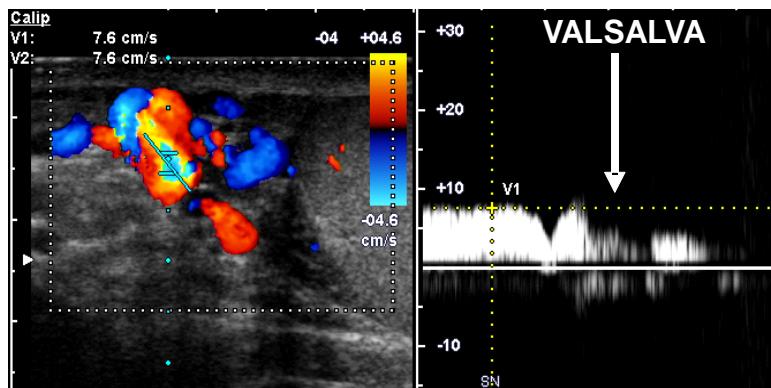


Fig. 15

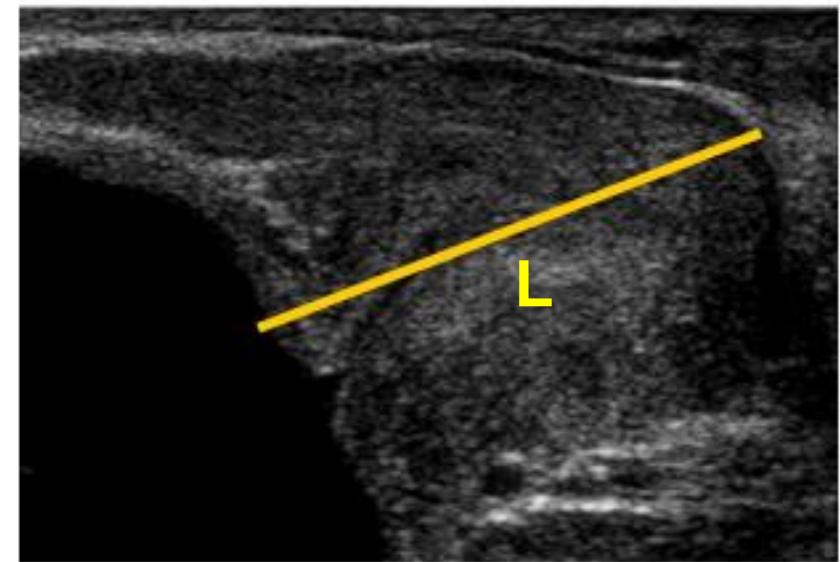
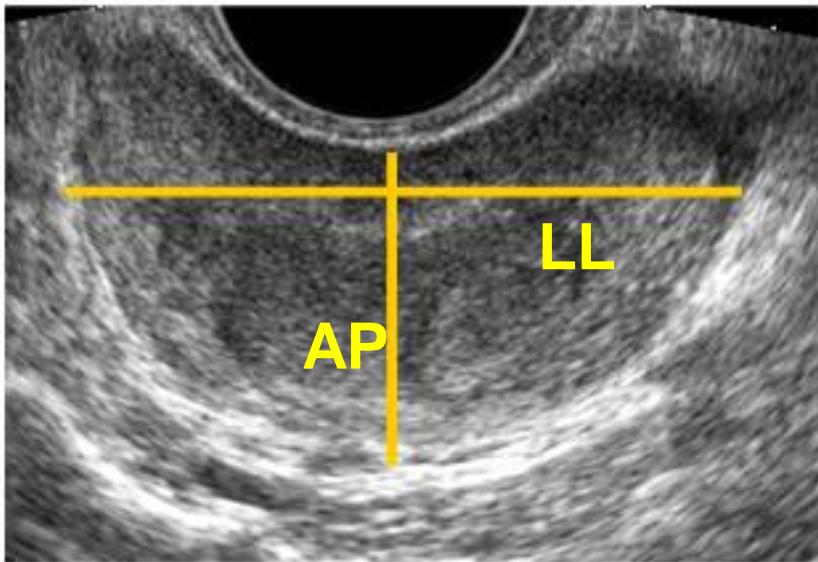
Prostate diameters

Lateral-lateral (LL)

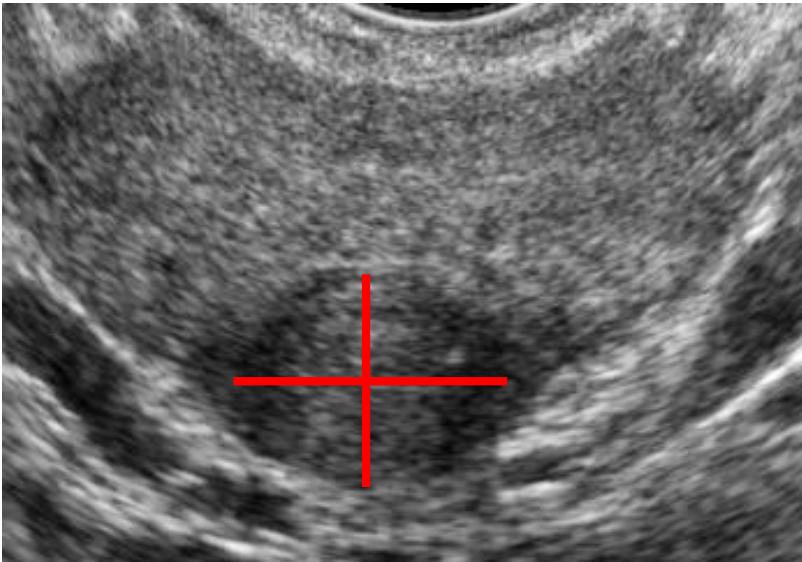
anterior-posterior (AP)

longitudinal (L)

A



B

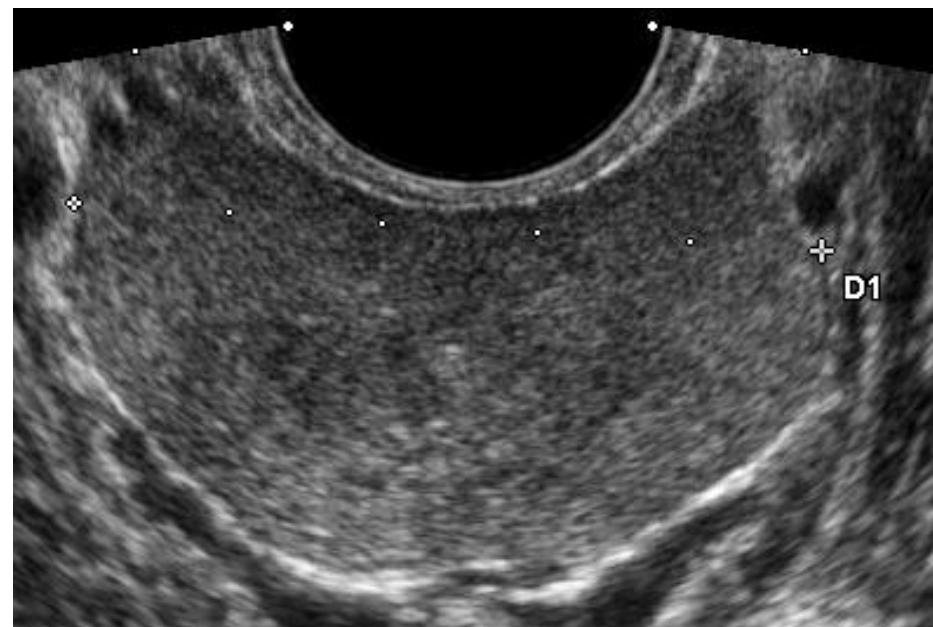


Transitional zone

Fig. 16

Prostate simmetry

Simmetry



Asimmetry
(left lobe bigger)

