Doppler sonography evaluation after renal transplantation: what can go wrong?

Poster No.:	C-1752
Congress:	ECR 2012
Type:	Educational Exhibit
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Keywords:	Kidney, Urinary Tract / Bladder, Ultrasound-Colour Doppler, Ultrasound-Spectral Doppler, Treatment effects, Education, Grafts
DOI:	10.1594/ecr2012/C-1752

Learning objectives

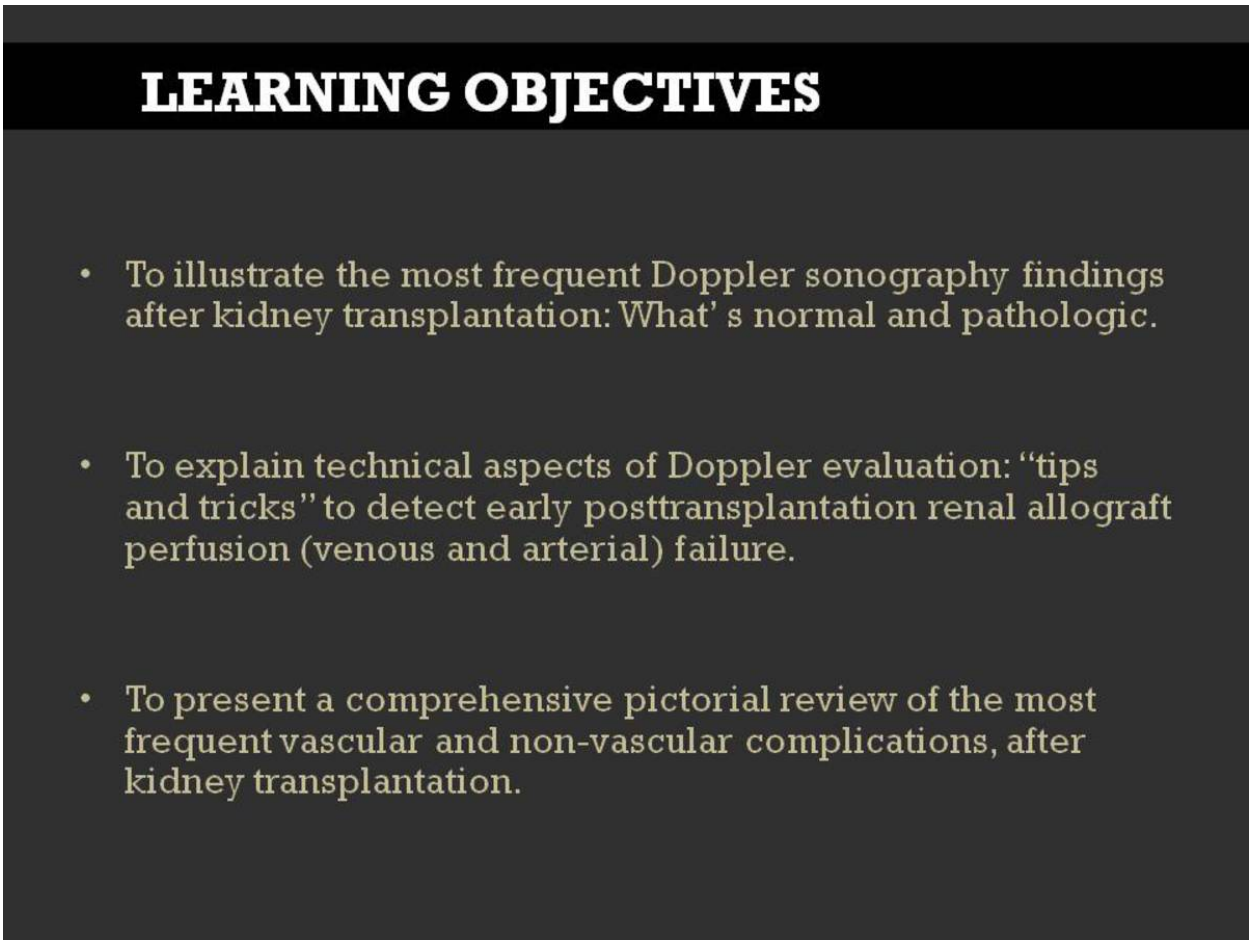

Fig. 1
References: L. Andrade; Radiology, Coimbra, PORTUGAL

Background

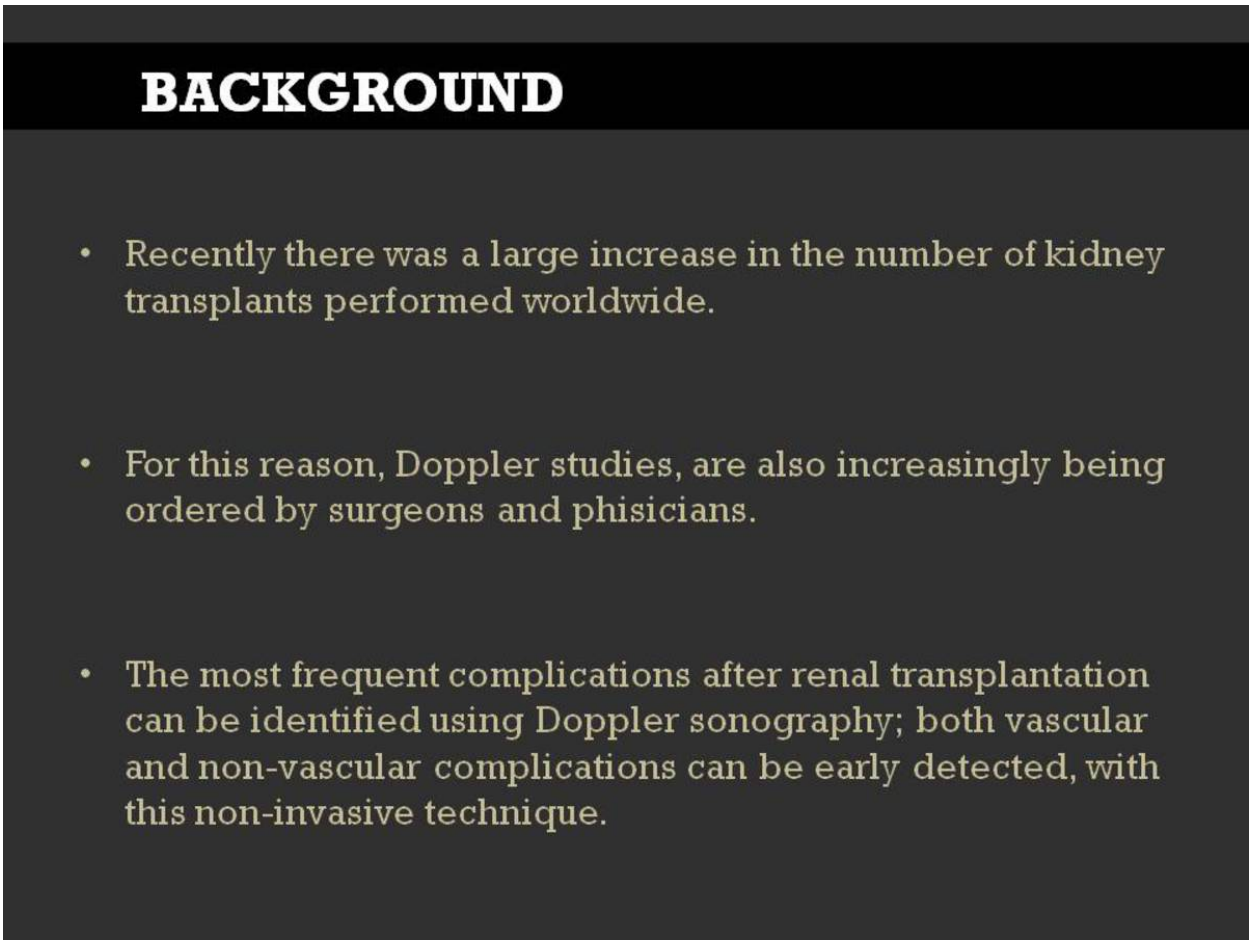

Fig. 2
References: L. Andrade; Radiology, Coimbra, PORTUGAL

