<table>
<thead>
<tr>
<th>Testis diameters</th>
<th>longitudinal (length)</th>
<th>lateral-medial (width)</th>
<th>anterior-posterior (height)</th>
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<tr>
<td></td>
<td>L</td>
<td>W</td>
<td>H</td>
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Fig. 1
1. Mild inhomogeneity (little hypoechoic areas)

2. Moderate-severe inhomogeneity (hypoechoic striae)
Testis echogenicity

0. Normal echogenicity

1. Hypoechoic

2. Hyperechoic

Fig. 3
Testis calcifications

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

Diffuse micro-calcifications

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
Nodules:

- 3 diameters

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

-Echogenicity (normal, hypo, or hyper)

-Calcifications

-Shape \[\begin{cases} \text{-regular} \\ \text{-irregular} \end{cases}\]

-Vascularization \[\begin{cases} \text{-absent} \\ \text{-peripheral/“basket”} \\ \text{-intranodular} \end{cases}\]
Testis vascularization

A. Testicular artery, in the spermatic cord - peak systolic velocity - RI

A. Intratesticular artery, - peak systolic velocity - RI

At least 2 Doppler spots

Fig. 7
A. Testicular appendix, longitudinal diameter

B. Extratesticular calcification, longitudinal diameter

C. Hydrocele, 3 diameters
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, polycystic 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)
Epididymal tail homogeneity

Homogeneous  Inhomogeneous  Course calcifications

Epididymal tail echogenicity

Normal echogenicity  Hypoechoic  Hyperechoic

Fig. 12
Epididymal cysts
Epididymal vascularization

Normal vascularization

Hyperaemia (diffuse Doppler spots)

Epididymal artery,
-peak systolic velocity
-RI

Fig. 14
Continuous

Reducing/stopping with Valsalva

Increasing with Valsalva

Intermittent

Retrograde venous flow (colour-Doppler)

**Pampiniform plexus**

Fig. 15
Prostate diameters

Lateral-lateral (LL)  anterior-posterior (AP)  longitudinal (L)

Transitional zone
Prostate simmetry

Simmetry

Asimmetry
*(left lobe bigger)*

Fig. 17
Prostate homogeneity

Transitional zone: homogeneous
Peripheral zone: homogeneous

Transitional zone: inhomogeneous
Peripheral zone: inhomogeneous
0. Normal echogenicity
1. Mainly hypoechoic
2. Hyperechoic/calcifications
3. Hypo- and hyper-echoic areas
**Prostate calcifications**

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

Ellipsoid \((d1 \times d2 \times d3 \times \frac{4}{3} \times \pi)\) \((d1 > d2 = d3)\)
Seminal vesicles homogeneity

Homogeneous

Inhomogeneous

Fig. 27
Seminal vesicles echogenicity

Normal echogenicity

Mainly hypoechoic/hypoechoic areas

Mainly hyperechoic/hyperechoic 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