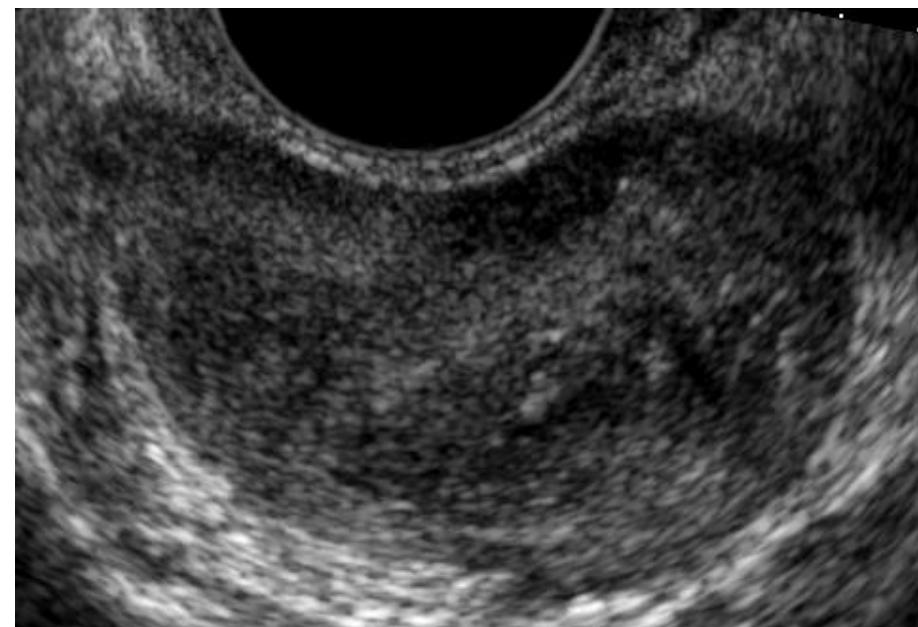


Fig. 17

Prostate homogeneity

Transitional zone: homogeneous
Peripheral zone: homogeneous

Transitional zone: inhomogeneous
Peripheral zone: inhomogeneous

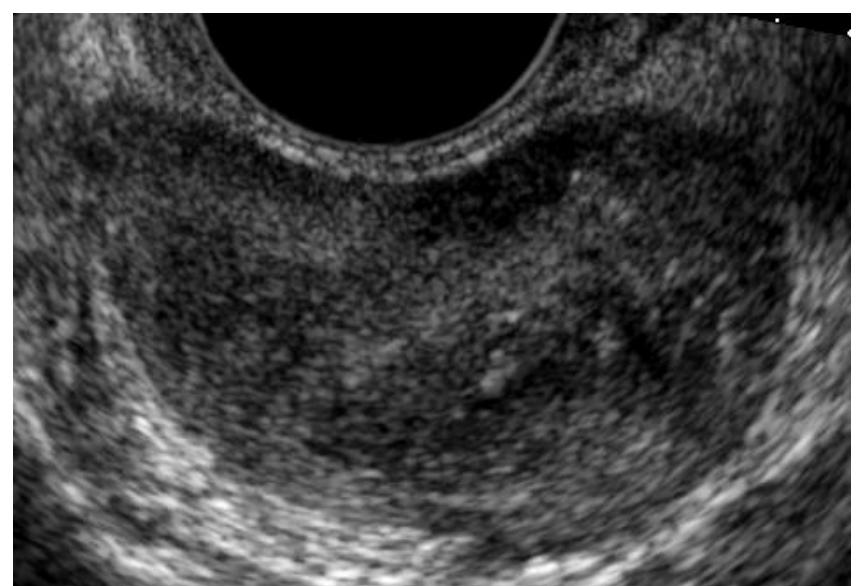
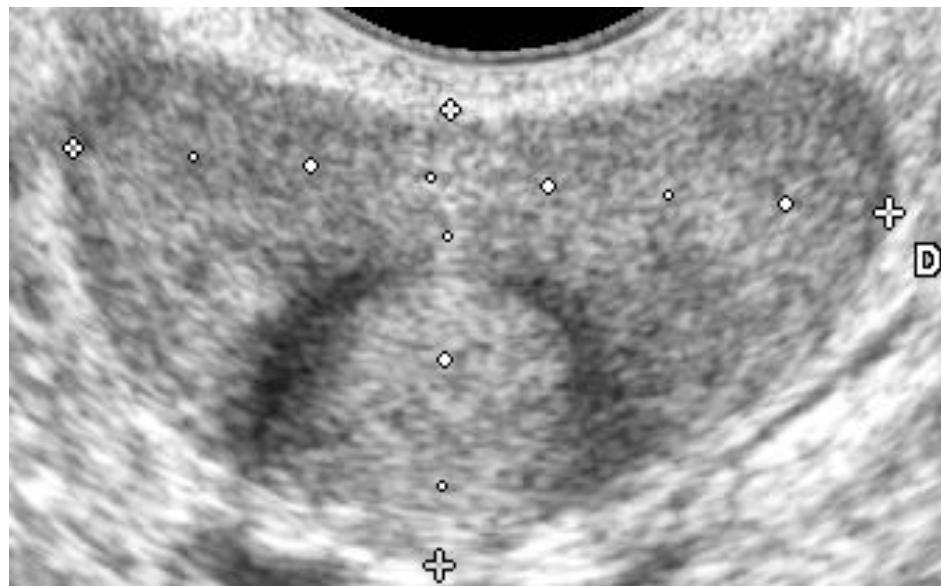
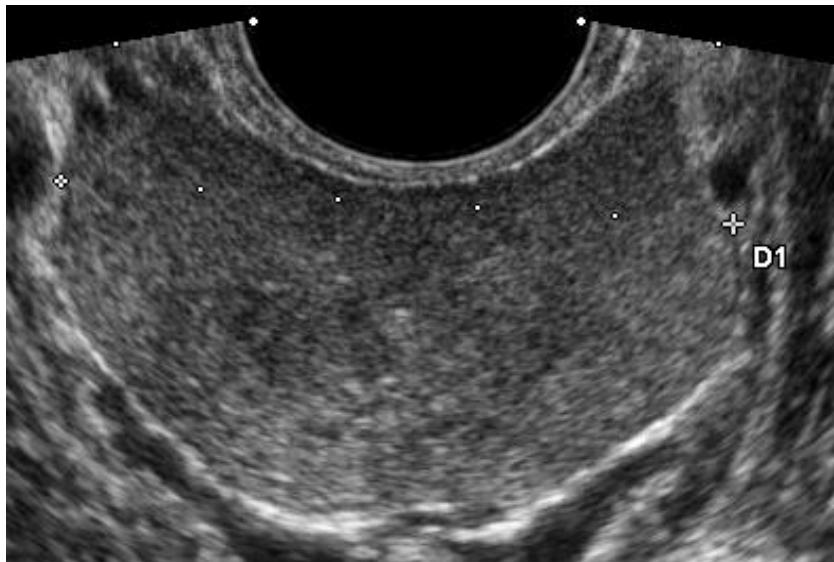