Imaging findings OR Procedure details

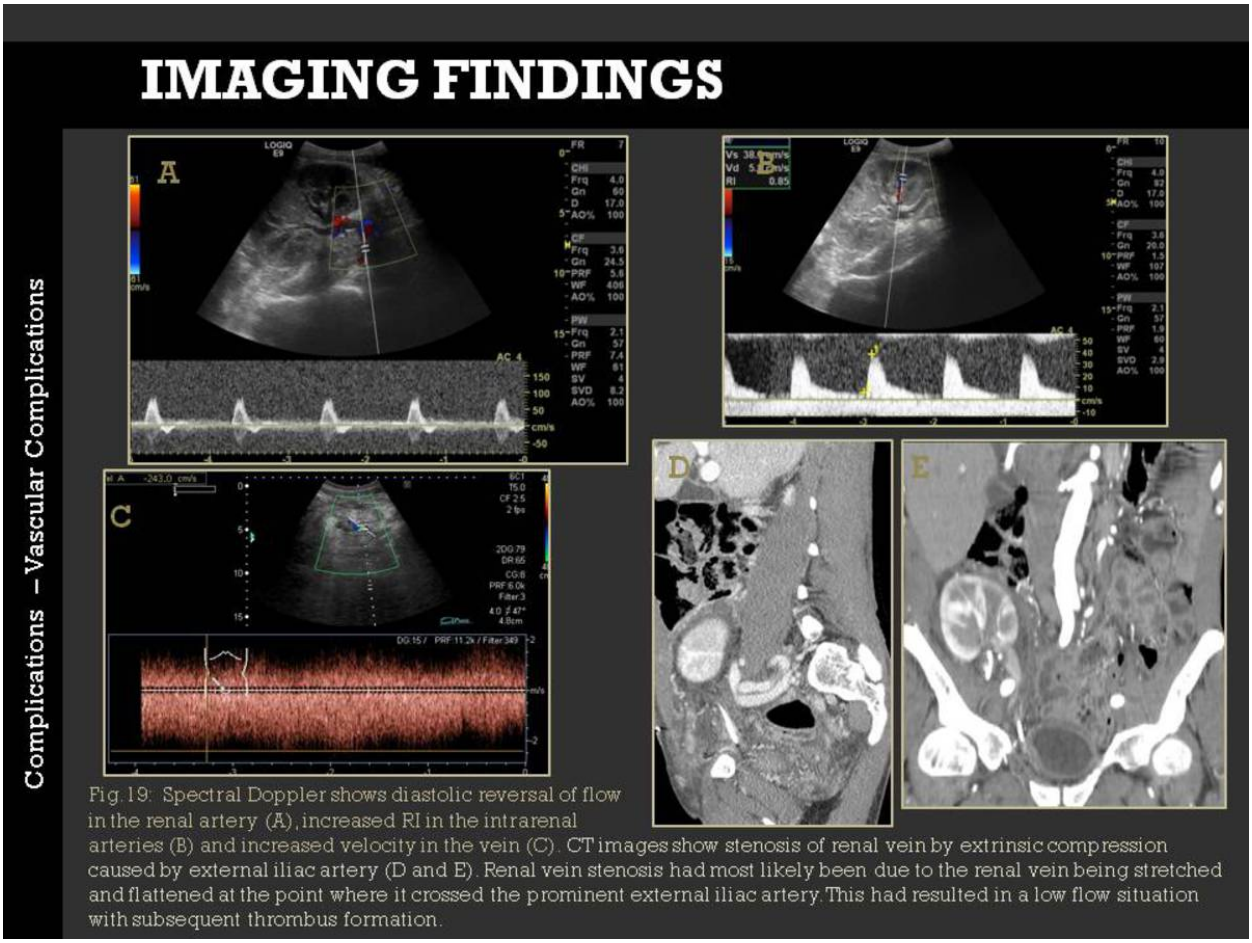

Fig. 36
References: L. Andrade; Radiology, Coimbra, PORTUGAL

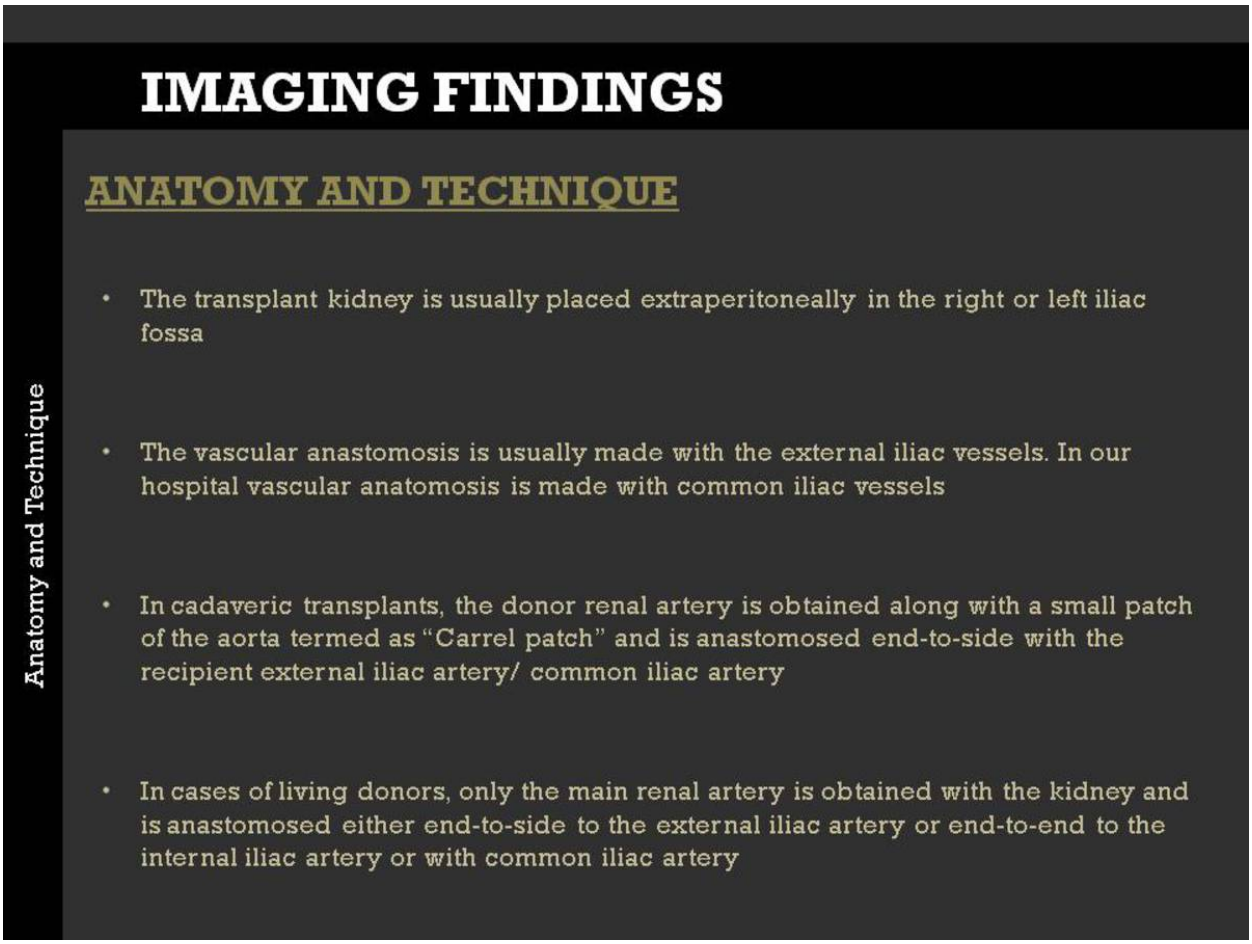

Fig. 3
References: L. Andrade; Radiology, Coimbra, PORTUGAL

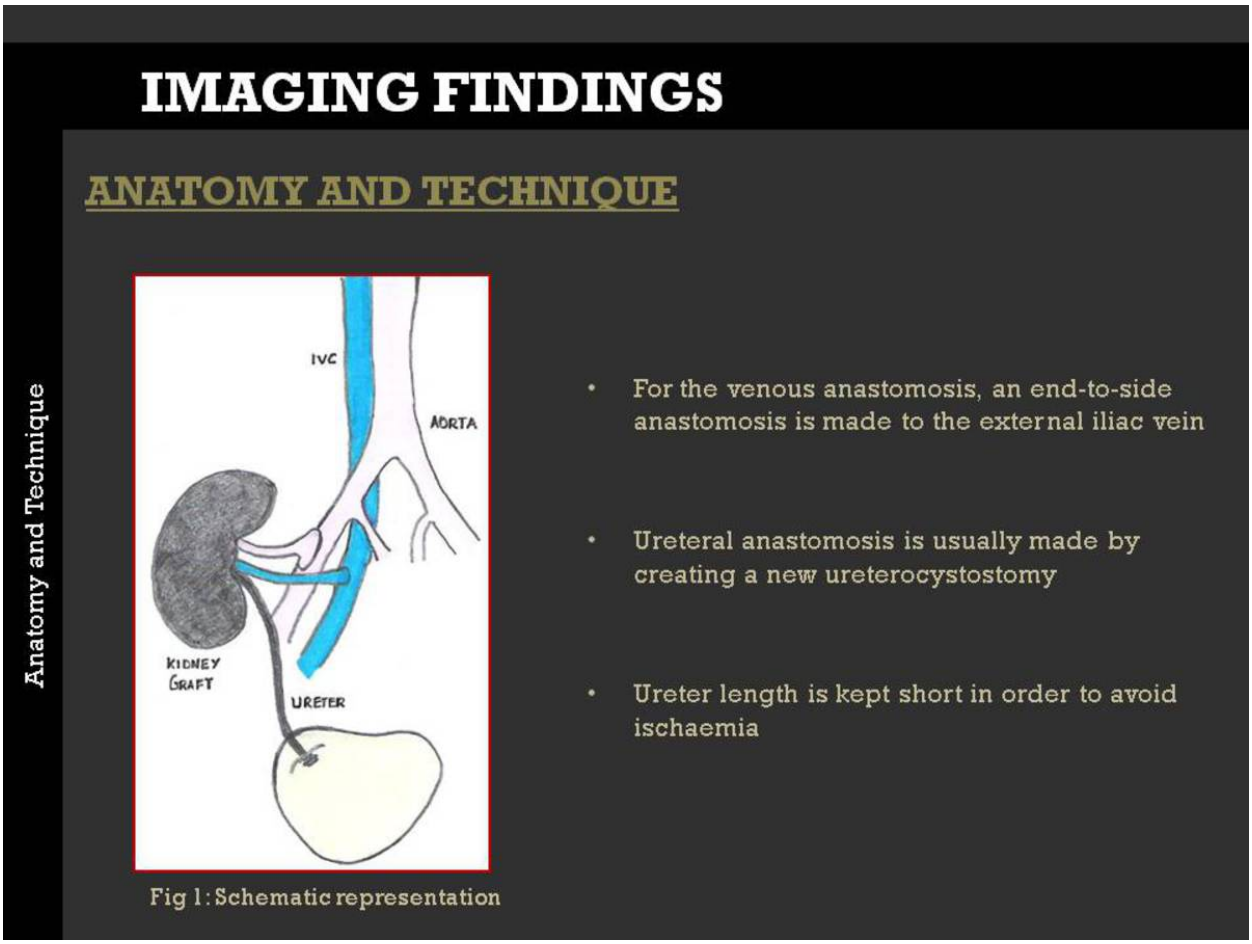

Fig. 4
References: L. Andrade; Radiology, Coimbra, PORTUGAL

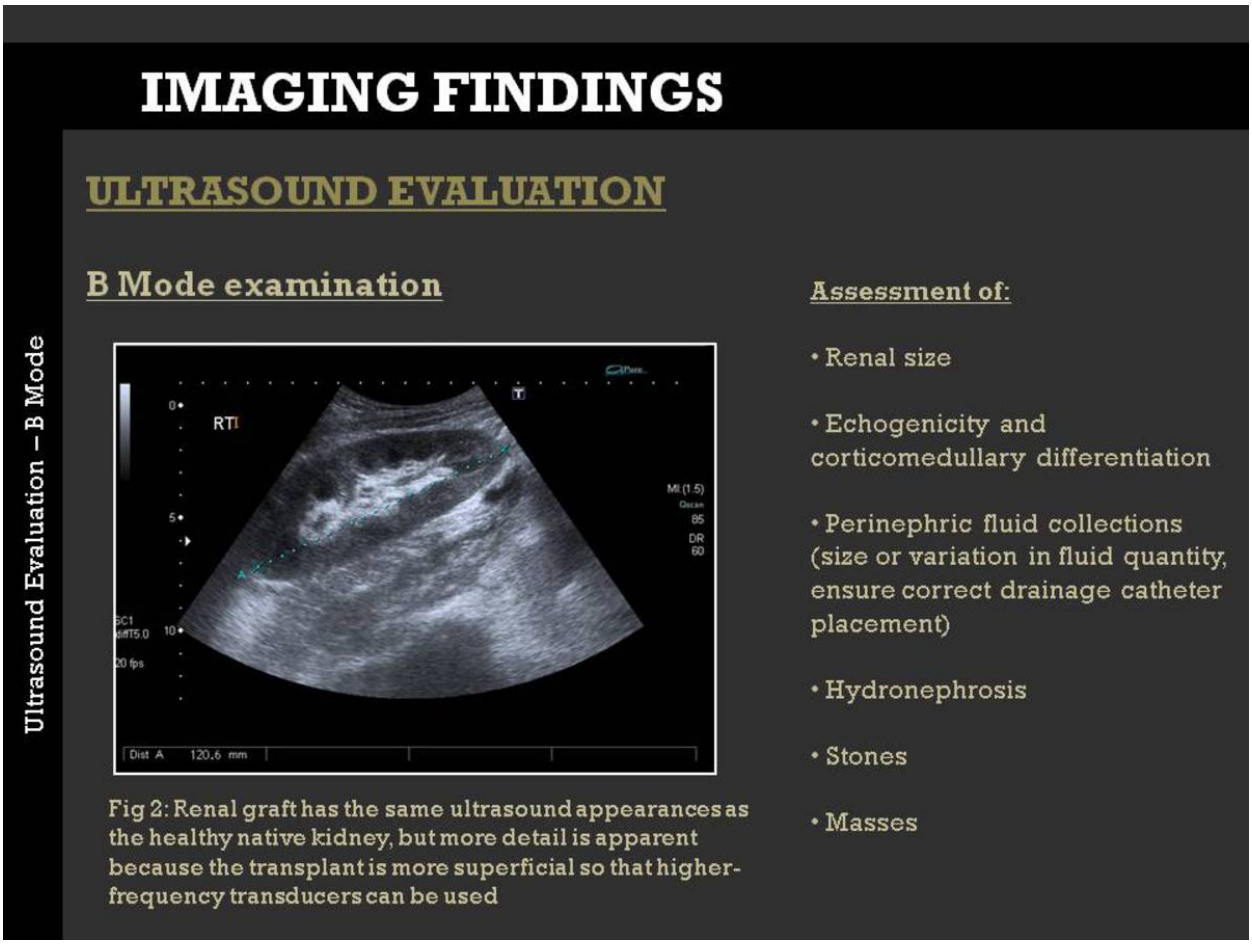

Fig. 5
References: L. Andrade; Radiology, Coimbra, PORTUGAL

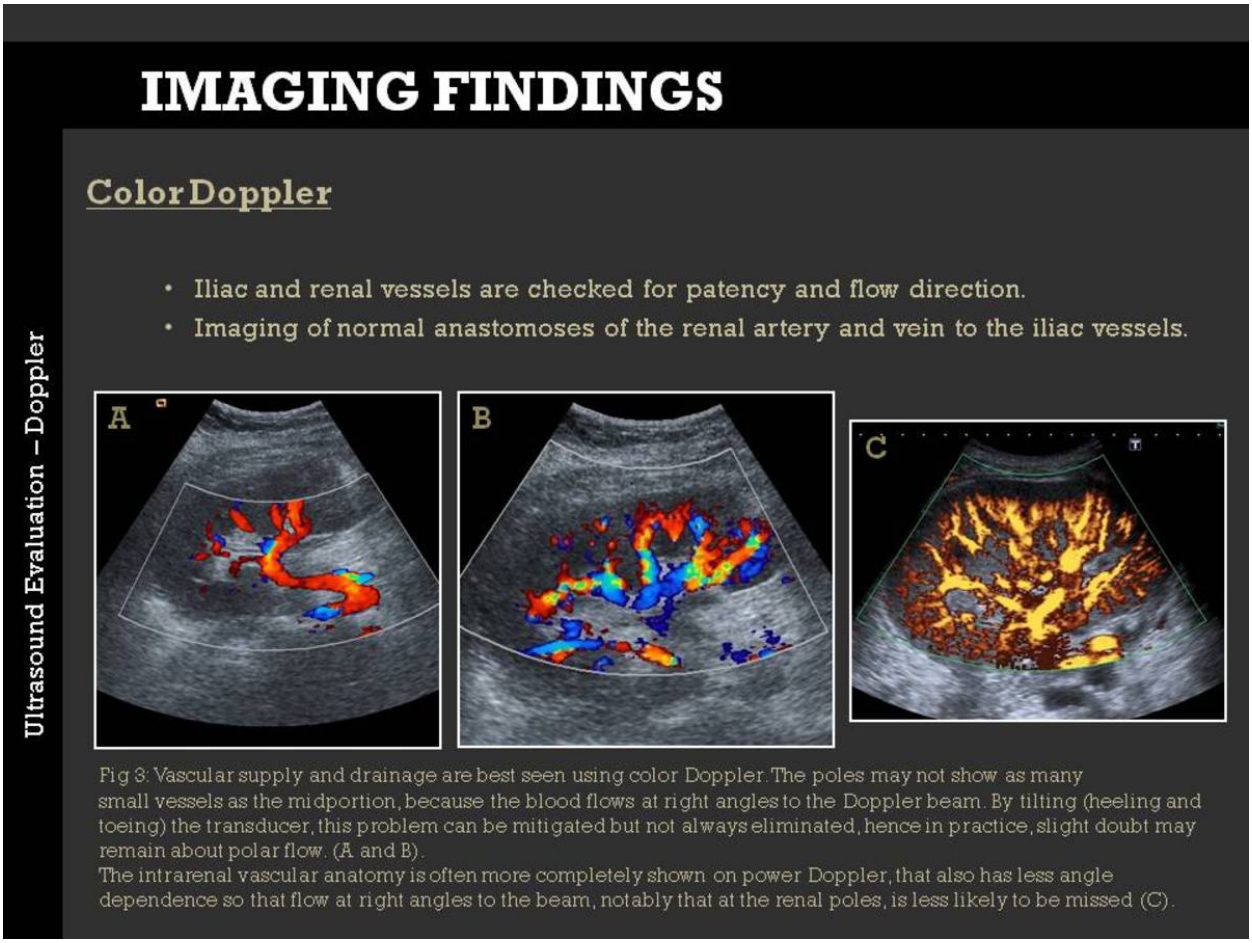

Fig. 6
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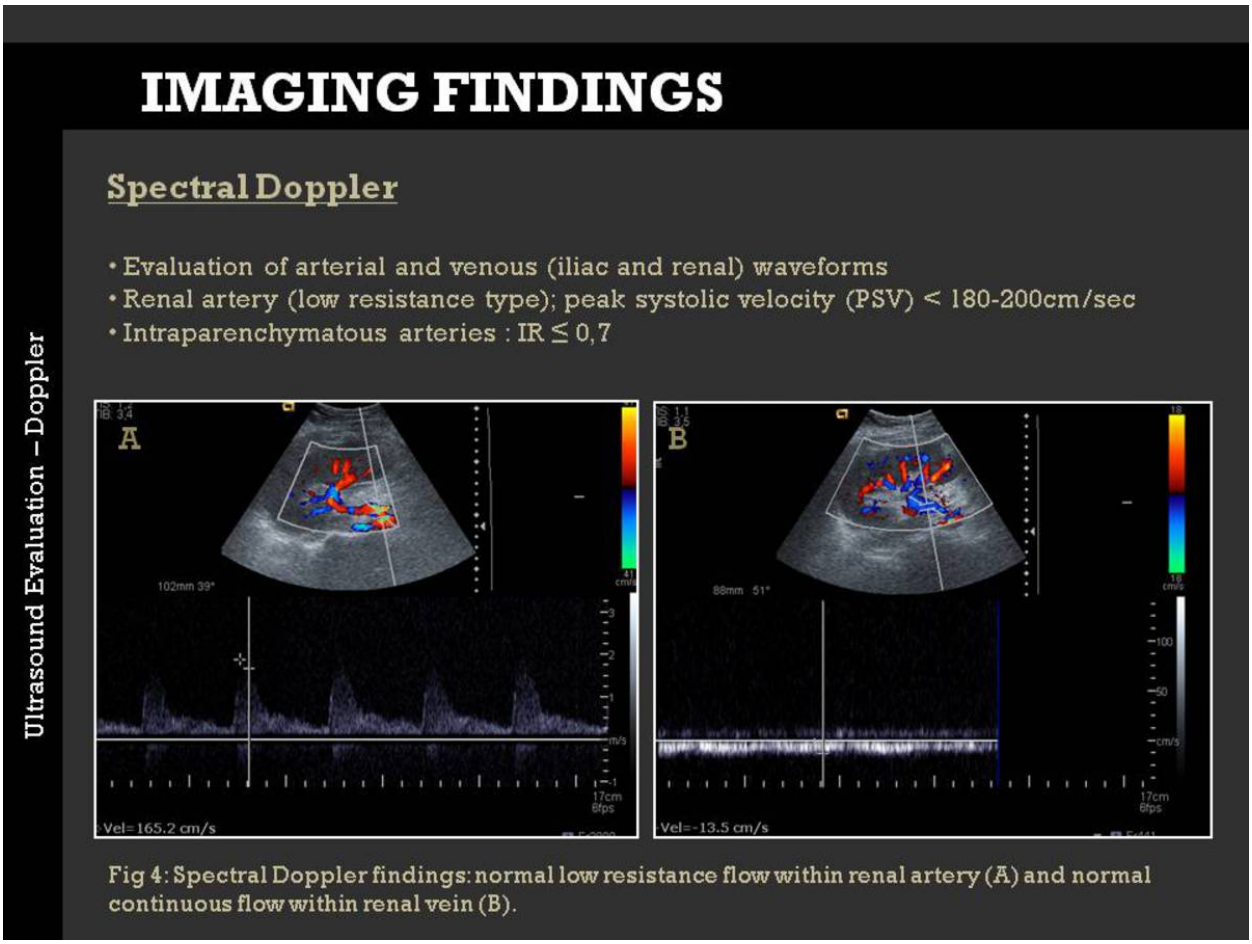

Fig. 7
References: L. Andrade; Radiology, Coimbra, PORTUGAL

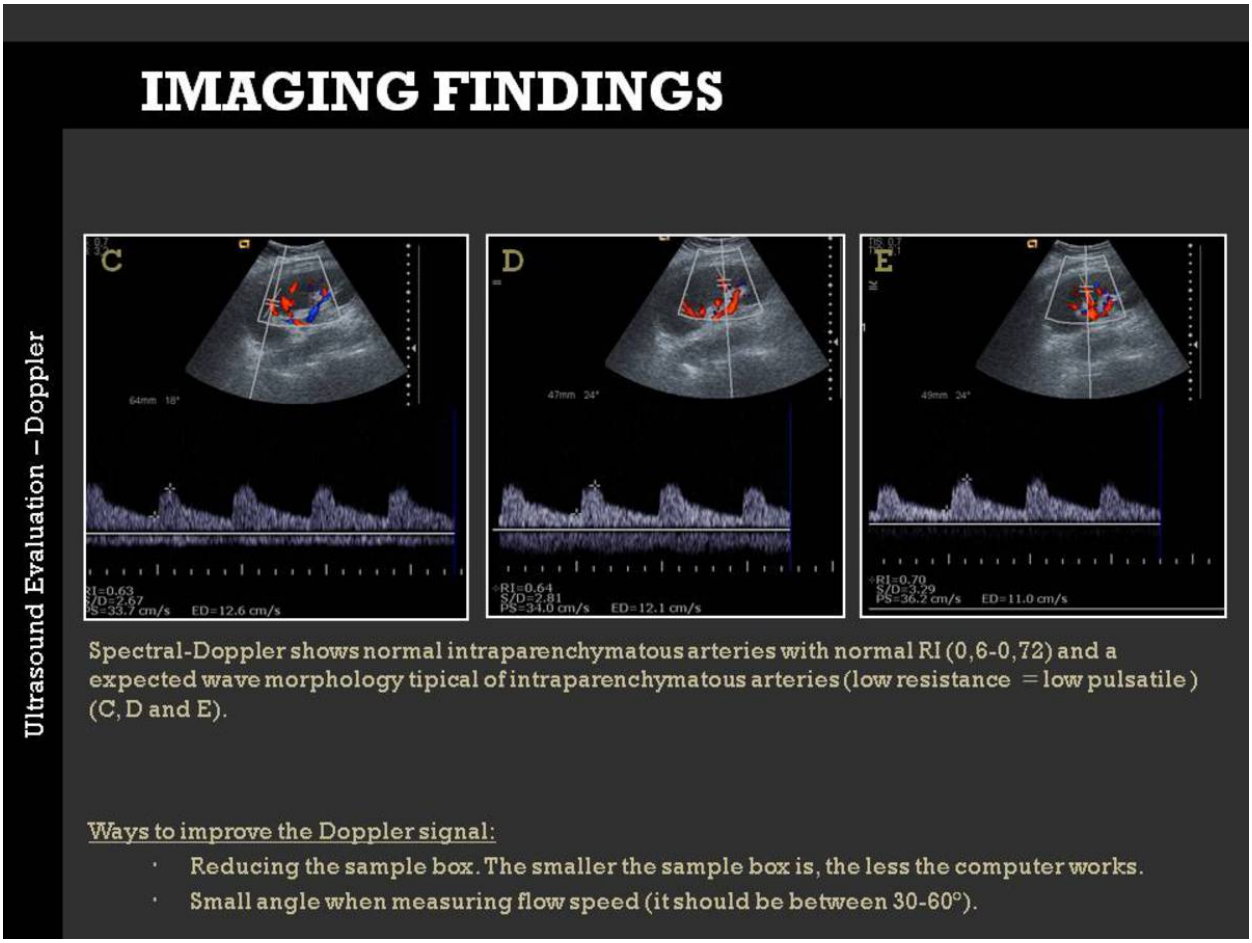

Fig. 8
References: L. Andrade; Radiology, Coimbra, PORTUGAL

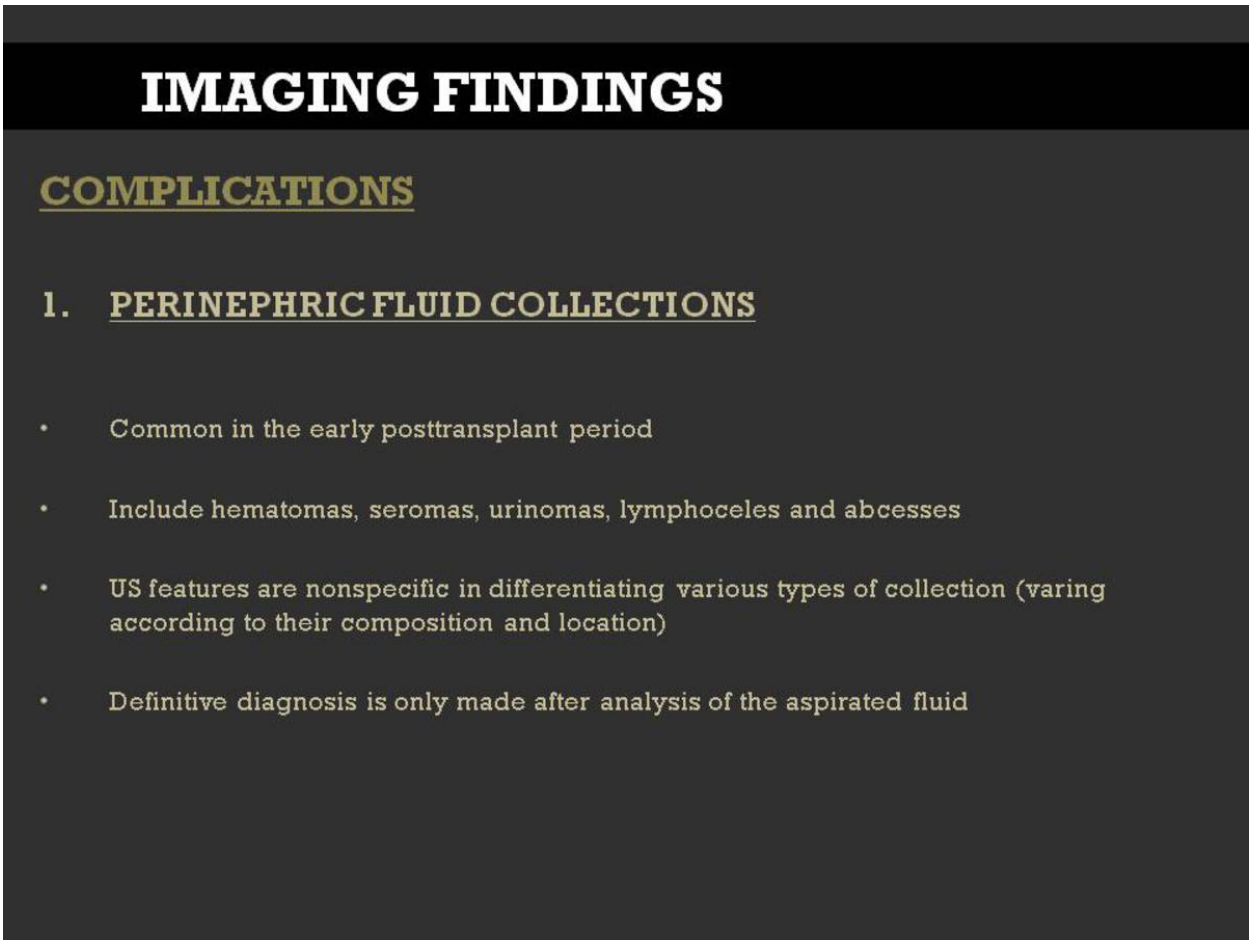

Fig. 9
References: L. Andrade; Radiology, Coimbra, PORTUGAL

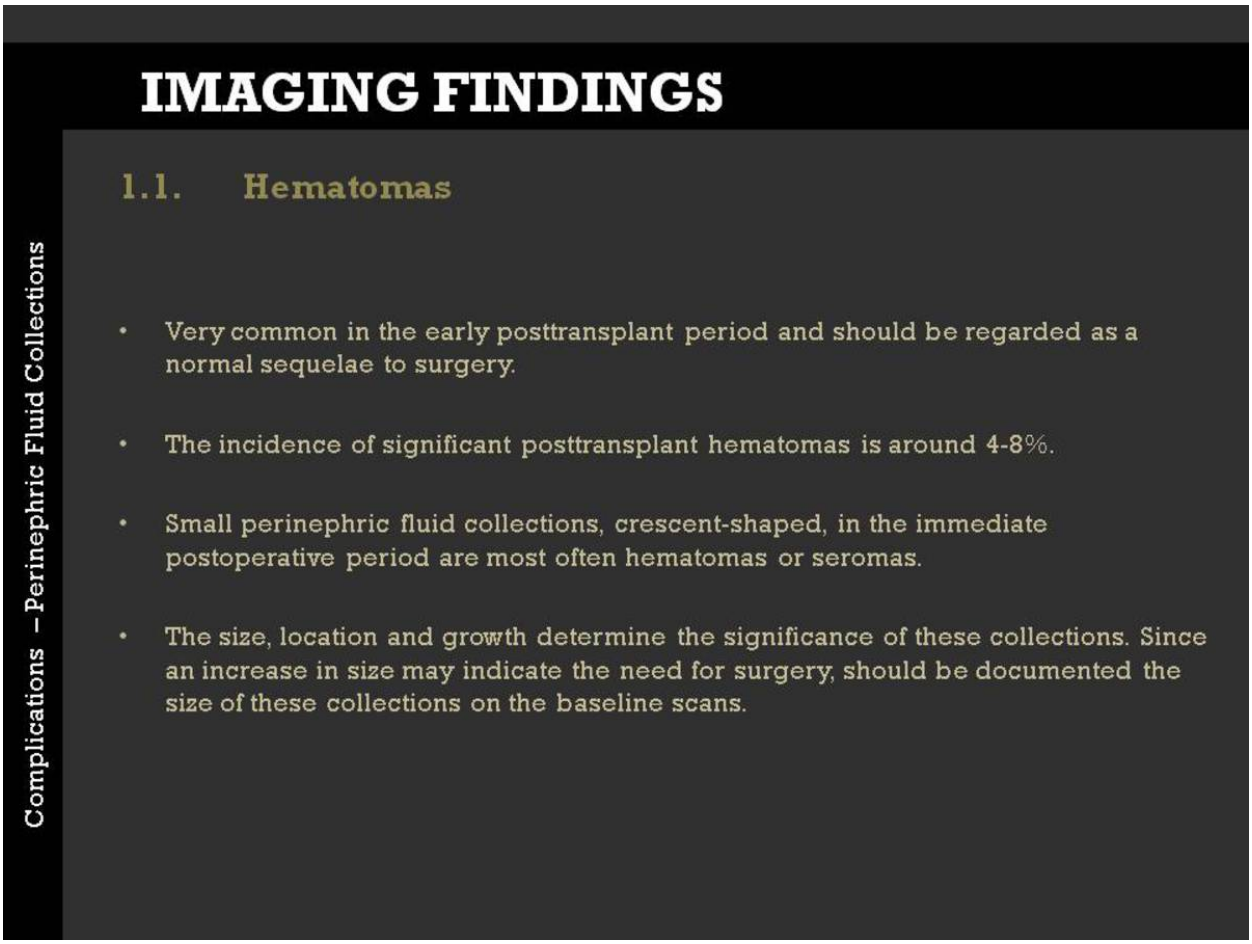

Fig. 10
References: L. Andrade; Radiology, Coimbra, PORTUGAL

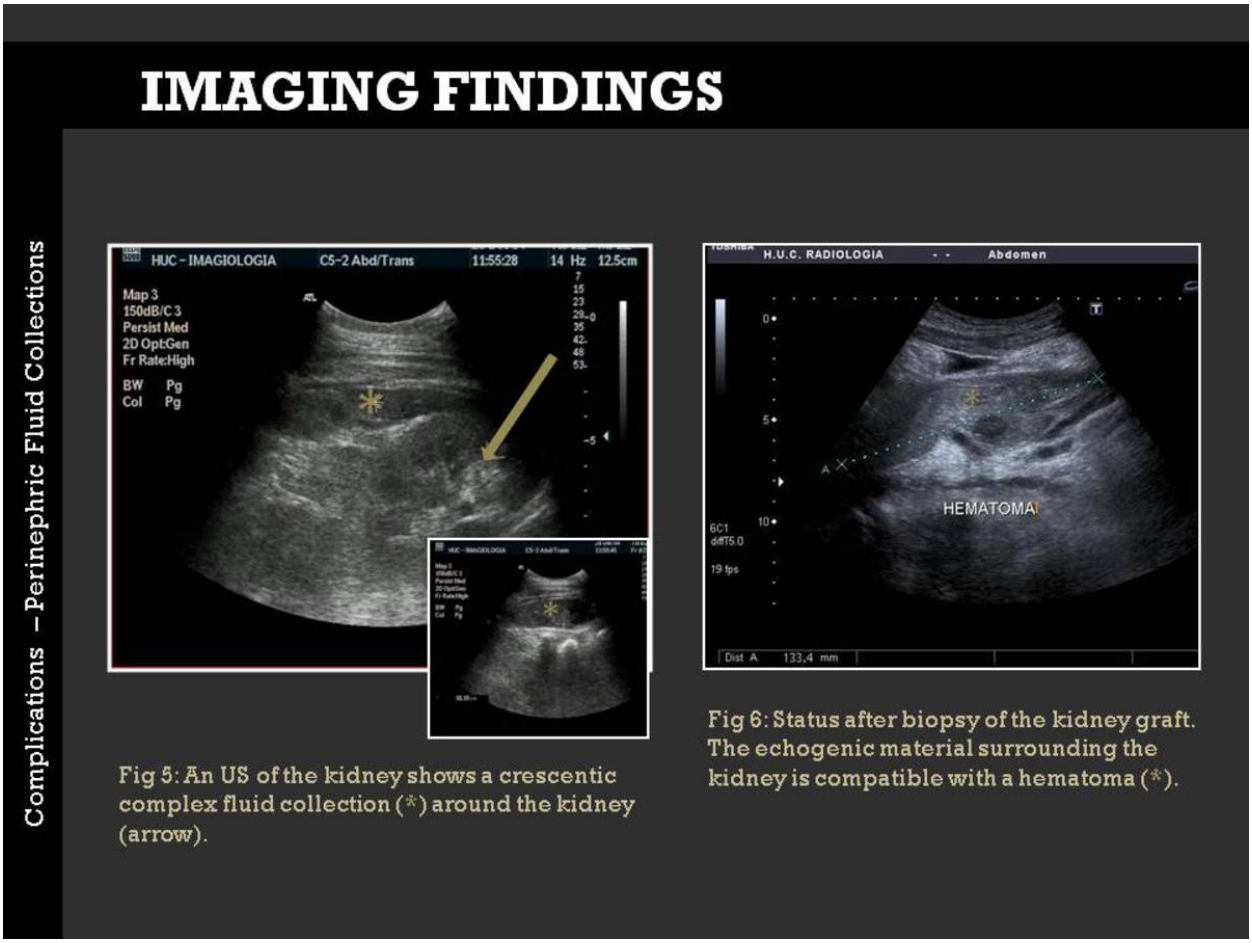

Fig. 11
References: L. Andrade; Radiology, Coimbra, PORTUGAL