Fig. 18

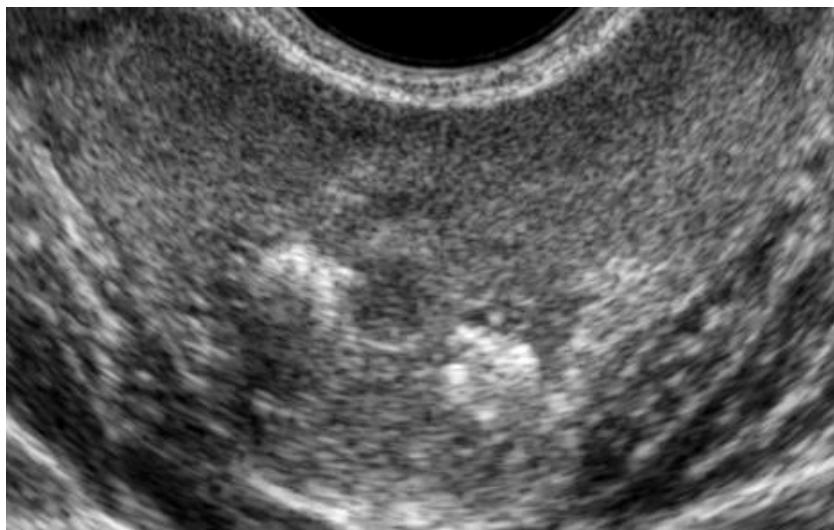
0.Normal echogenicity

Prostate echogenicity

1.Mainly hypoechoic



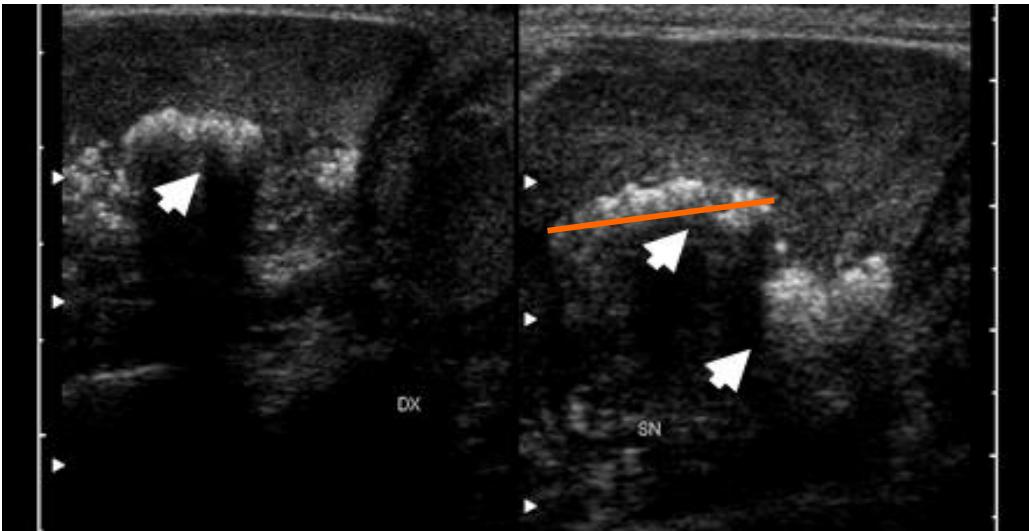
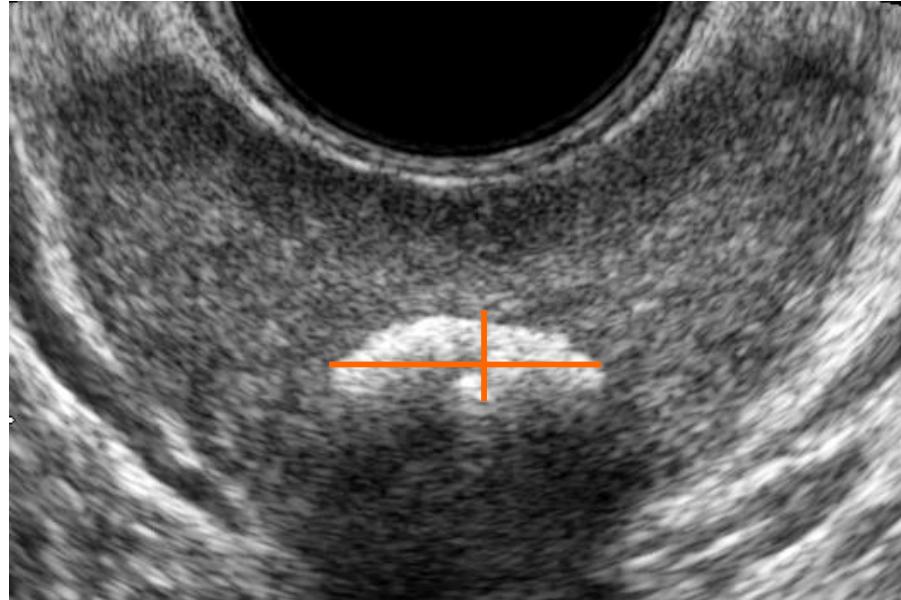
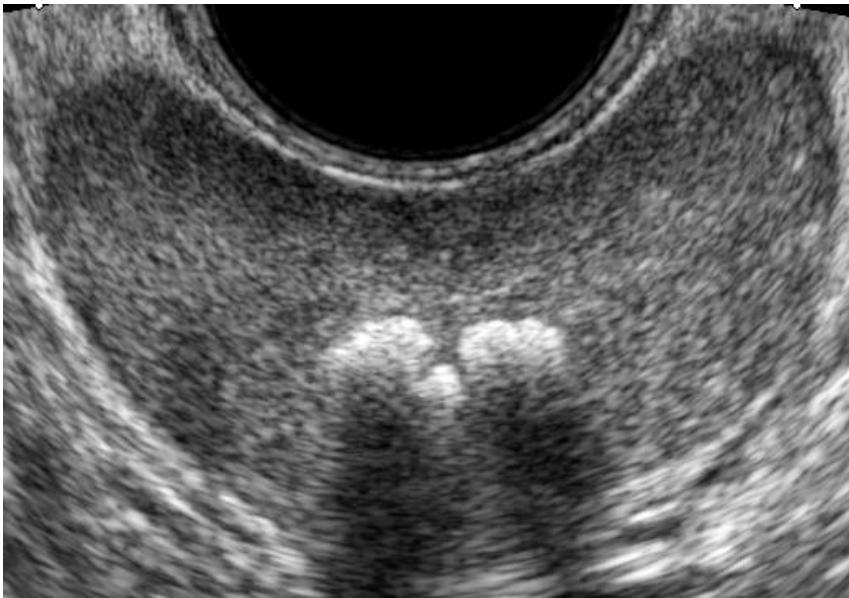
2.Hyperechoic/calcifications



3.Hypo- and hyper-echoic areas



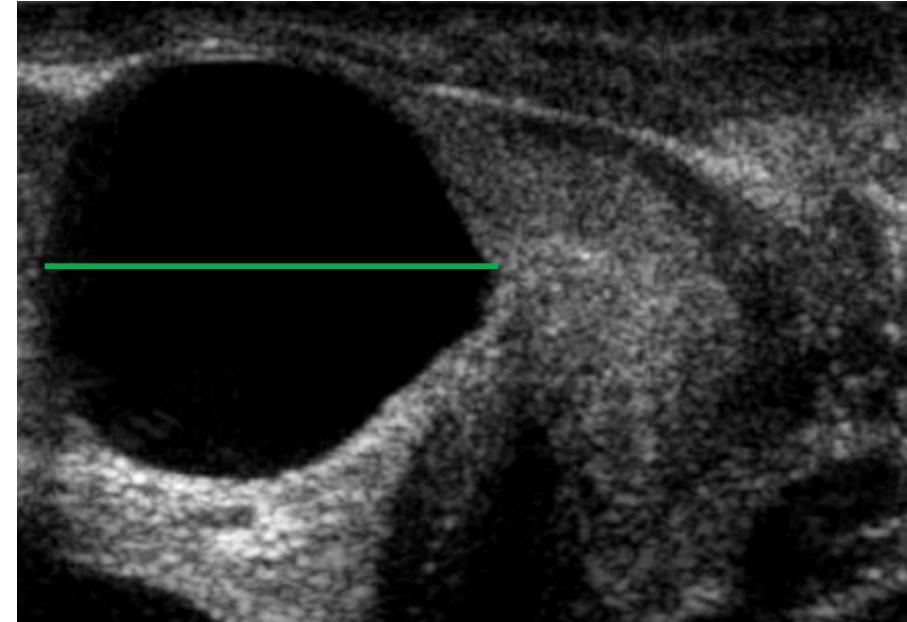
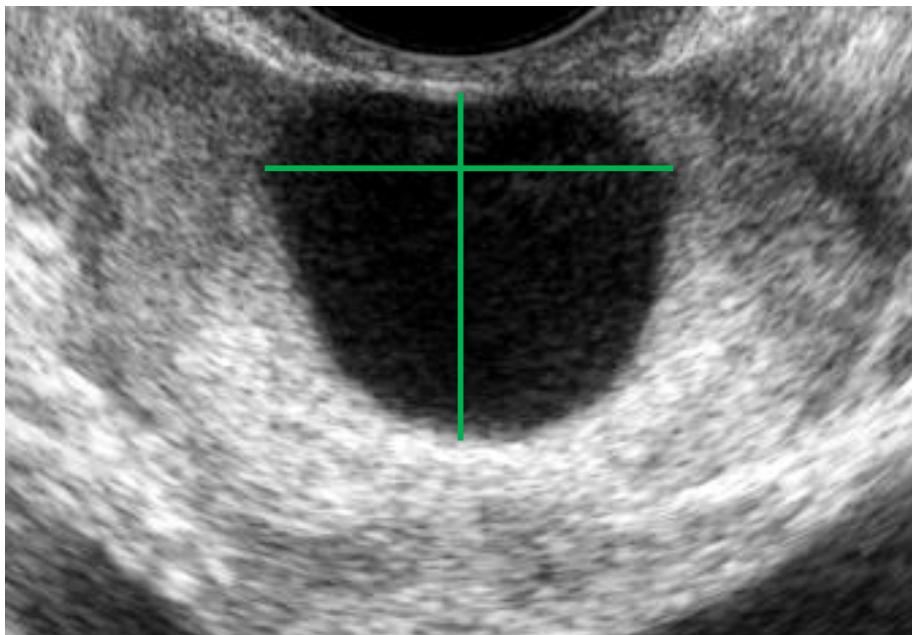
Prostate calcifications