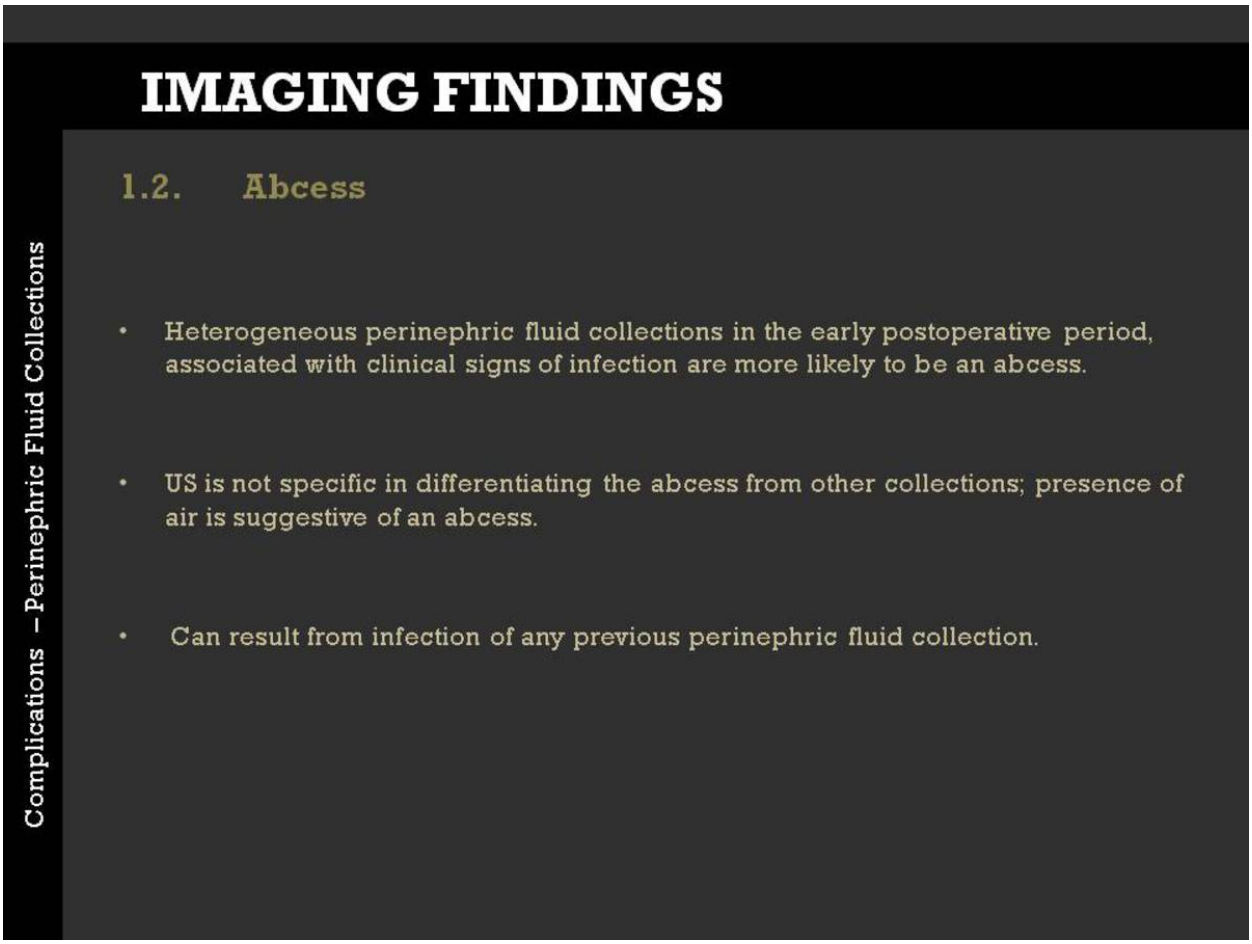

Fig. 12
References: L. Andrade; Radiology, Coimbra, PORTUGAL

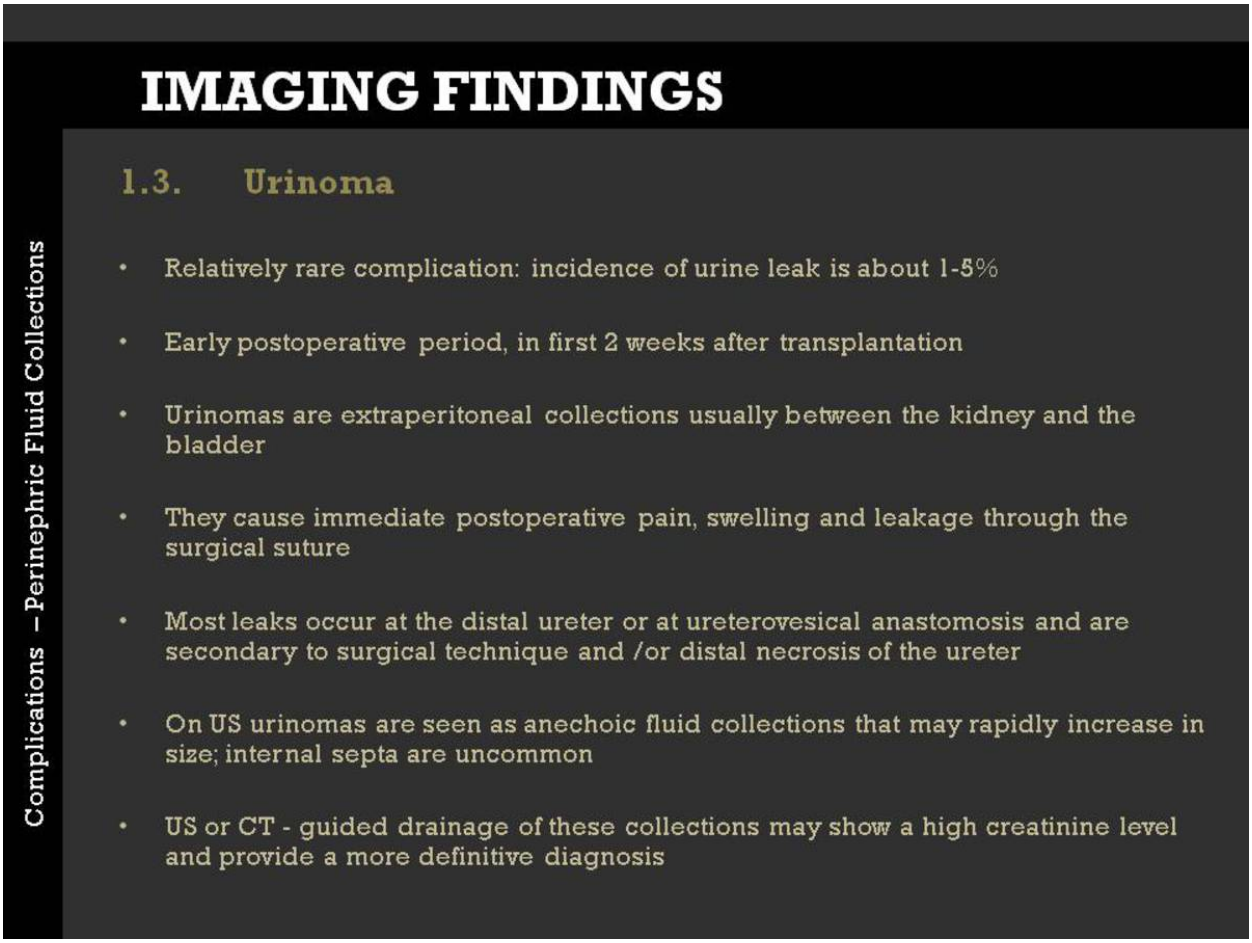

Fig. 13
References: L. Andrade; Radiology, Coimbra, PORTUGAL

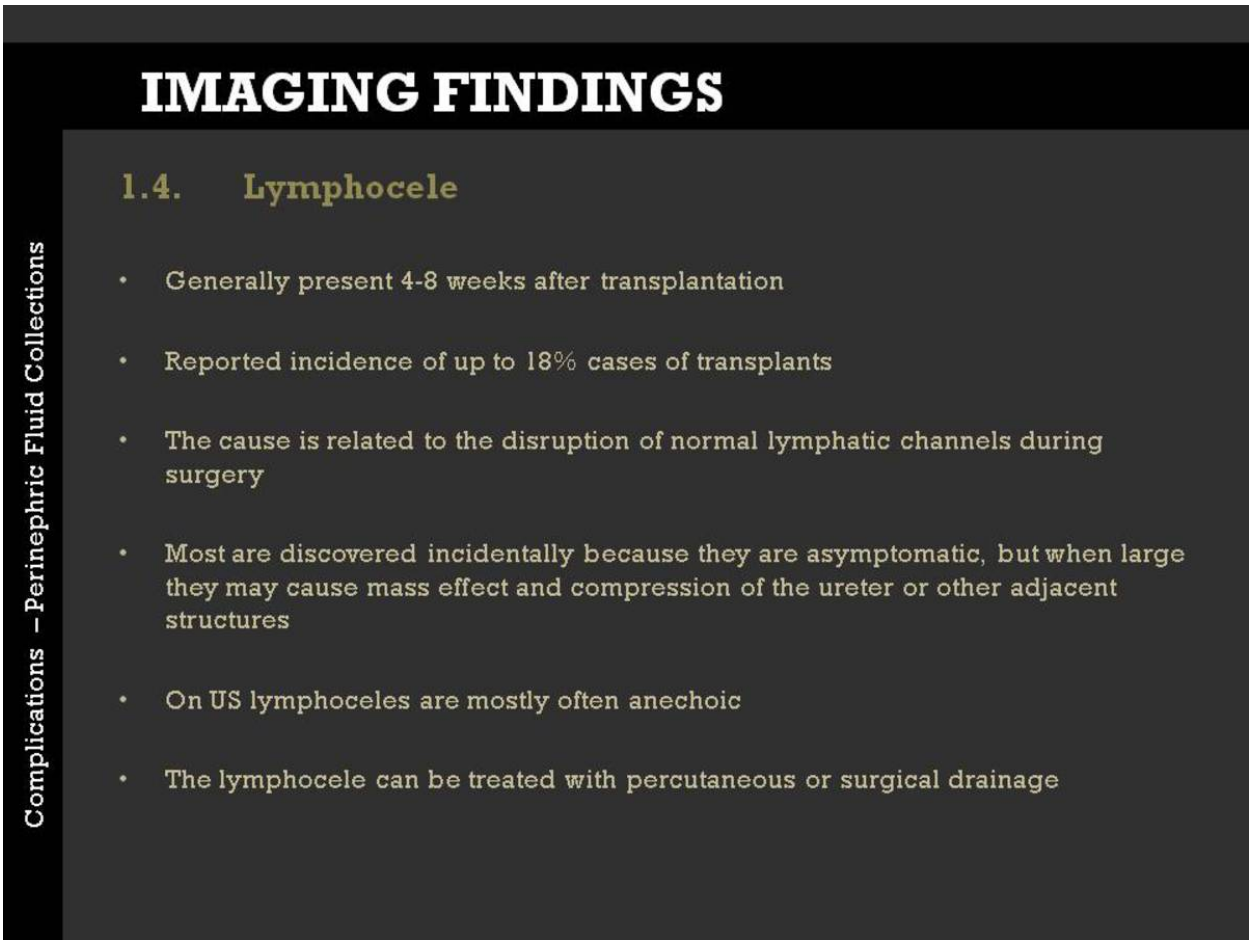

Fig. 14
References: L. Andrade; Radiology, Coimbra, PORTUGAL

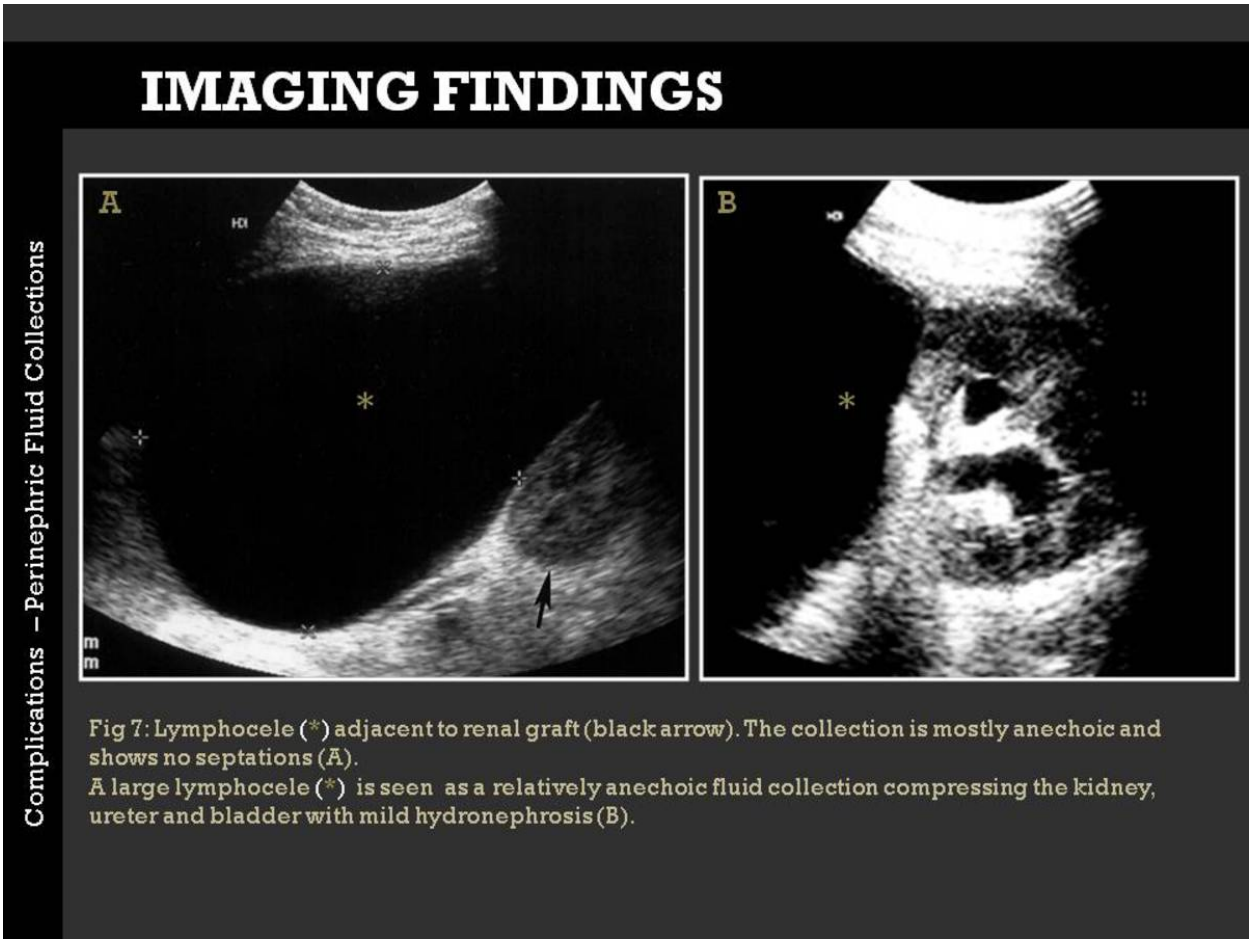

Fig. 15
References: L. Andrade; Radiology, Coimbra, PORTUGAL

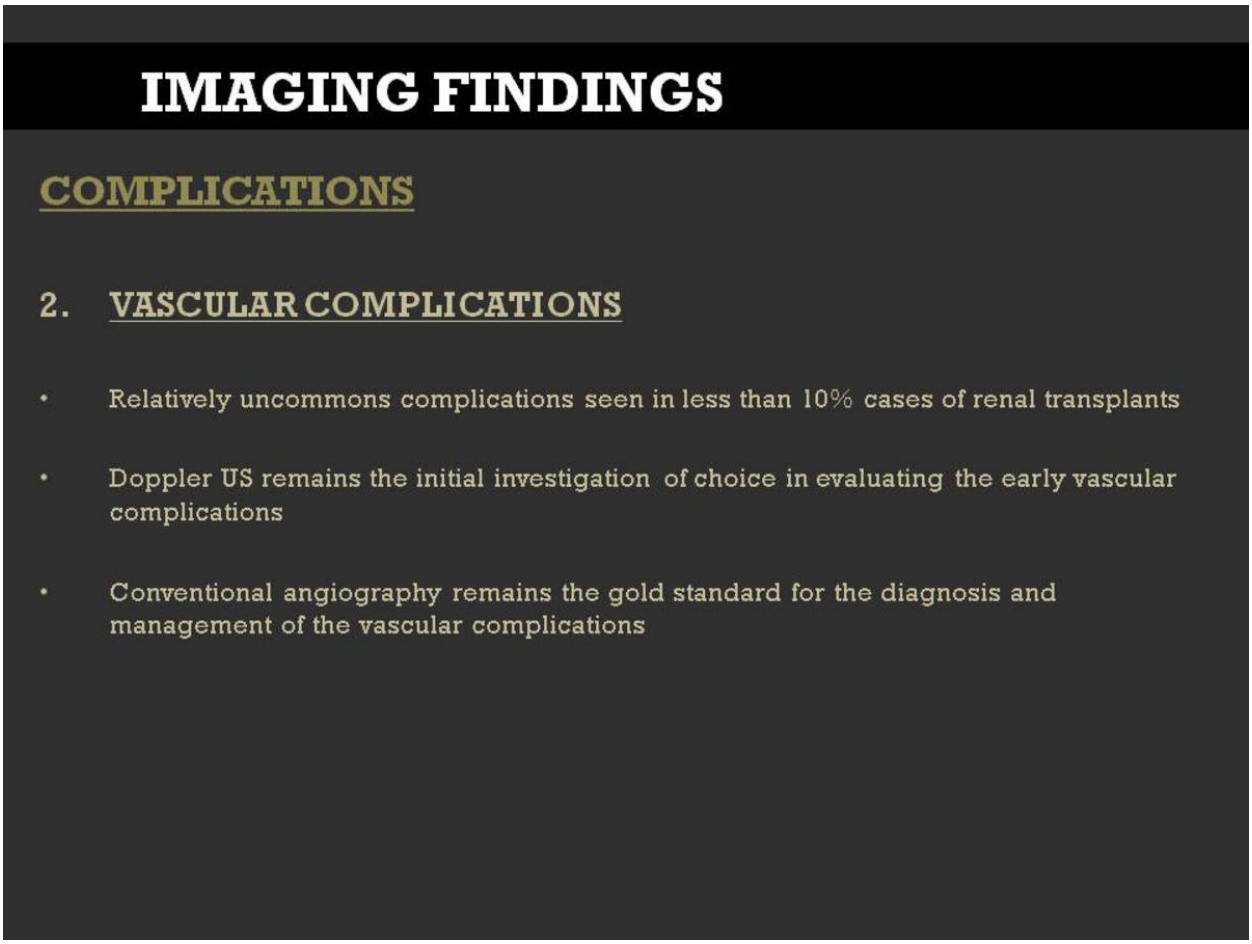

Fig. 16
References: L. Andrade; Radiology, Coimbra, PORTUGAL

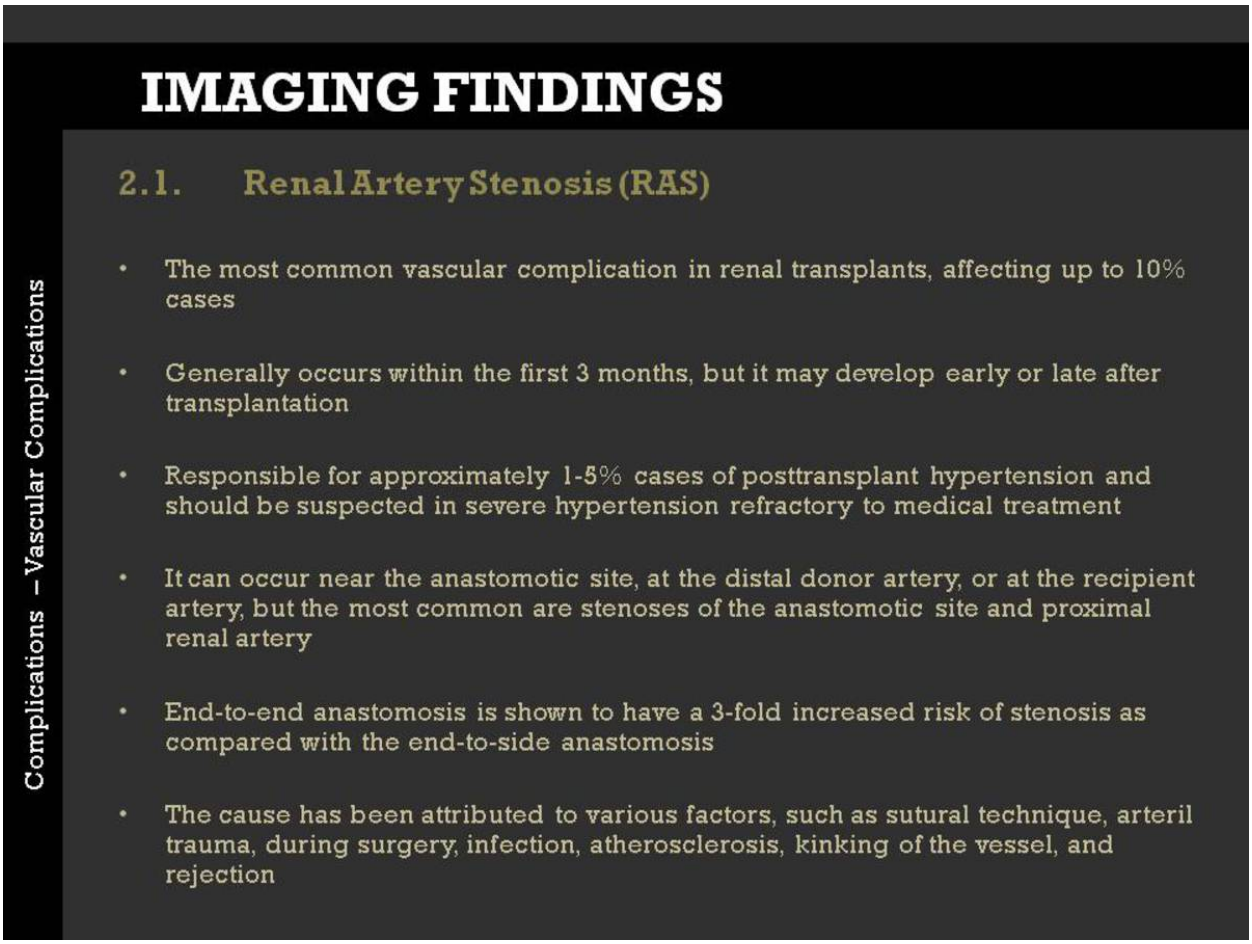

Fig. 17
References: L. Andrade; Radiology, Coimbra, PORTUGAL

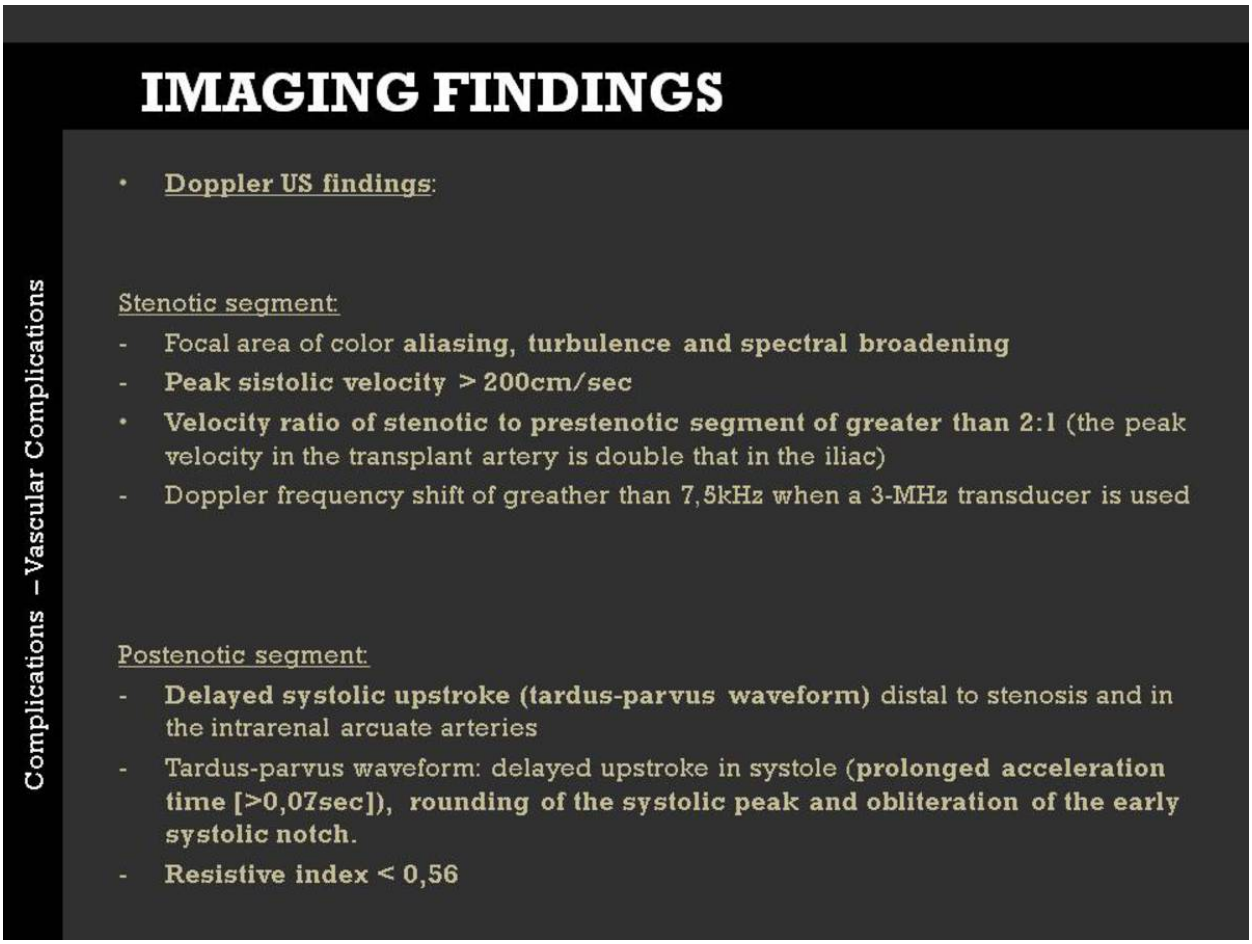

Fig. 18
References: L. Andrade; Radiology, Coimbra, PORTUGAL

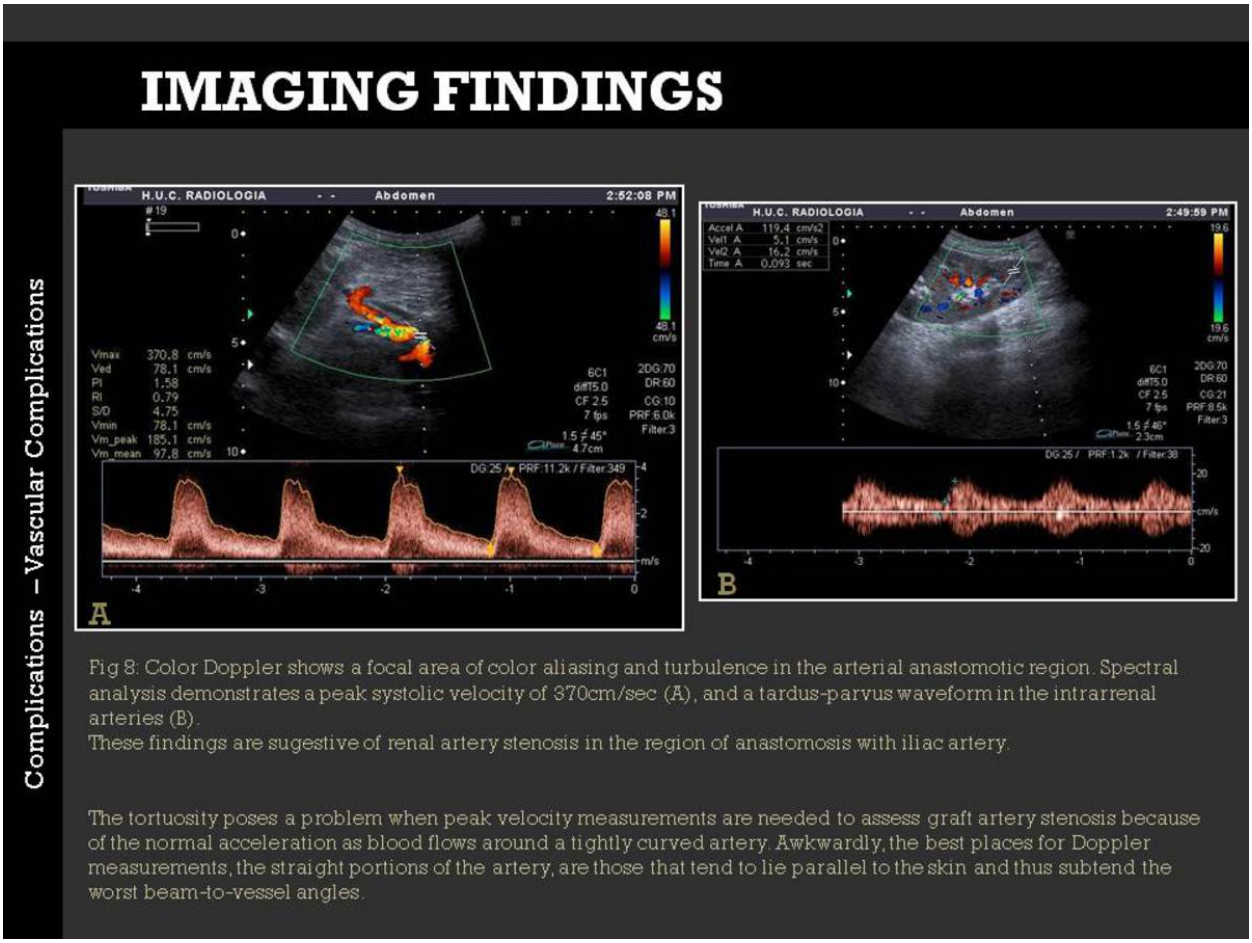

Fig. 19
References: L. Andrade; Radiology, Coimbra, PORTUGAL

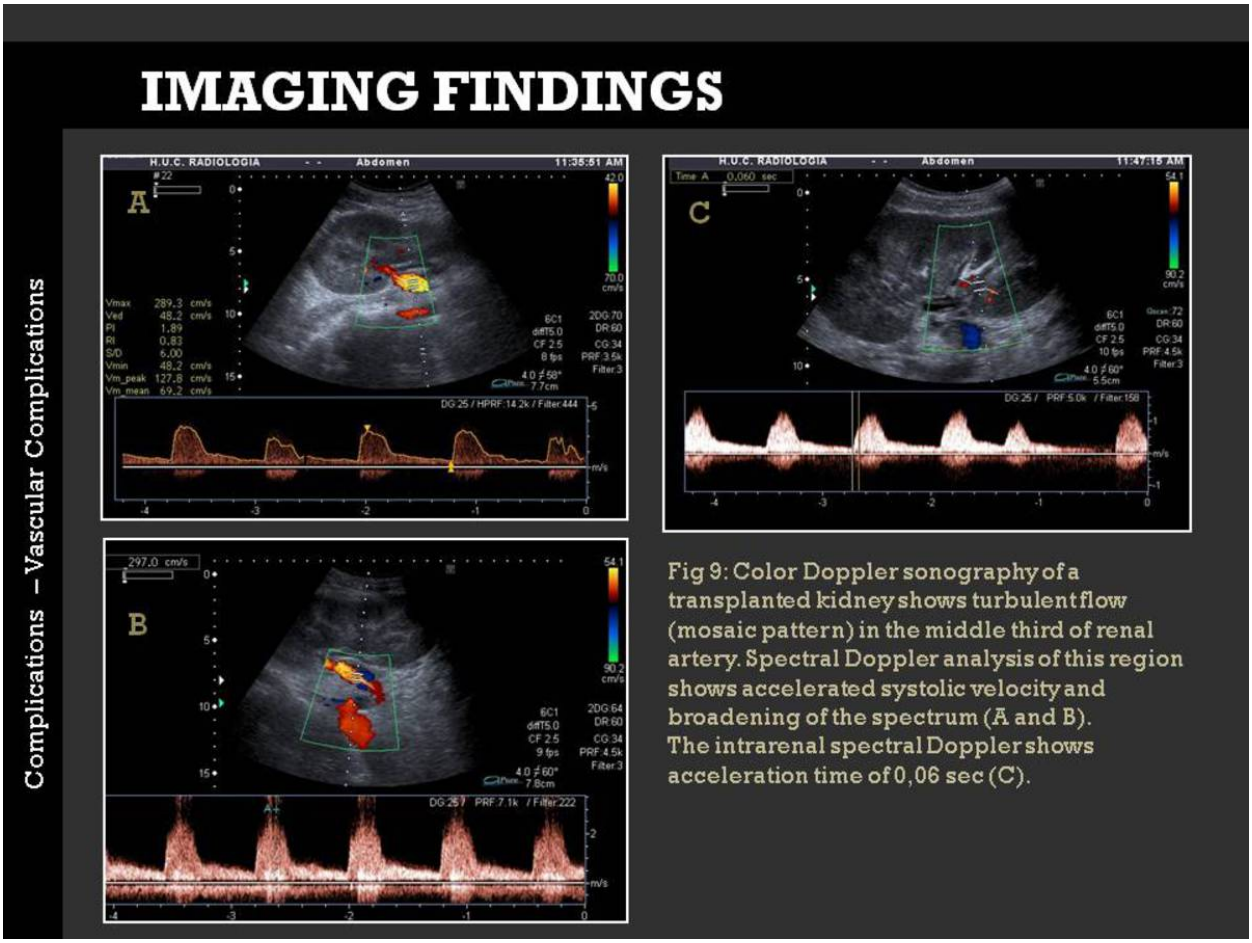

Fig. 20
References: L. Andrade; Radiology, Coimbra, PORTUGAL

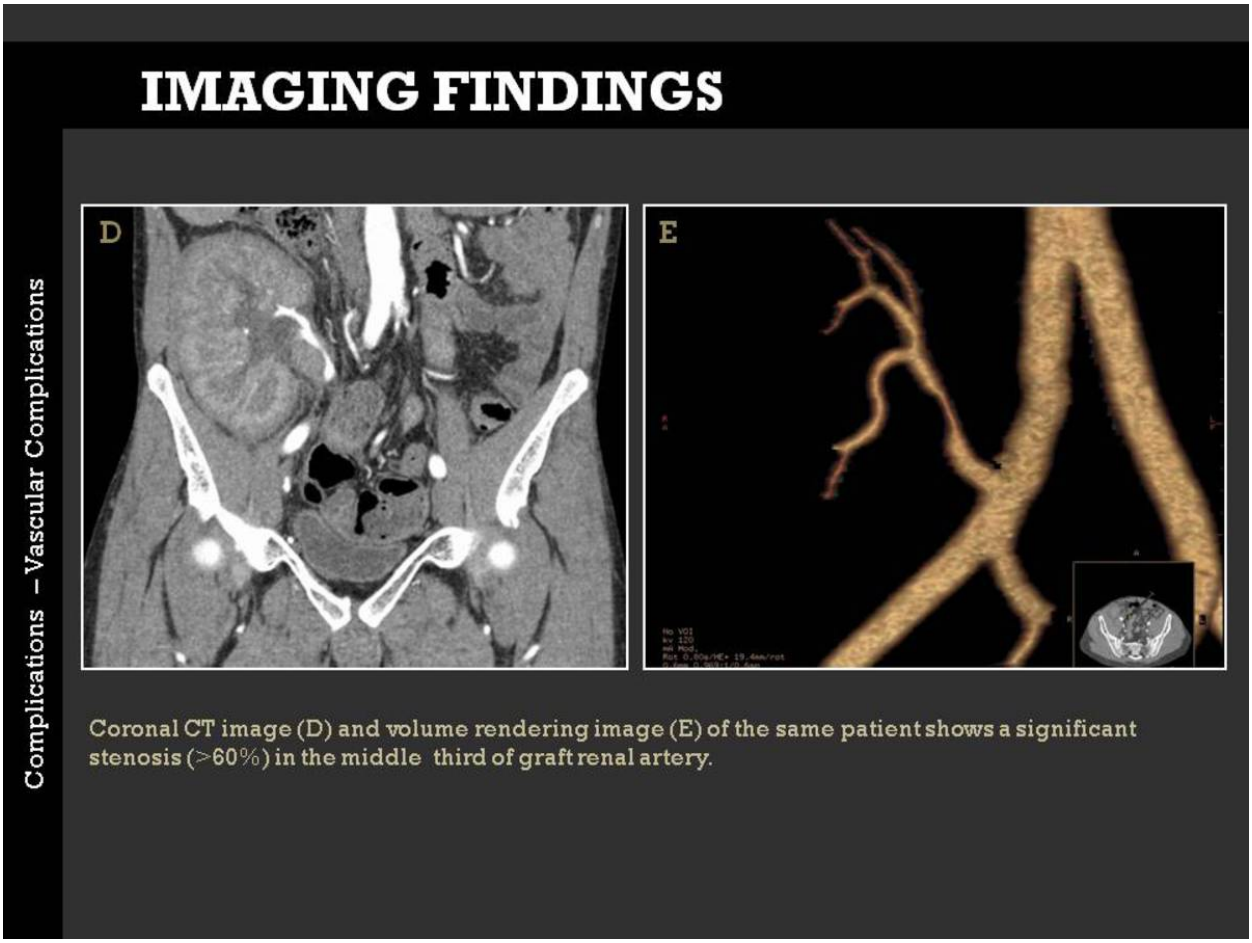

Fig. 21