Macro-calcification: > 3 mm
Peri-transitional
3 diameters

Fig. 20

Prostate utricular / mullerian cyst

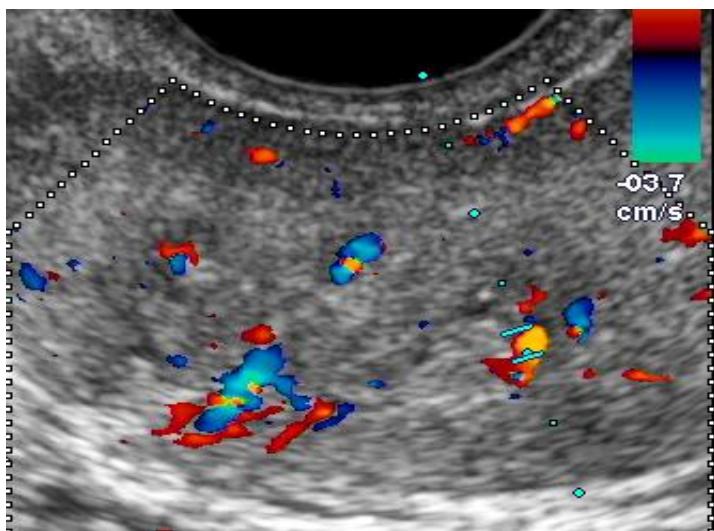


3 diameters

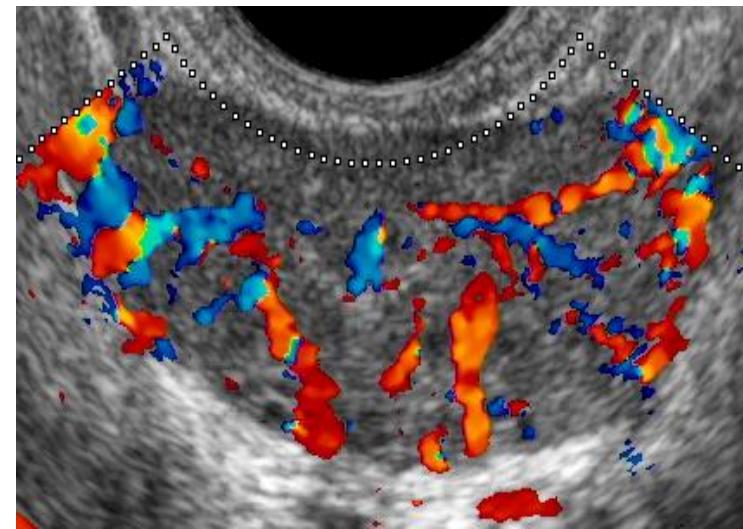
Fig. 21

Prostate vascularization

Normal



Diffuse hyperaemia: ≥ 15 Doppler spots



Arterial peak systolic velocity and RI

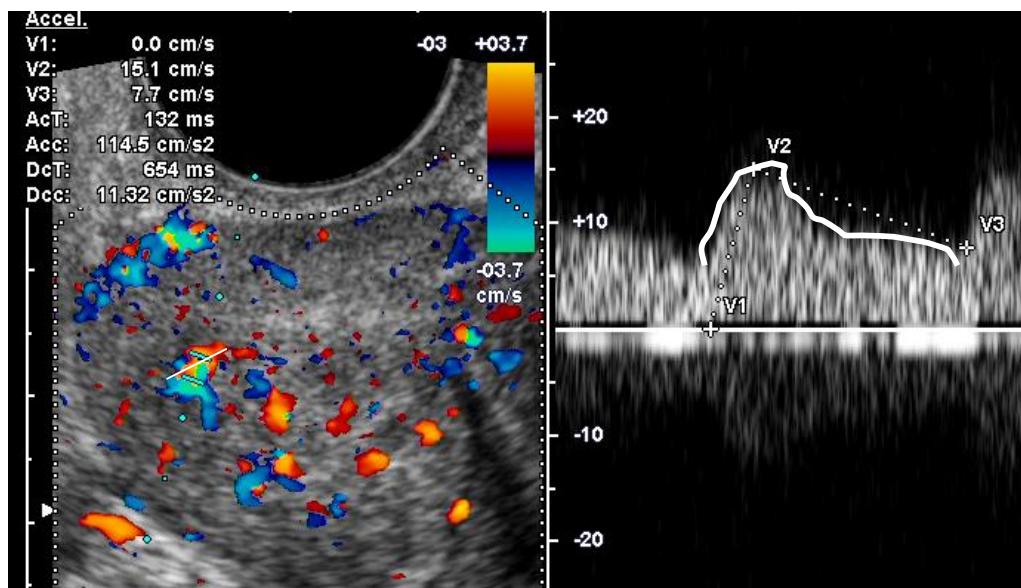
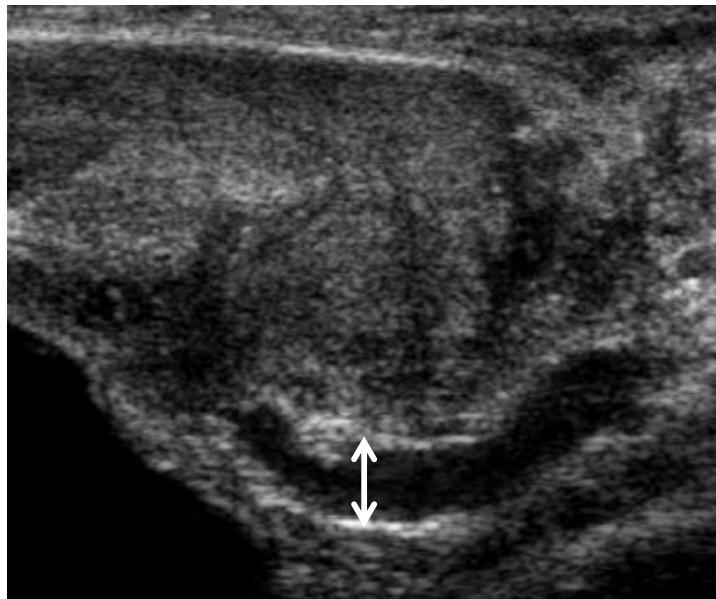
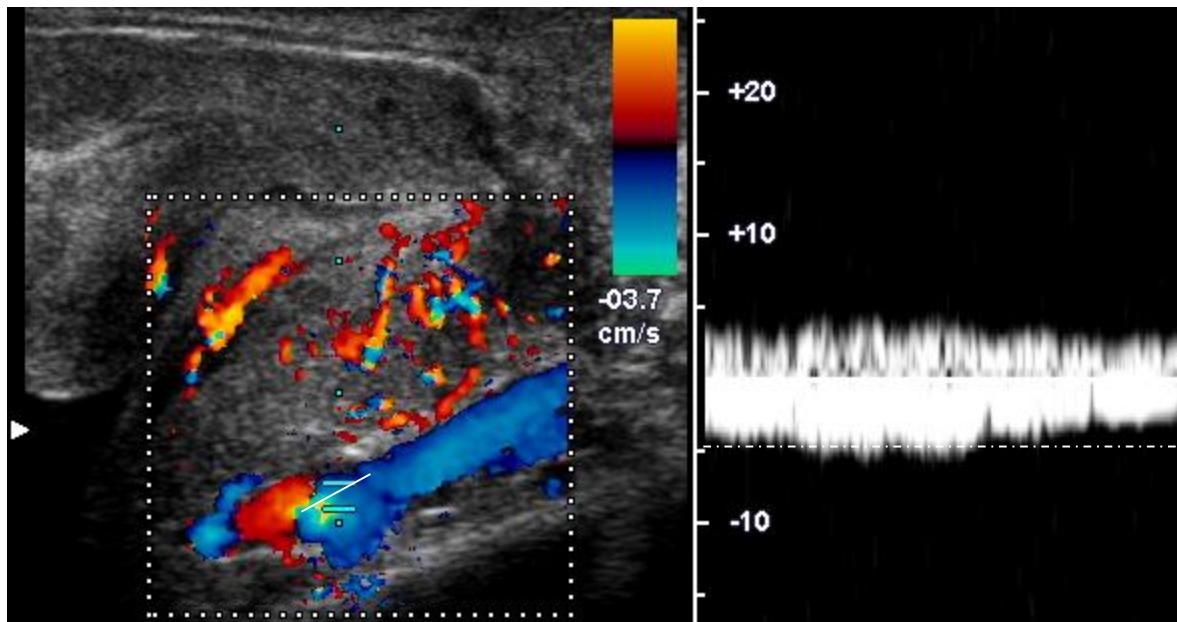


Fig. 22

Prostate venous plexus



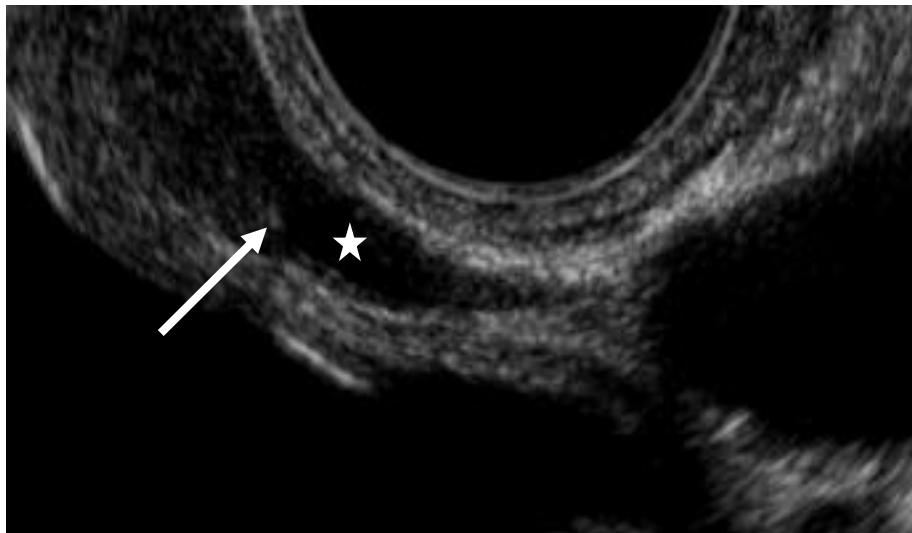
Maximum anterior-posterior diameter



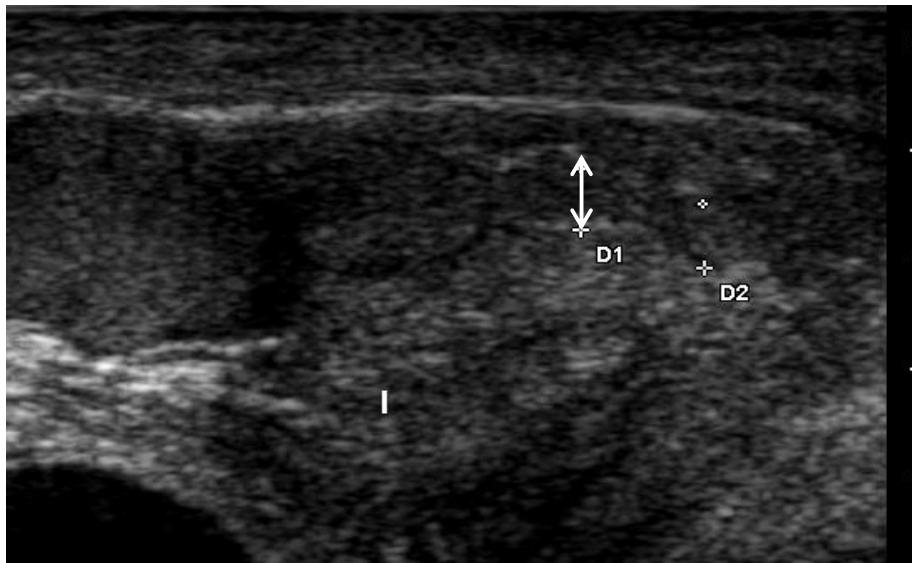
Basal venous blood flow velocity

Fig. 23

Ejaculatory ducts



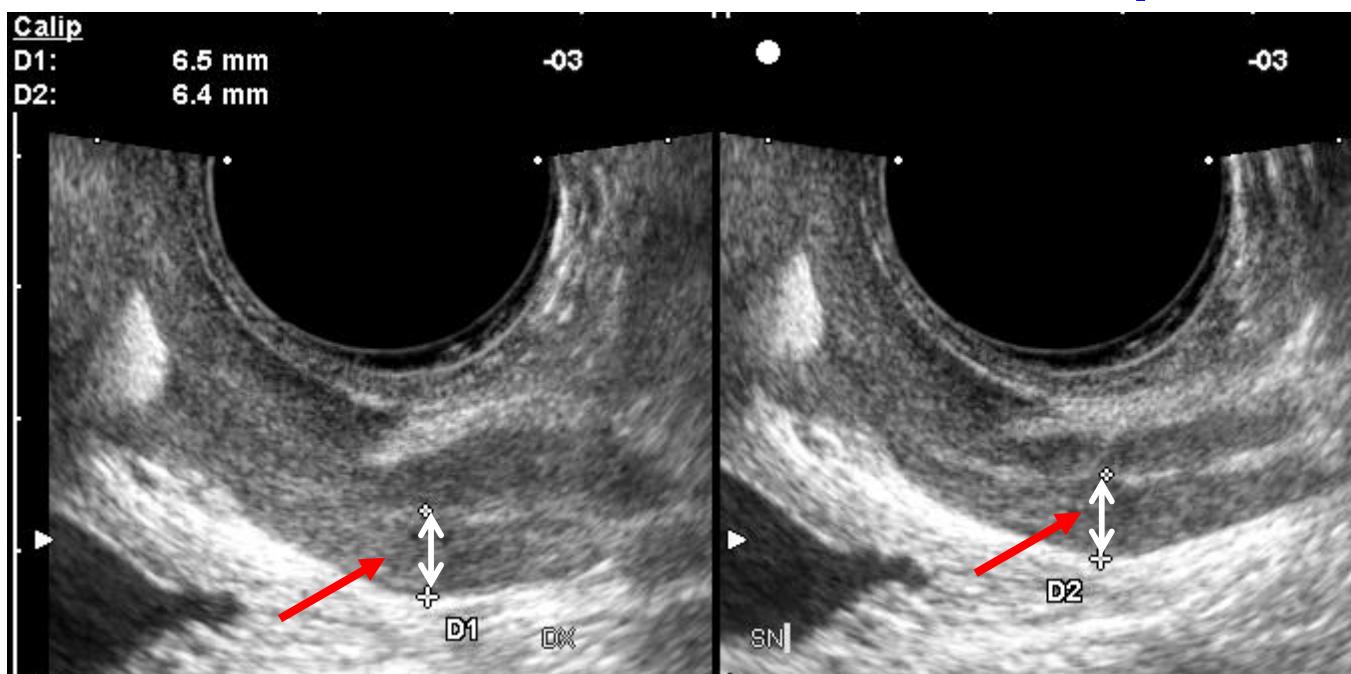
Ejaculatory duct:
-calcification (arrow)
-cyst (star)



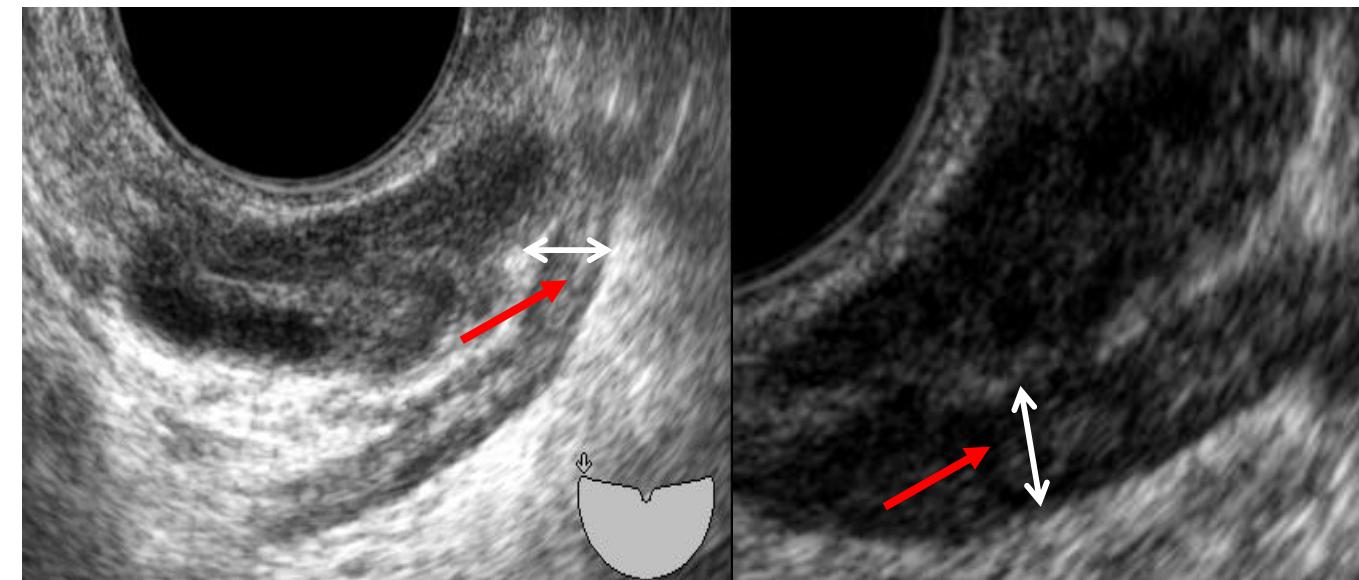
Ejaculatory duct dilatation:
anterior-posterior diameter