References: L. Andrade; Radiology, Coimbra, PORTUGAL

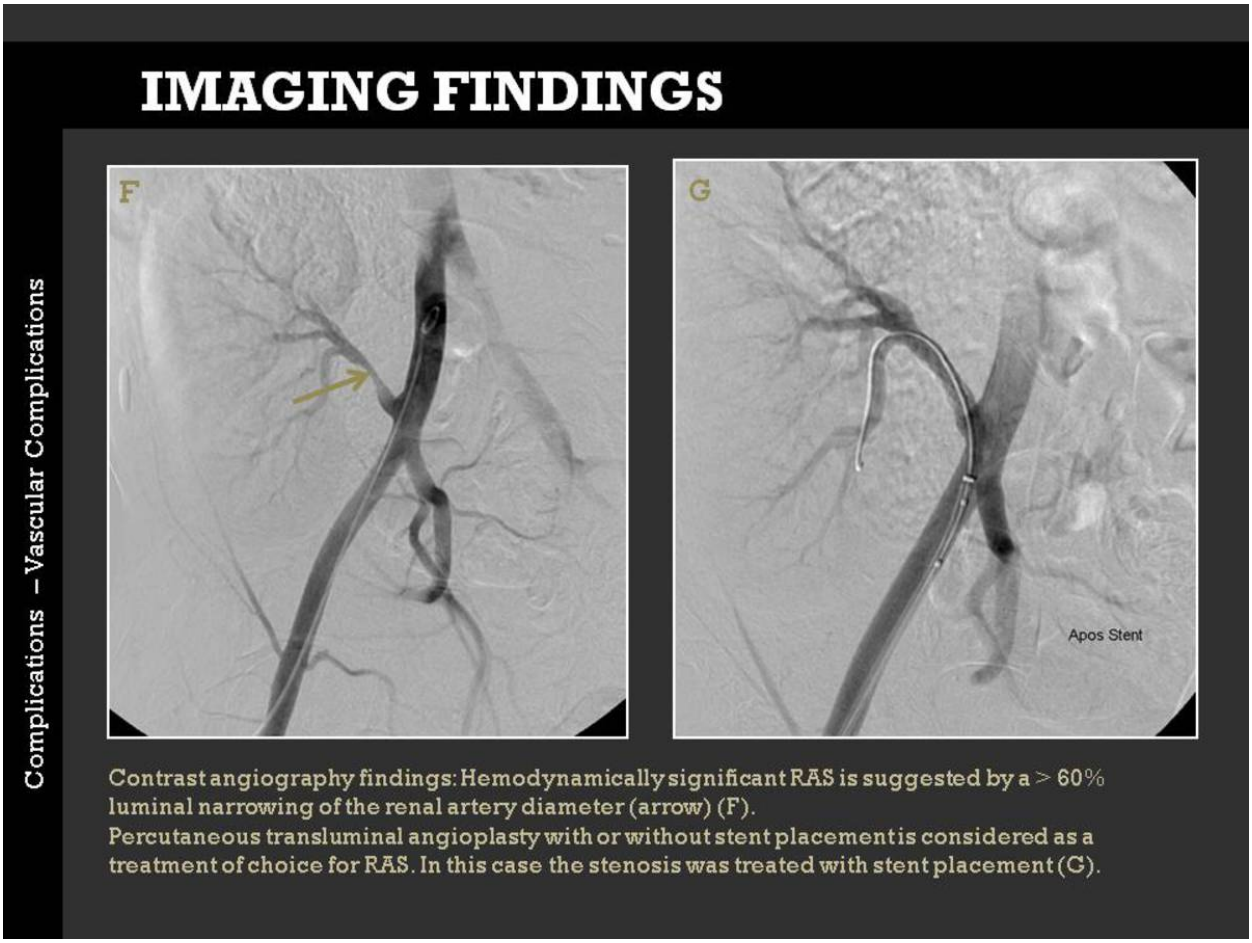

Fig. 22
References: L. Andrade; Radiology, Coimbra, PORTUGAL

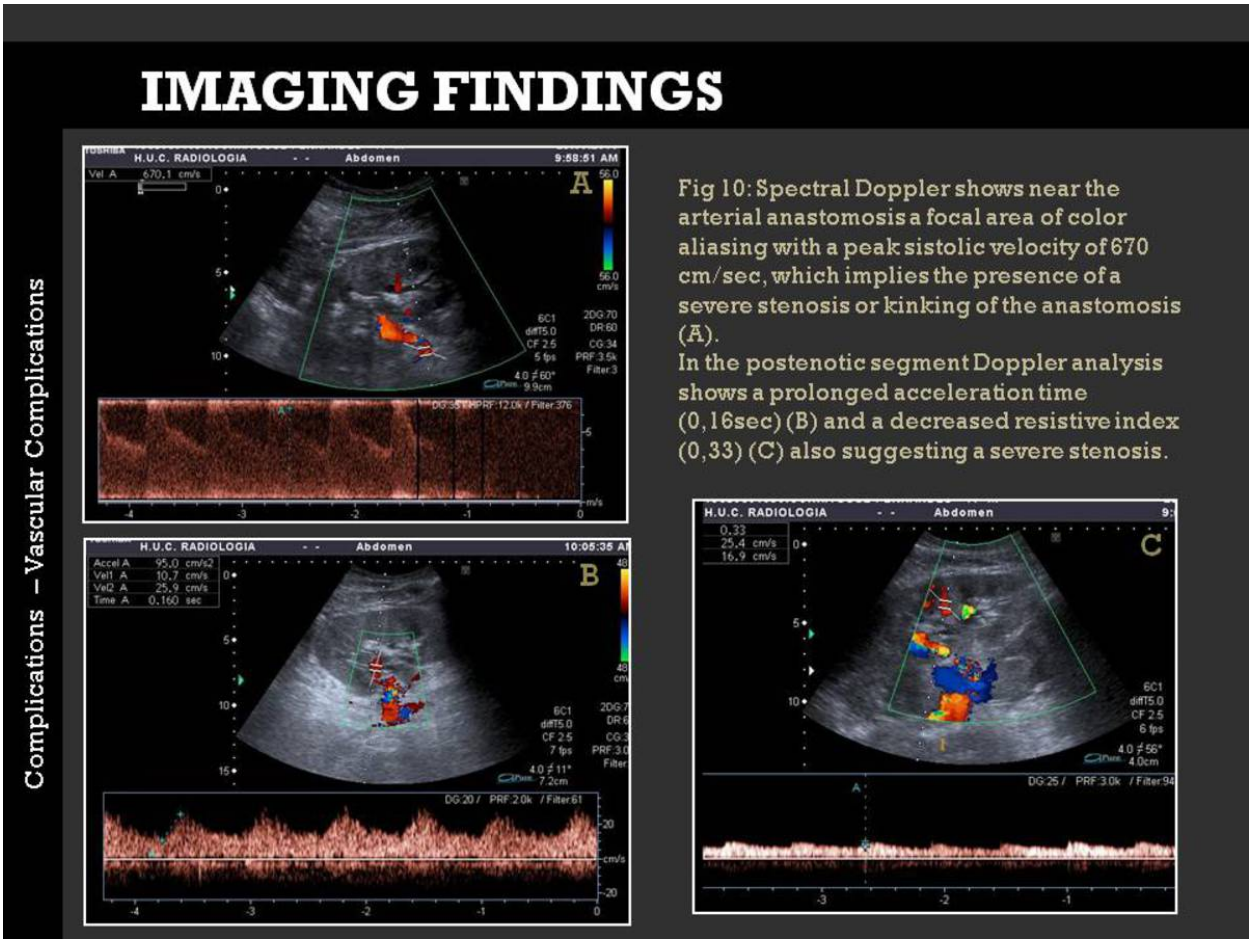

Fig. 23
References: L. Andrade; Radiology, Coimbra, PORTUGAL

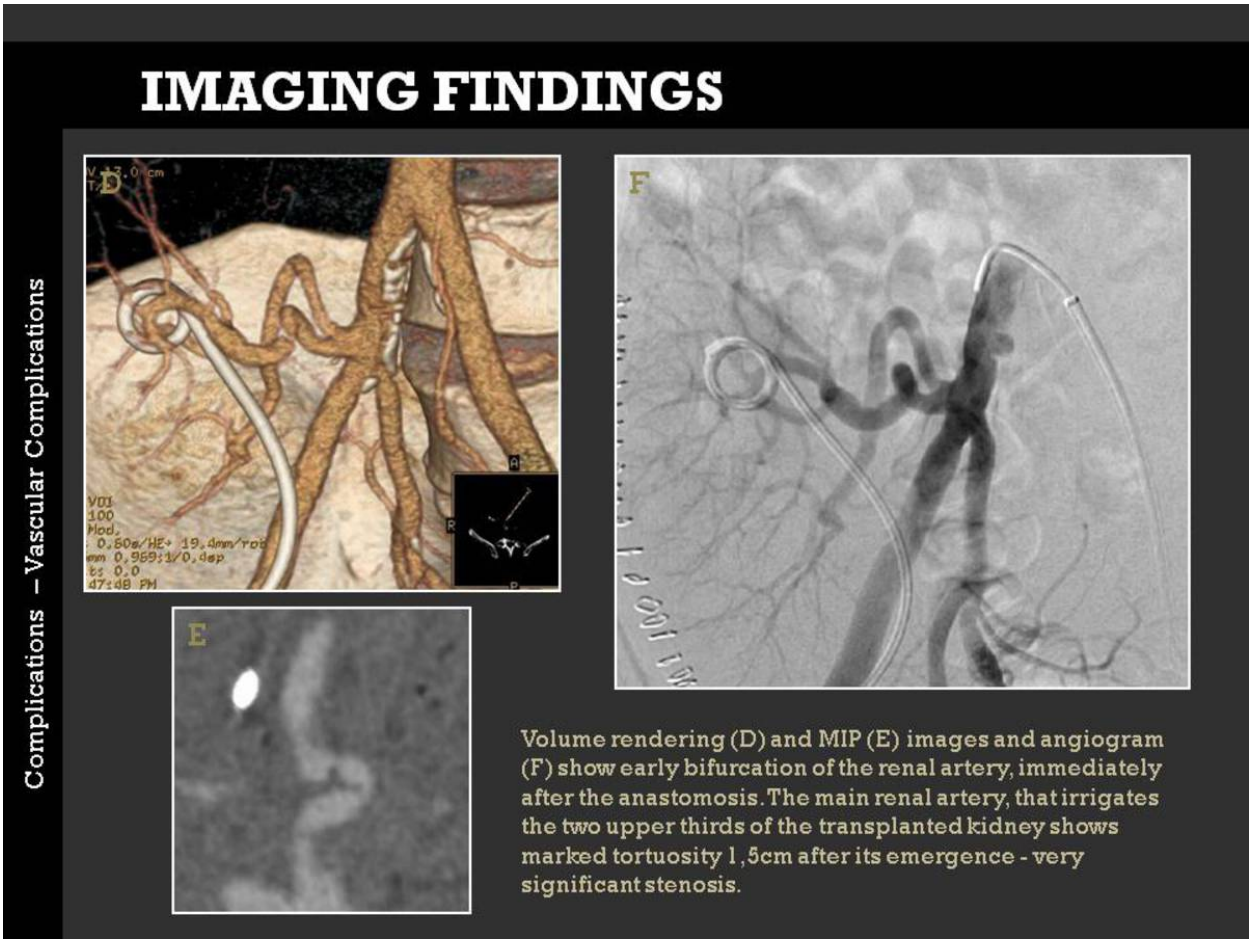

Fig. 24
References: L. Andrade; Radiology, Coimbra, PORTUGAL

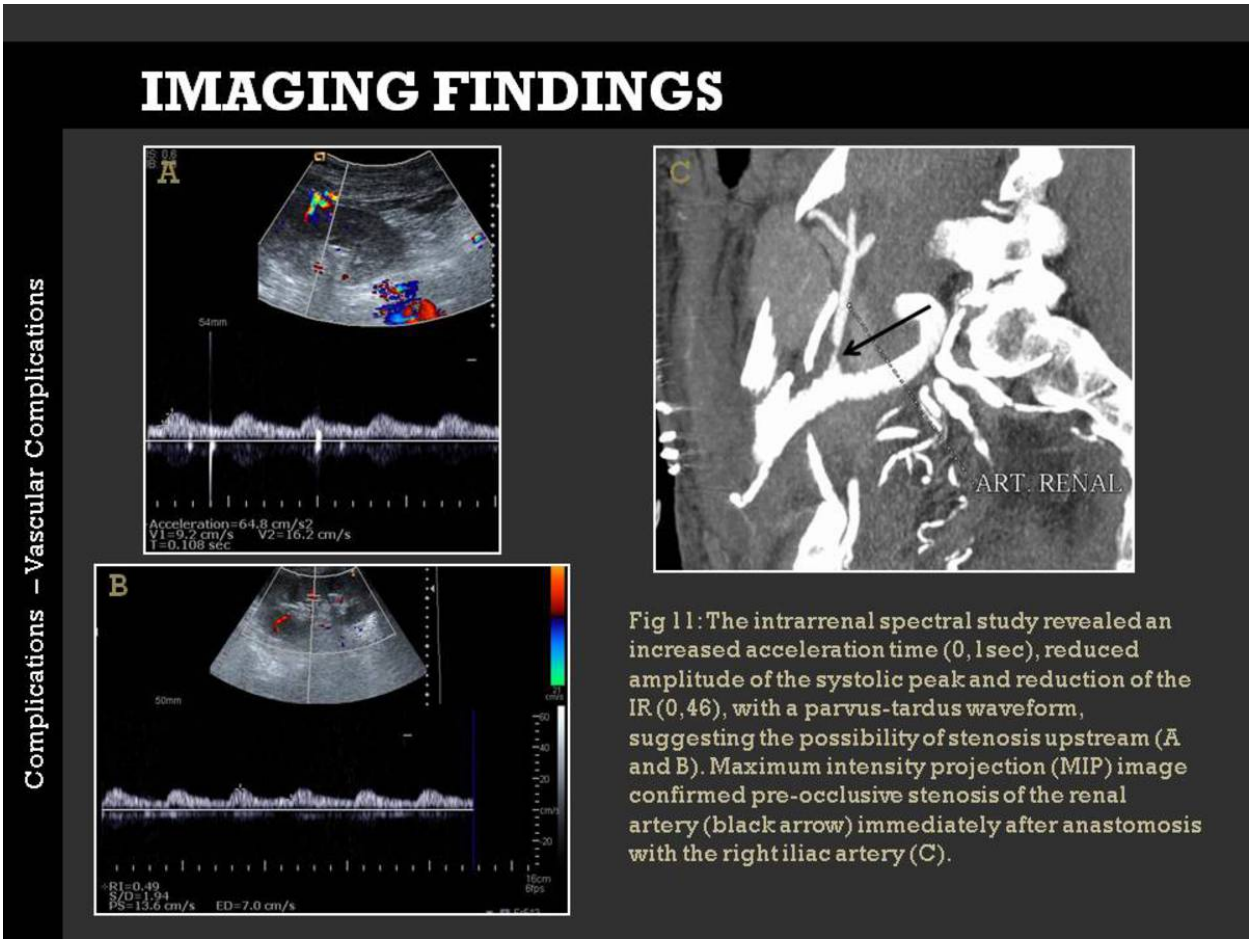

Fig. 25
References: L. Andrade; Radiology, Coimbra, PORTUGAL

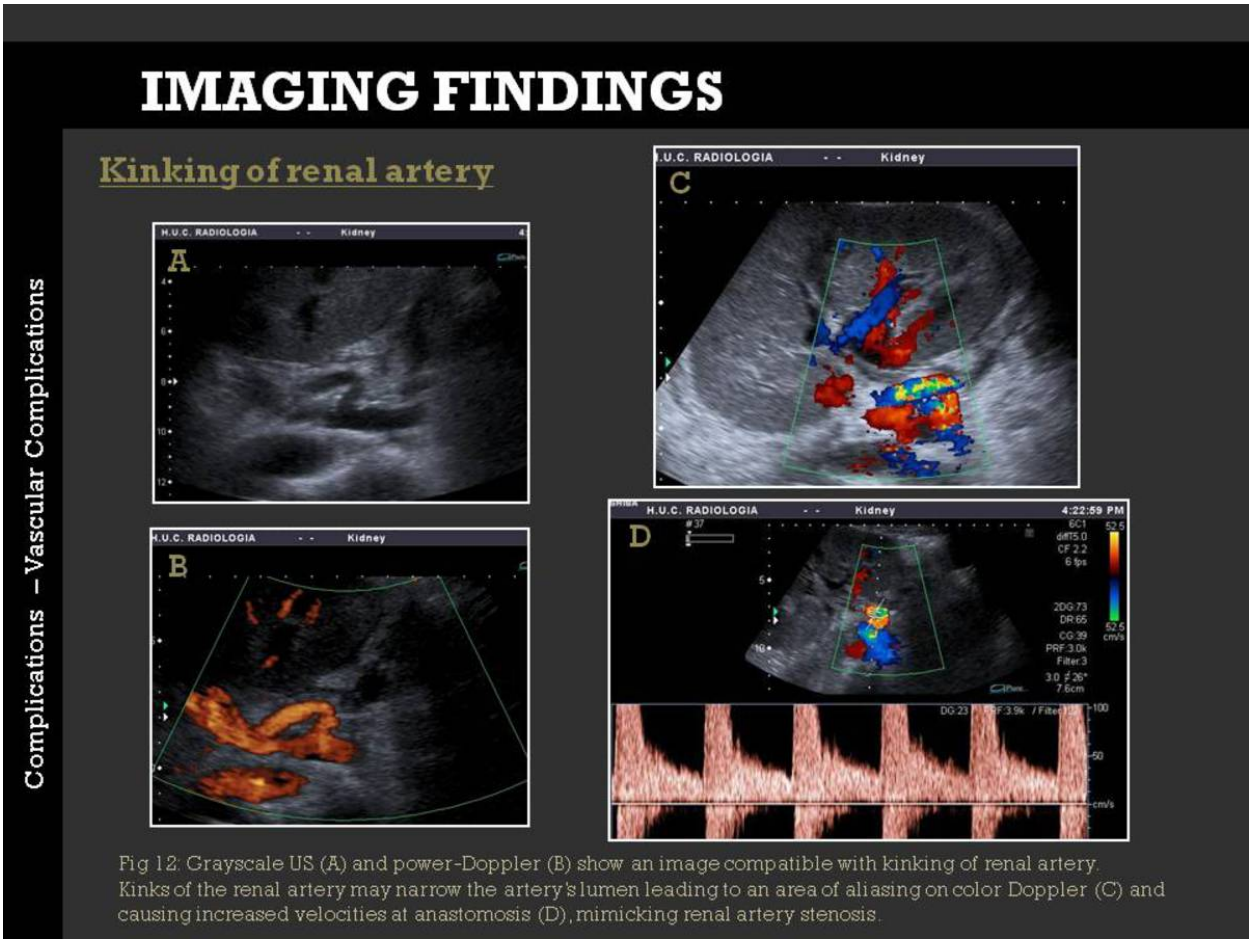

Fig. 26