Fig. 24

Deferential ampullas



A. Right and left deferential ampullas: anterior-posterior diameter

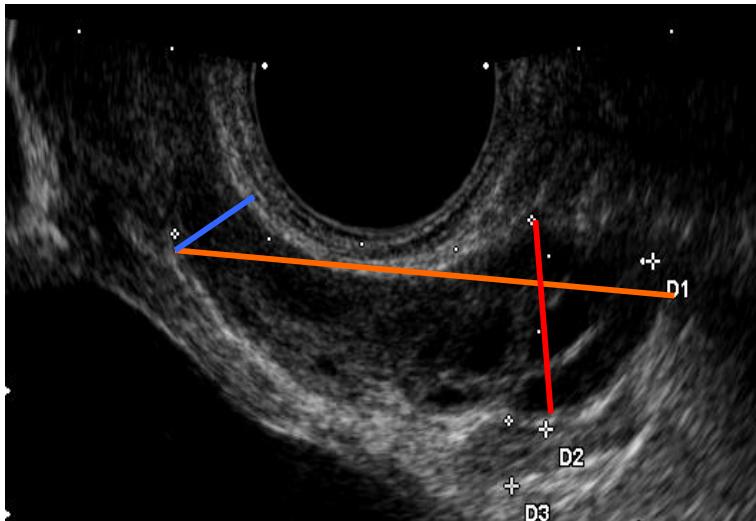


B. Distal vas deferens: anterior-posterior diameter

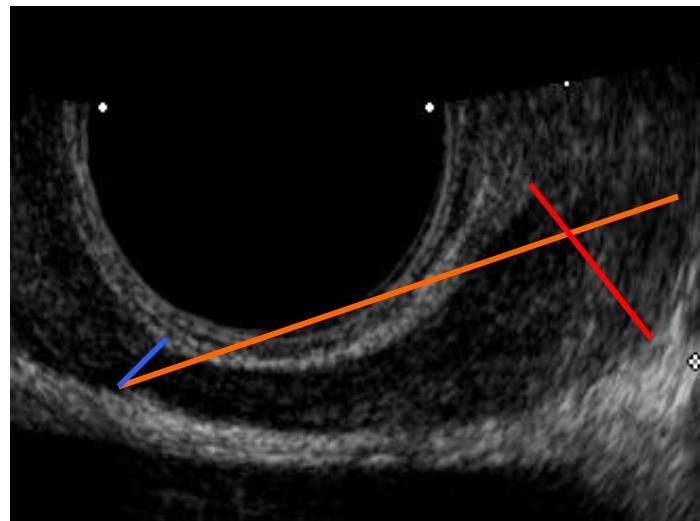
Fig. 25

Seminal vesicles (SV) diameters and volume

A



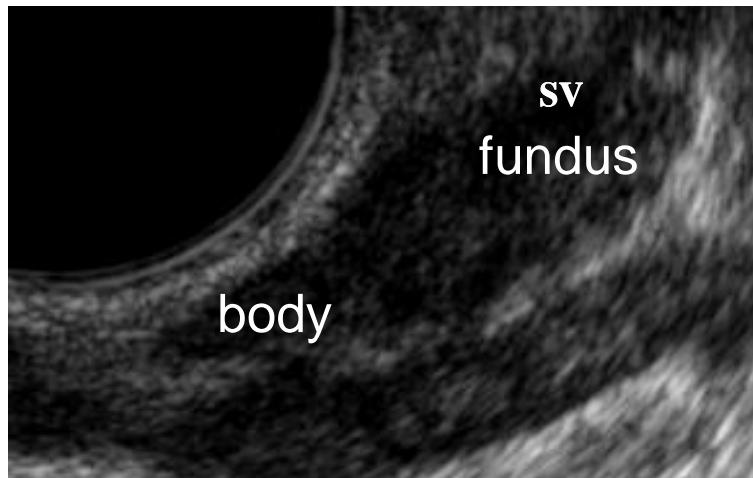
Before ejaculation



After ejaculation

[Orange: longitudinal diameter; Red: max anterior-posterior diameter (fundus);
Blue: body anterior-posterior diameter]

B



$$\text{Ellipsoid } (d_1 \times d_2 \times d_3 \times \frac{4}{3} \times \pi) \quad (d_1 > d_2 = d_3)$$

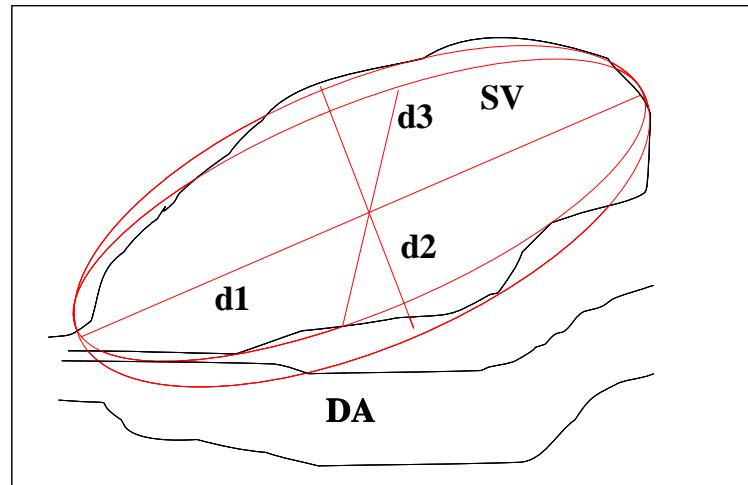
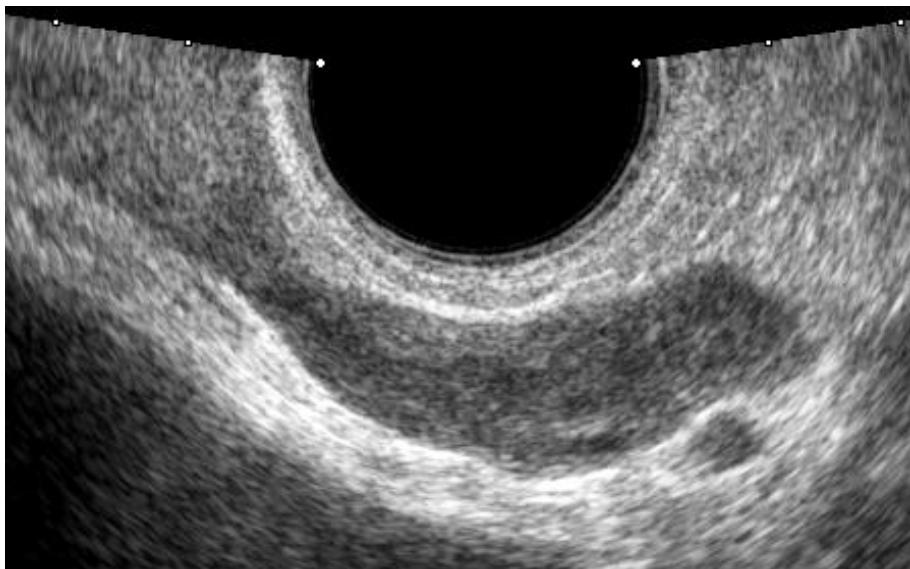


Fig. 26

Seminal vesicles homogeneity

Homogeneous



Inhomogeneous

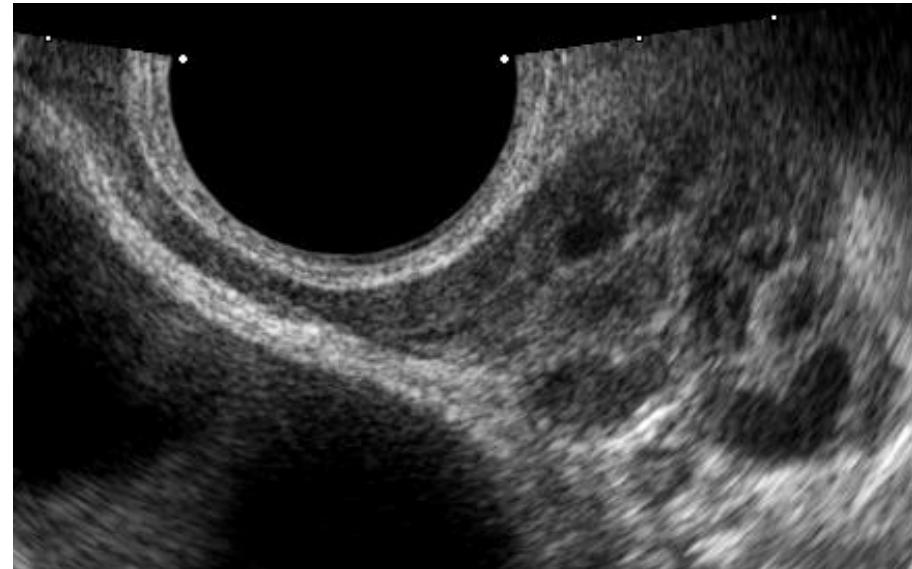
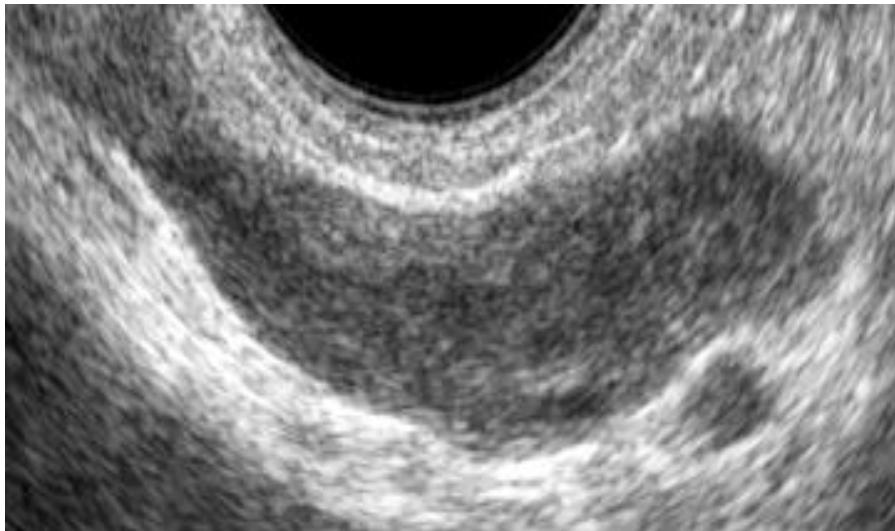
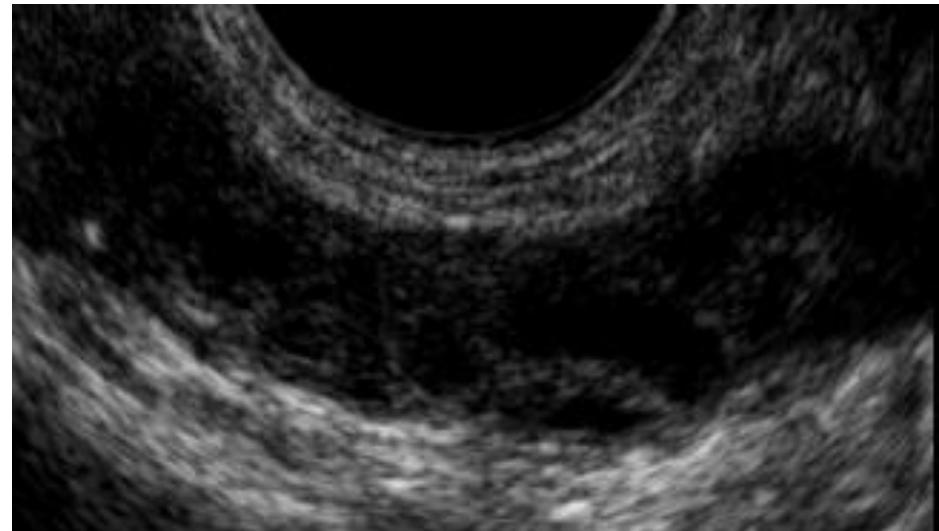


Fig. 27

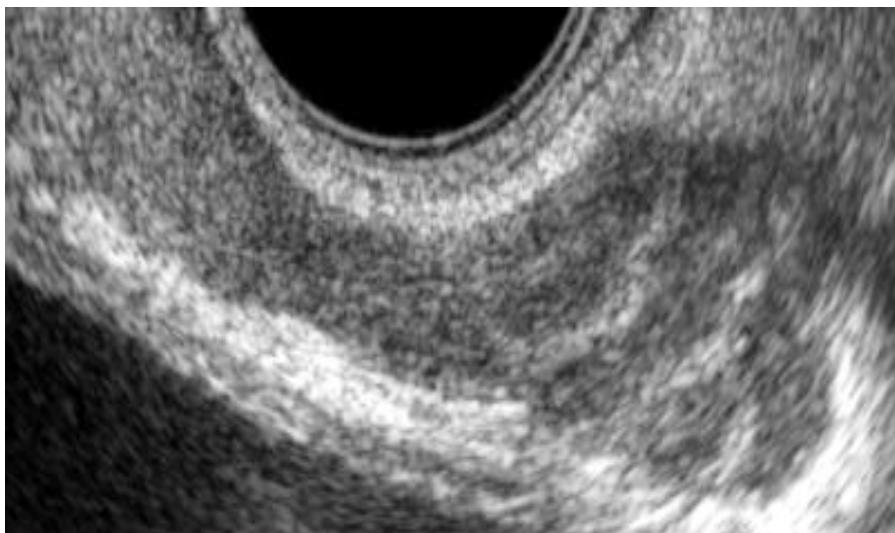
Seminal vesicles echogenicity



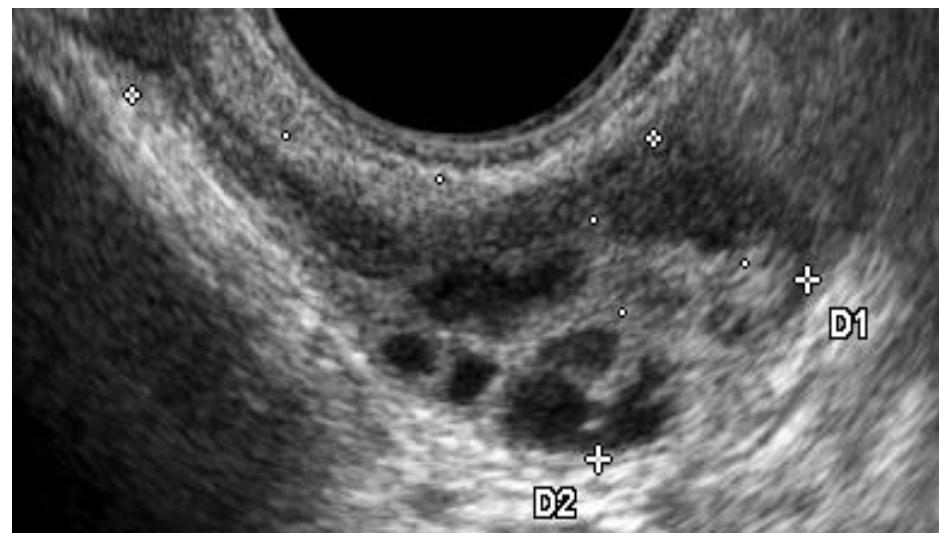
Normal echogenicity



Mainly hypoechoic/hypoechoic areas



Mainly hyperechoic/hyperechoic areas



Hypo- and hyper-echoic areas **Fig. 28**

Seminal vesicles vascularization

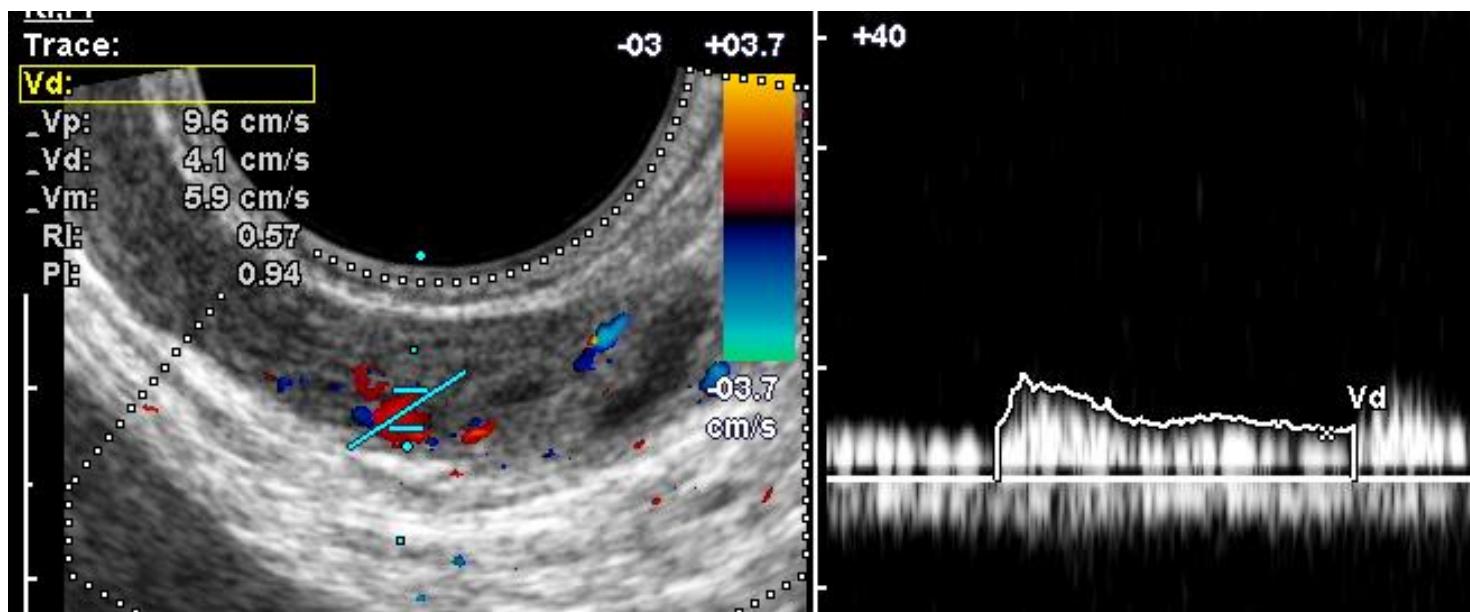