References: L. Andrade; Radiology, Coimbra, PORTUGAL

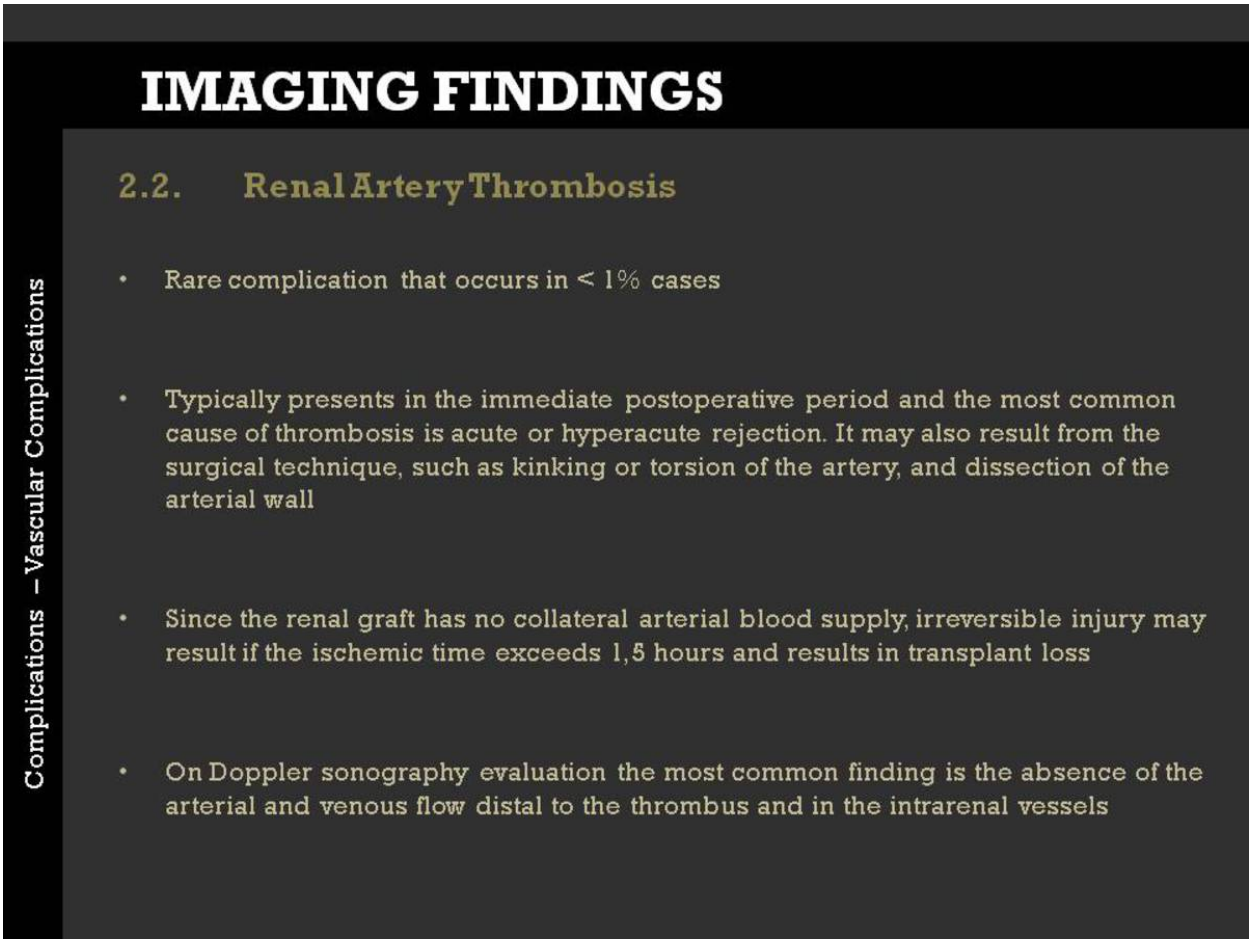

Fig. 27
References: L. Andrade; Radiology, Coimbra, PORTUGAL

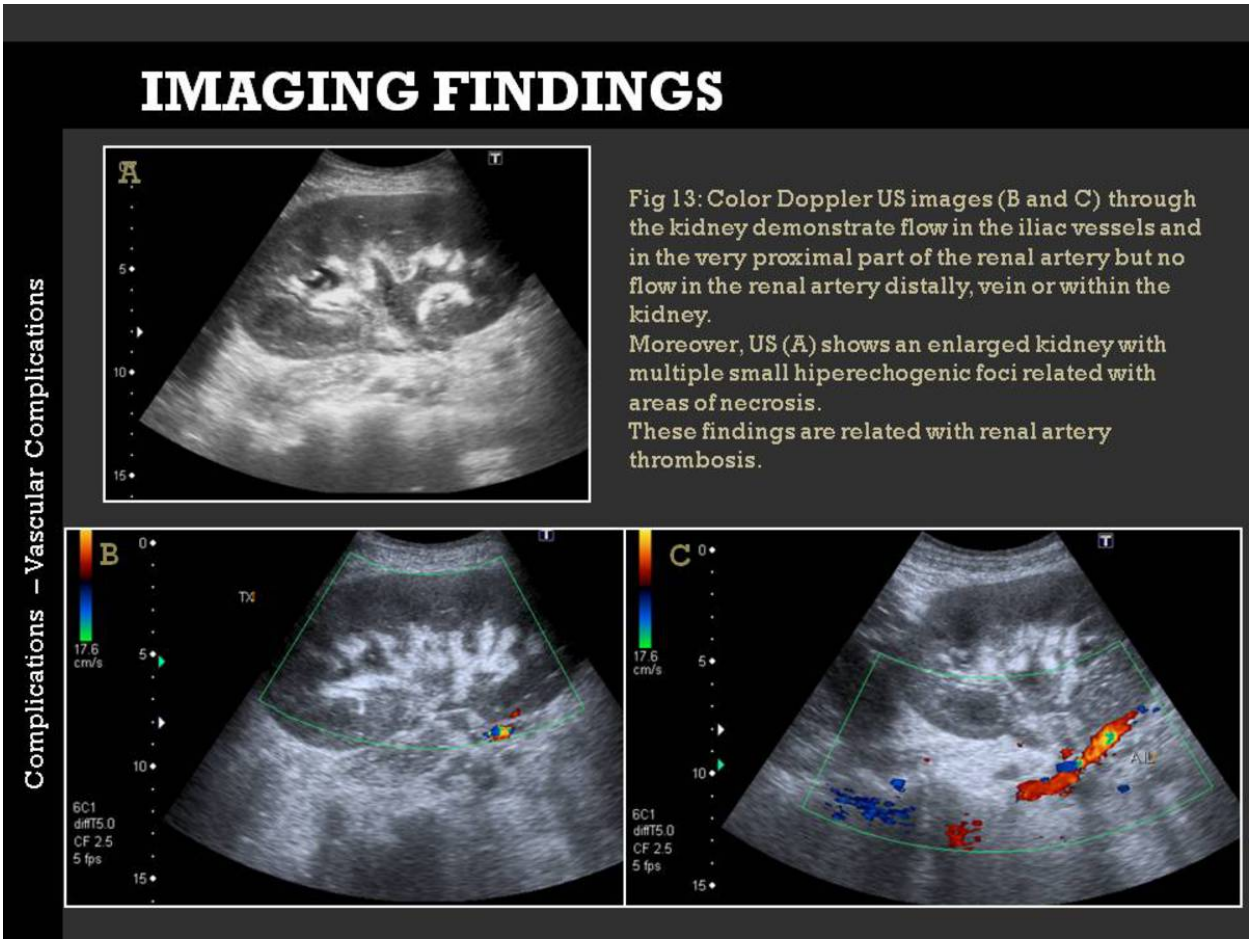

Fig. 28
References: L. Andrade; Radiology, Coimbra, PORTUGAL

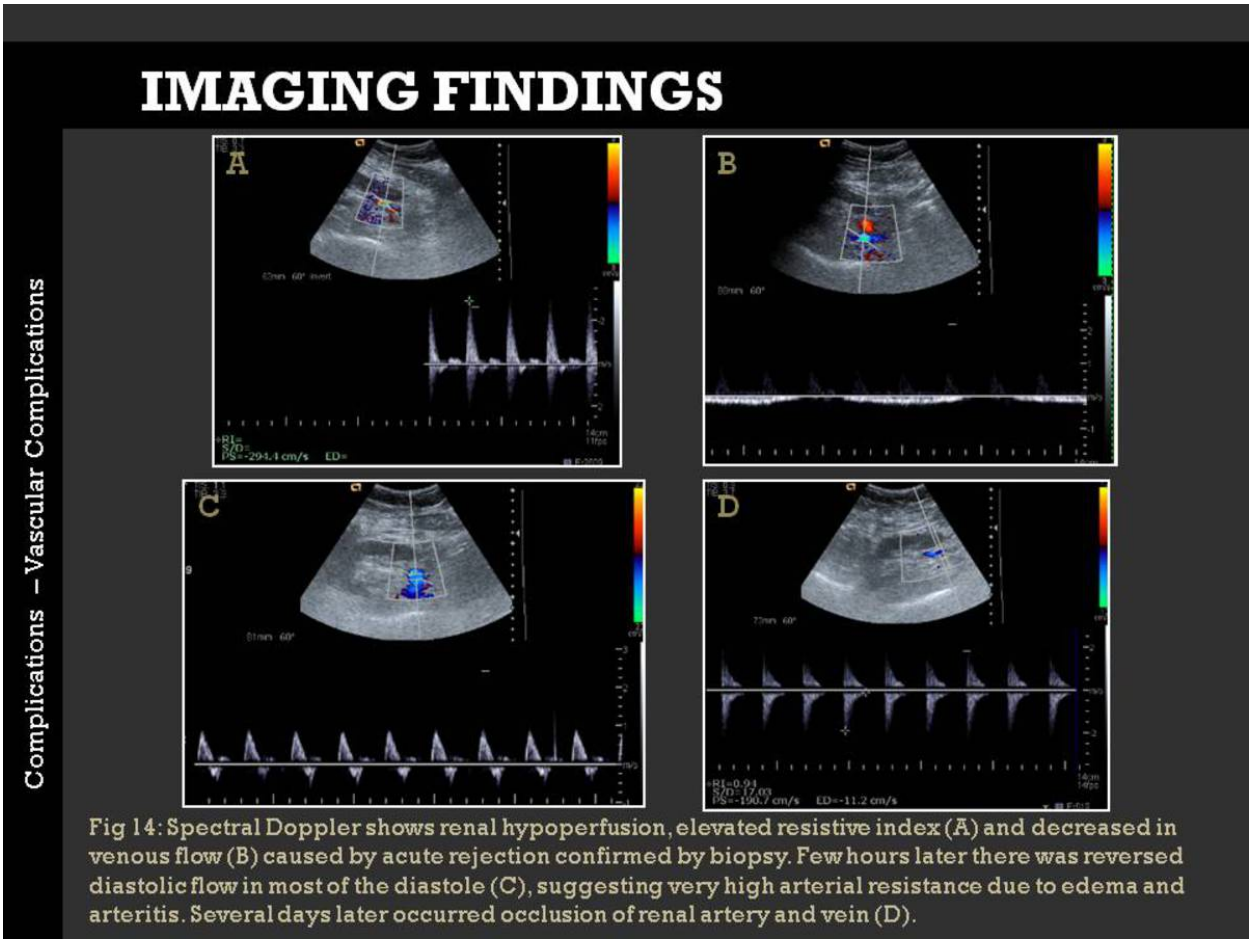

Fig. 29
References: L. Andrade; Radiology, Coimbra, PORTUGAL

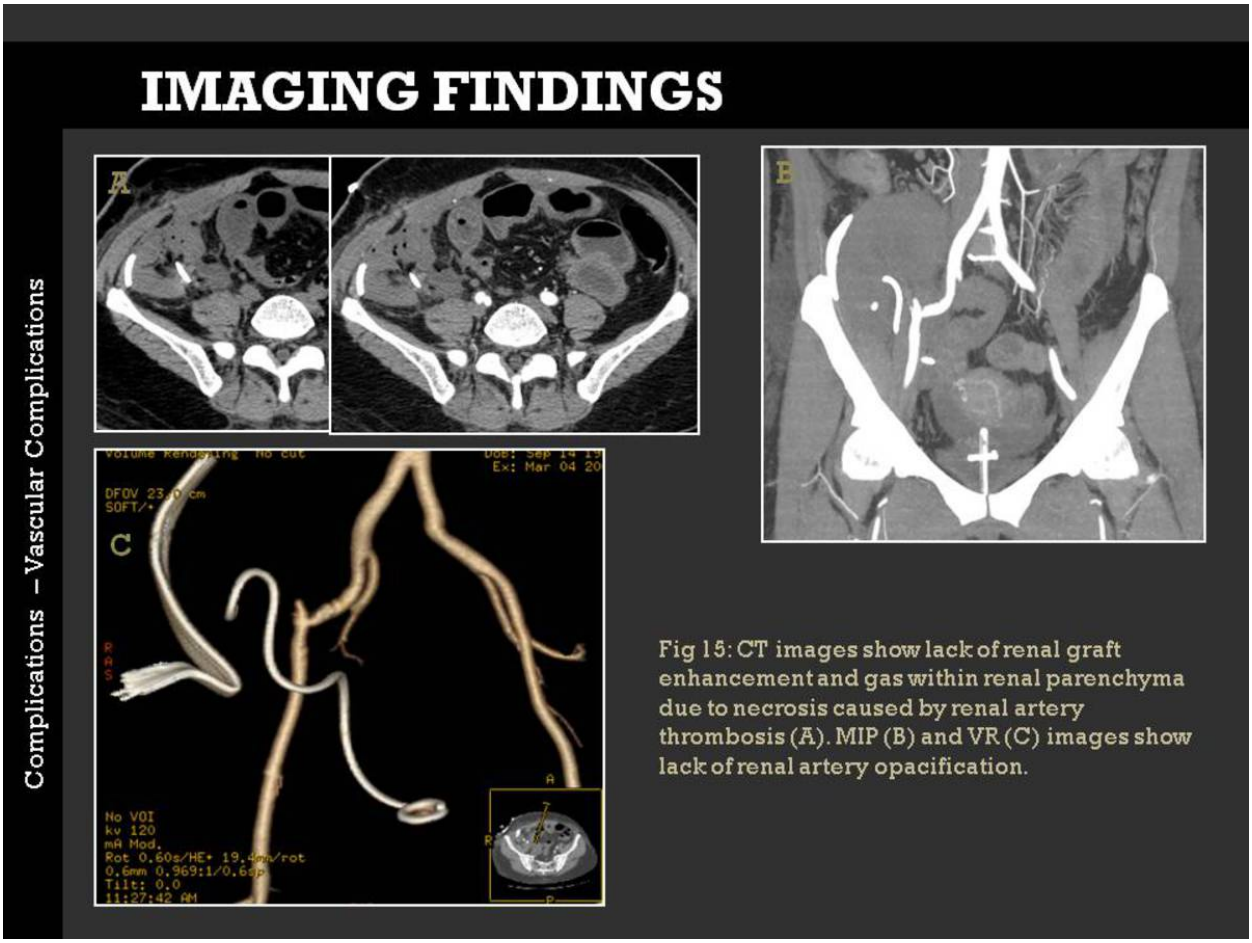

Fig. 30
References: L. Andrade; Radiology, Coimbra, PORTUGAL

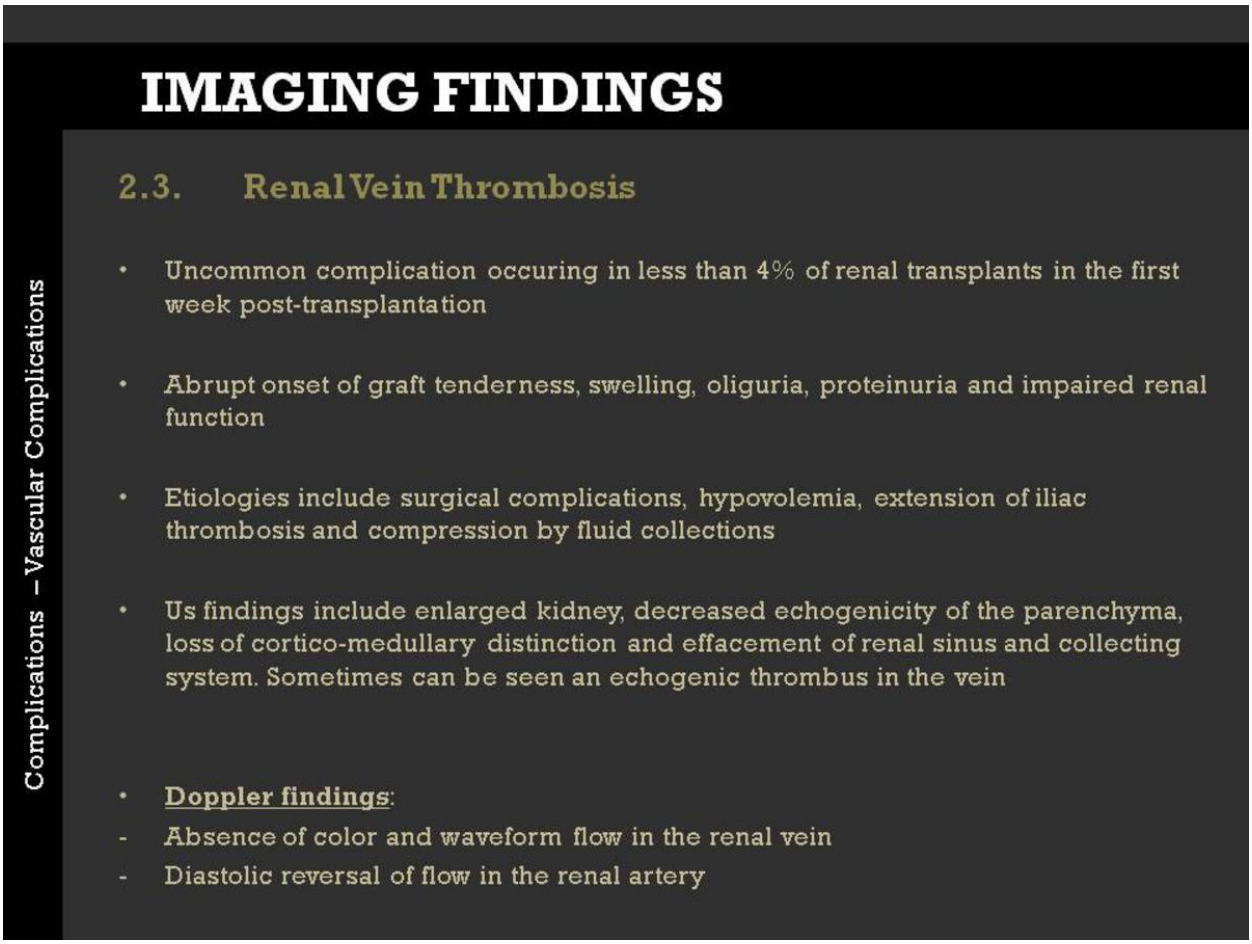