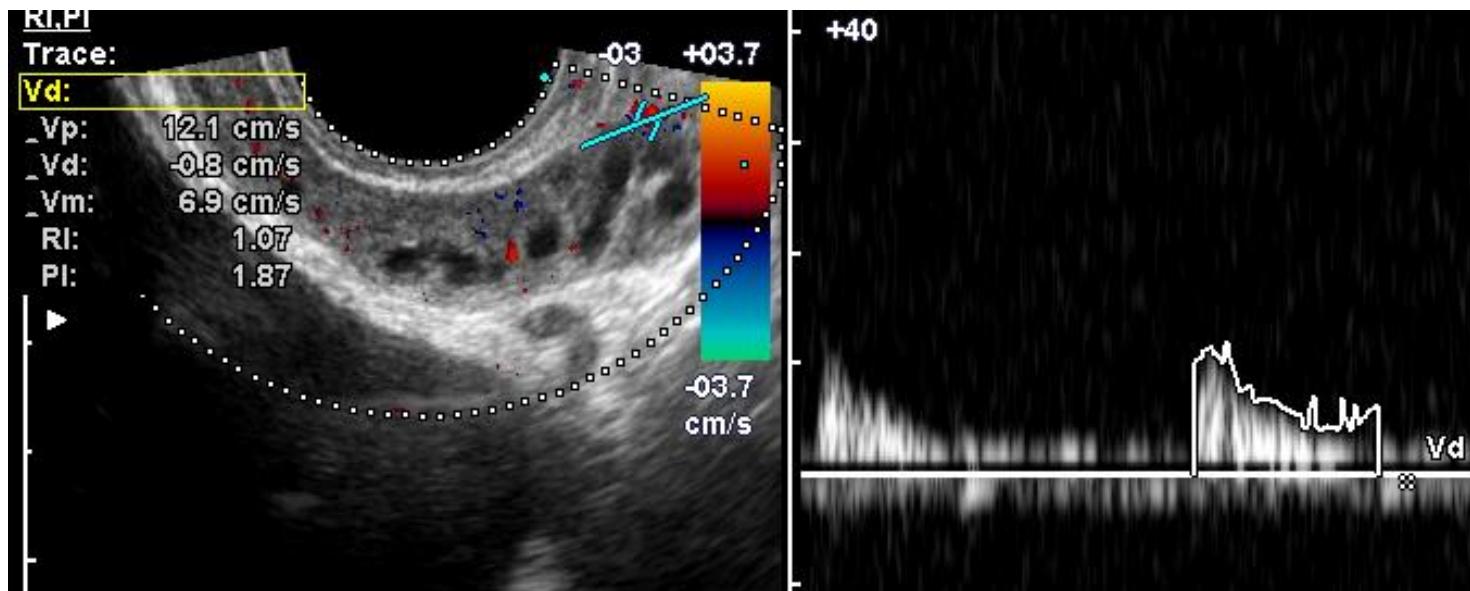
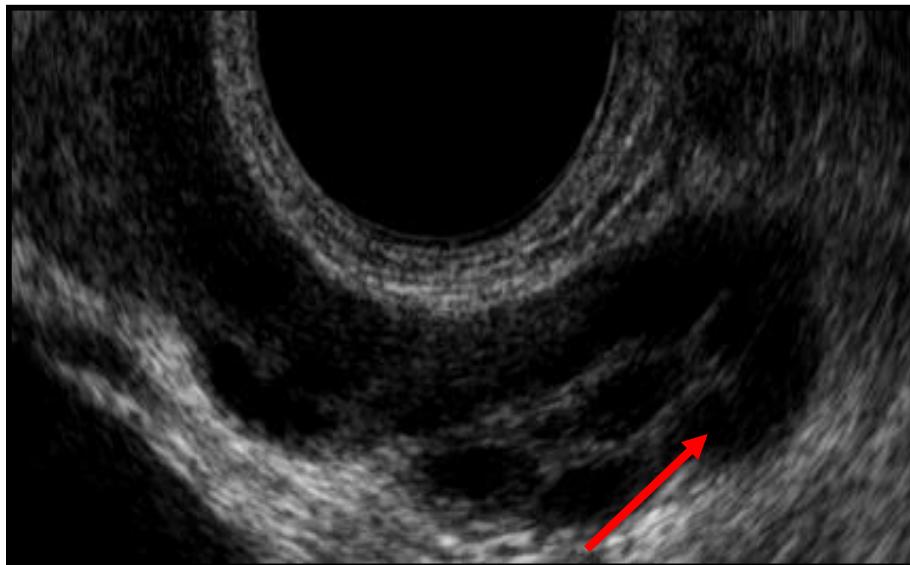
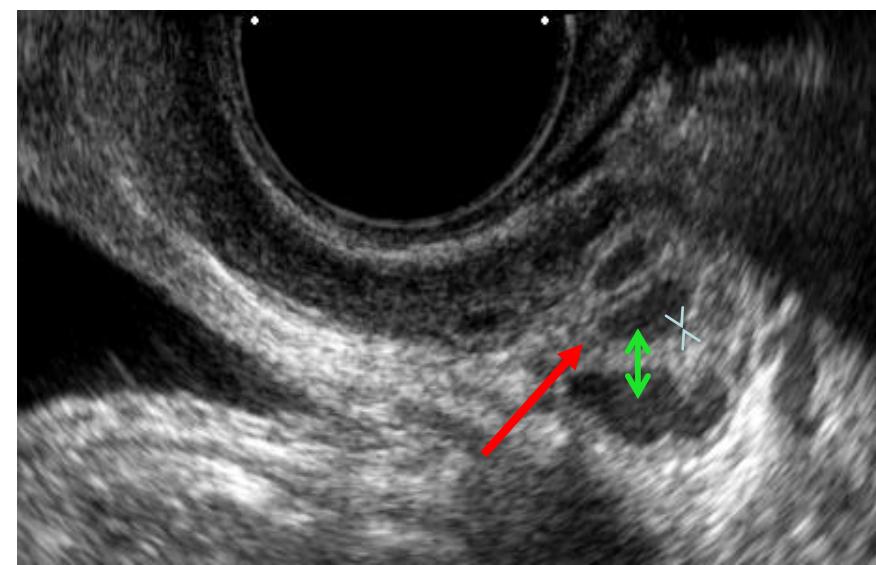


Fig. 29

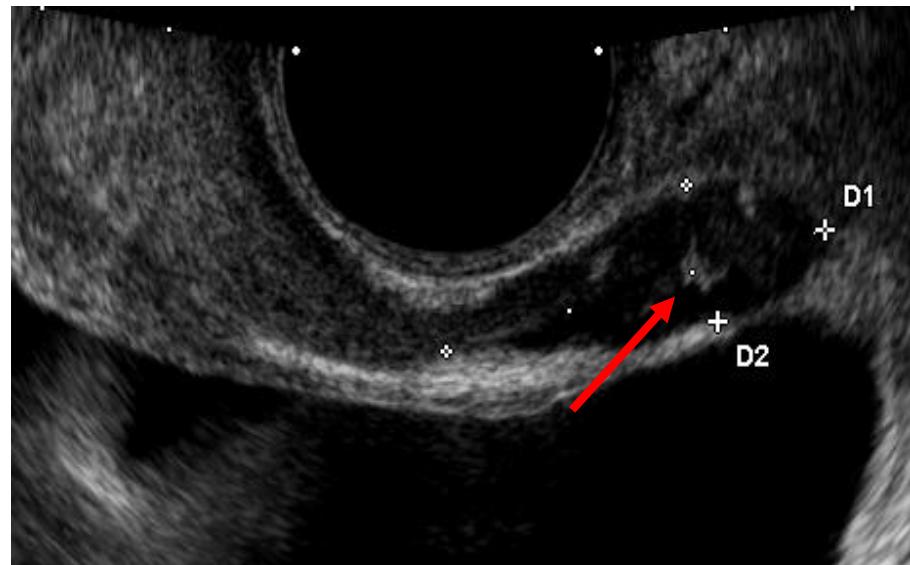
Seminal vesicles ultrasound abnormalities



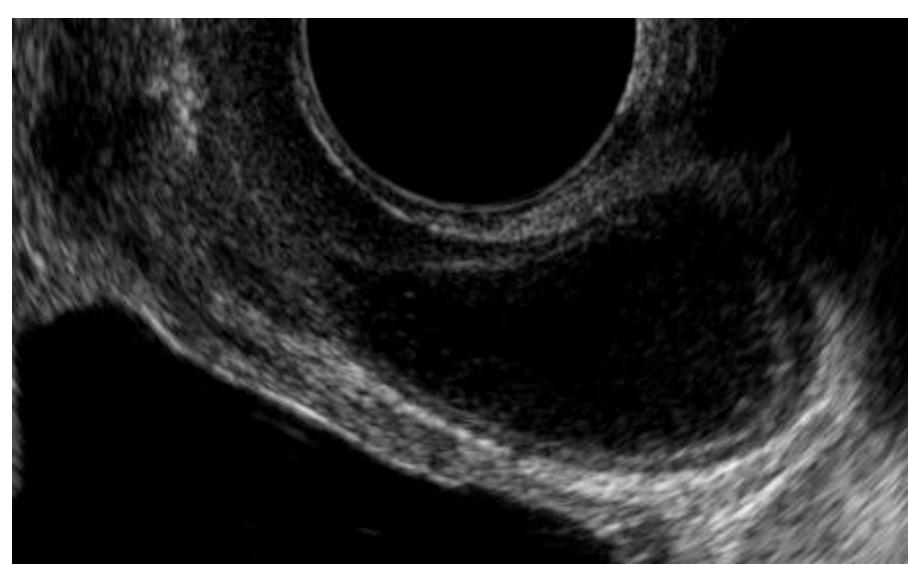
Areas of endocapsulation



Septa



Calcifications



Giant cyst

Fig. 30