Fig. 31
References: L. Andrade; Radiology, Coimbra, PORTUGAL

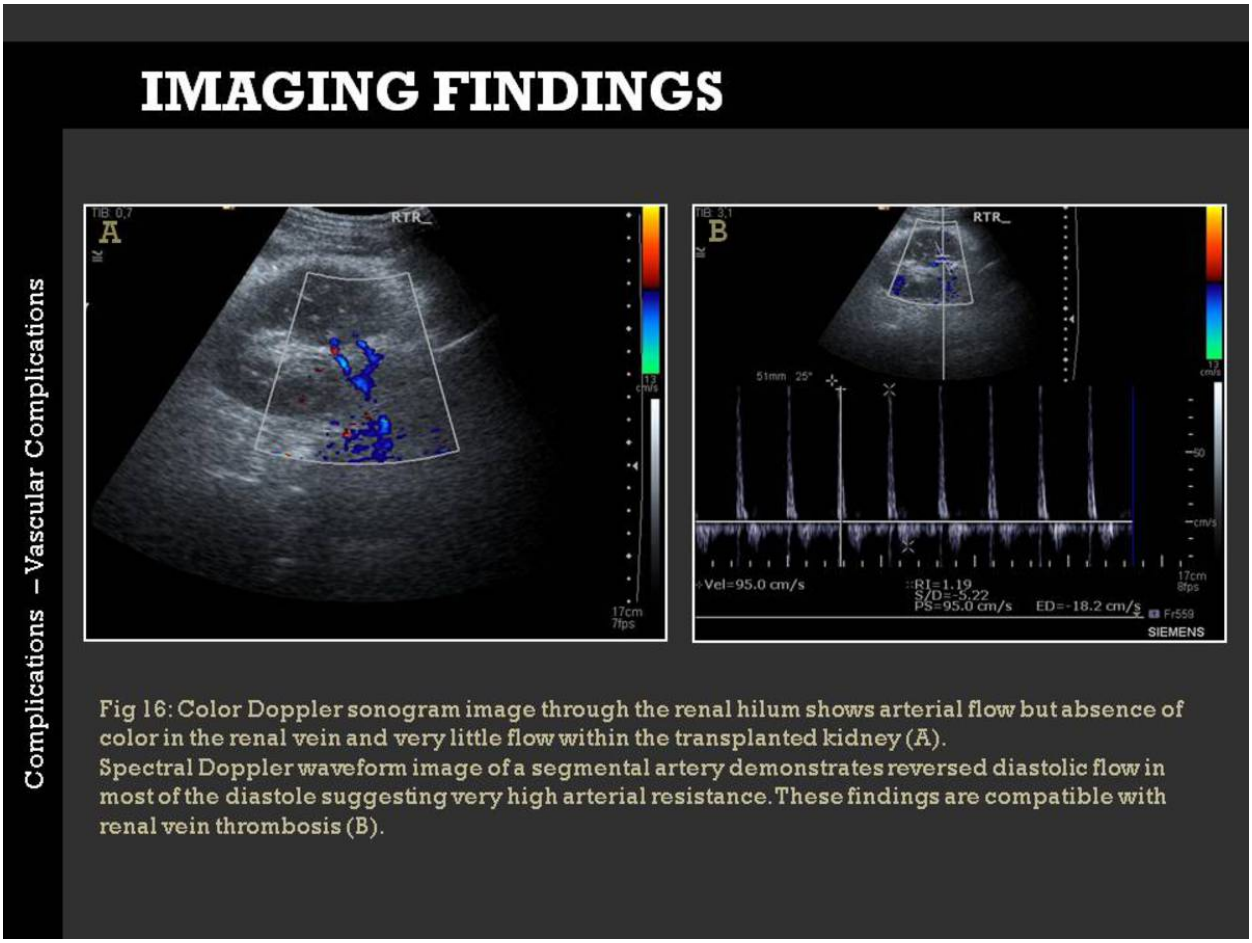

Fig. 32
References: L. Andrade; Radiology, Coimbra, PORTUGAL

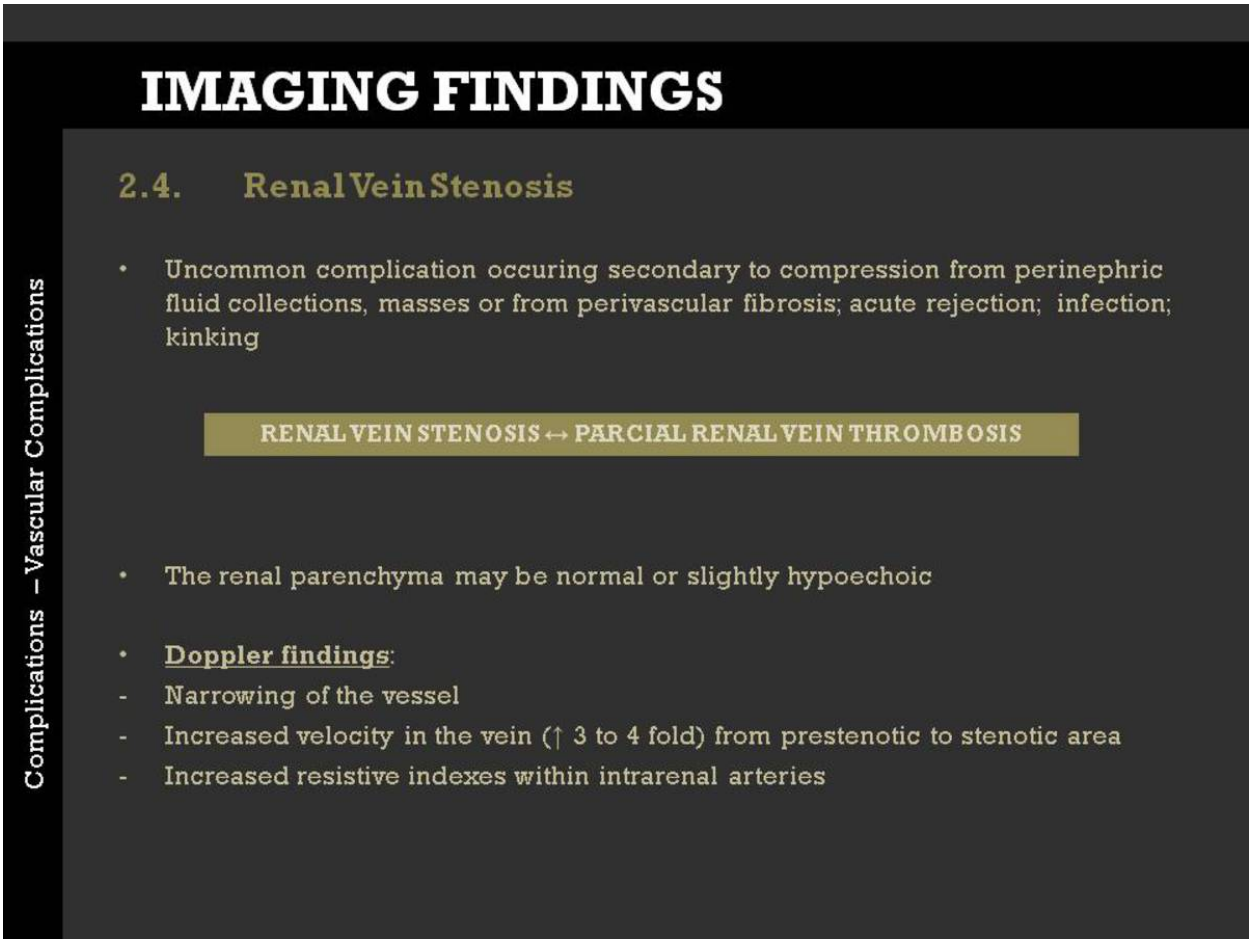

Fig. 33
References: L. Andrade; Radiology, Coimbra, PORTUGAL

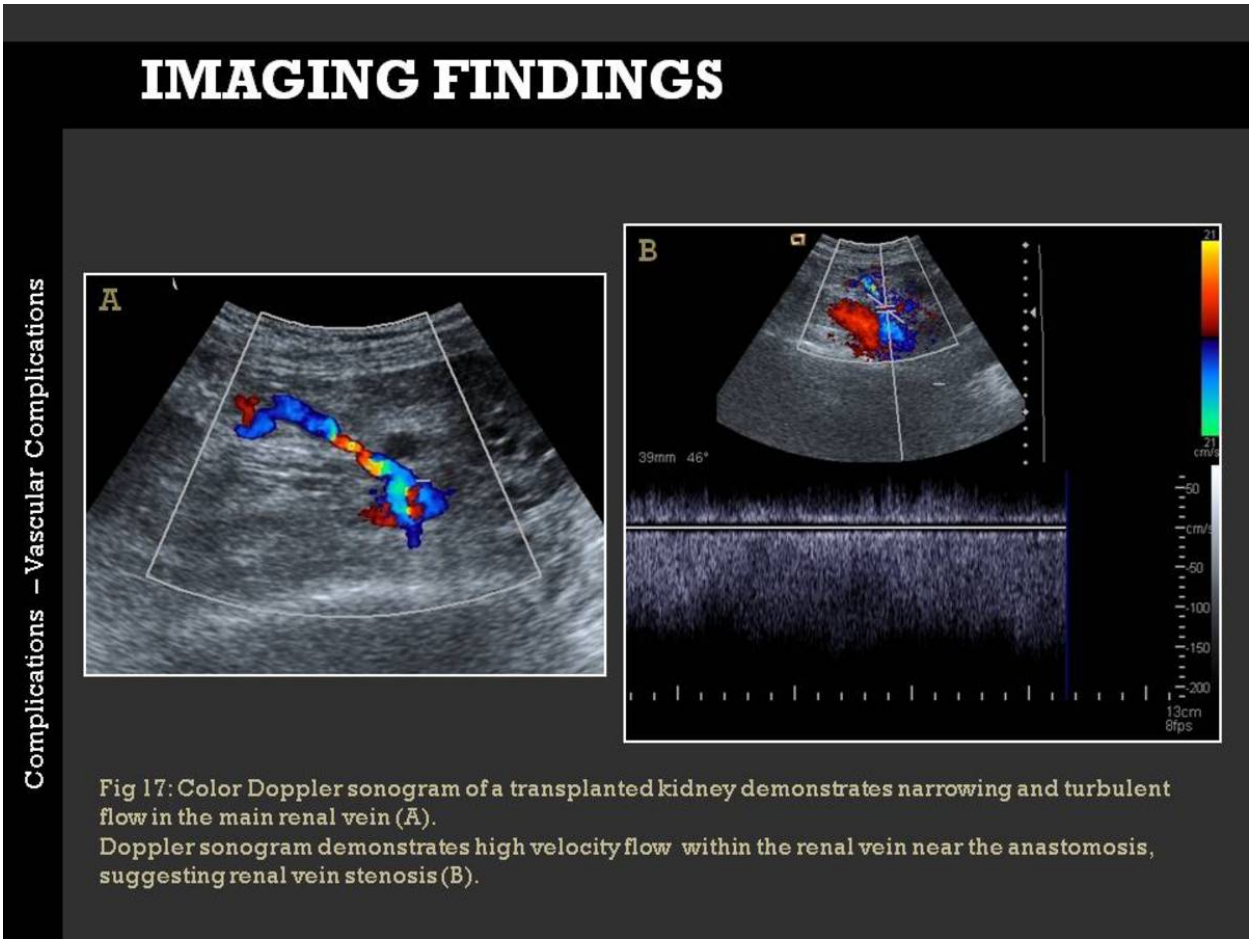

Fig. 34
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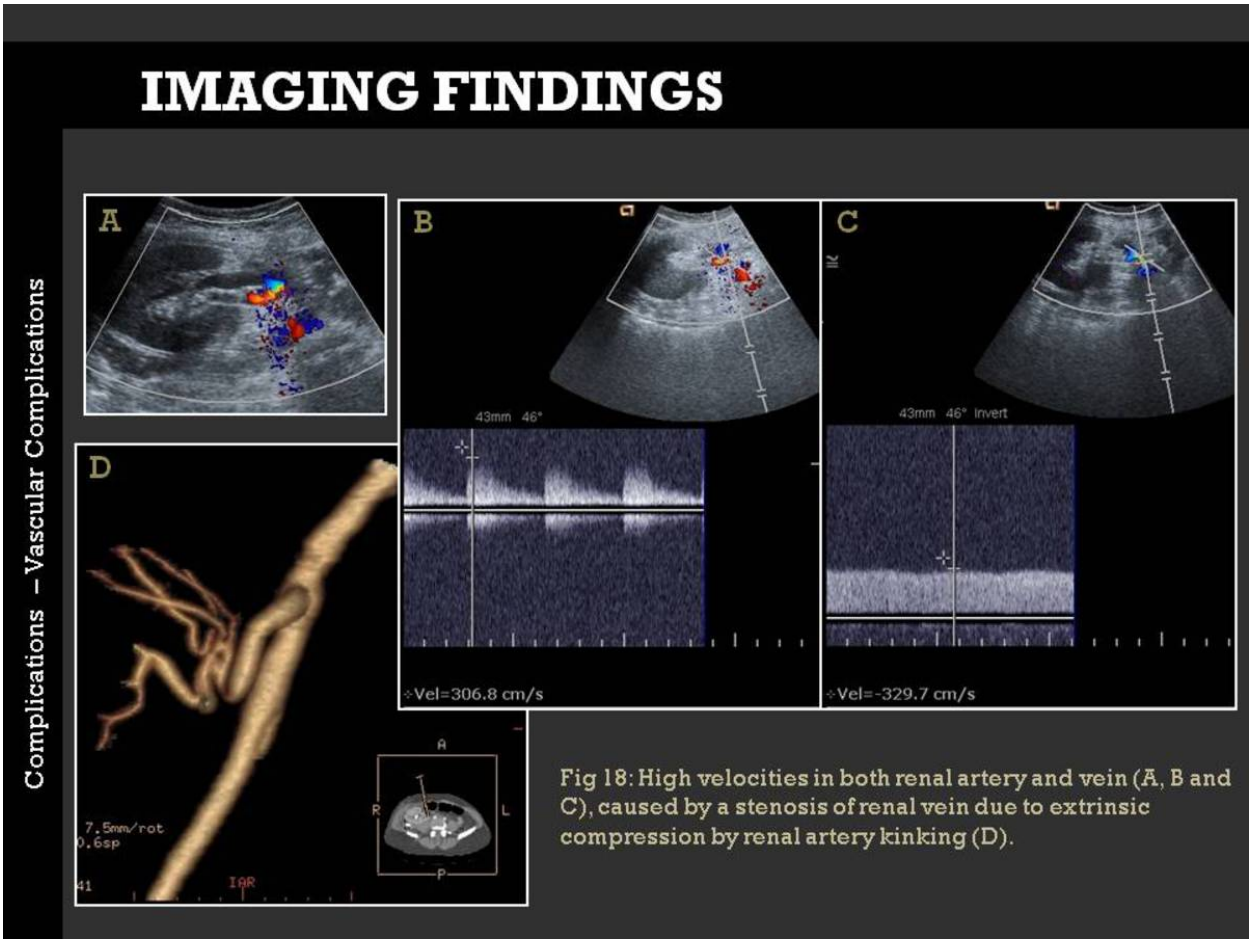

Fig. 35
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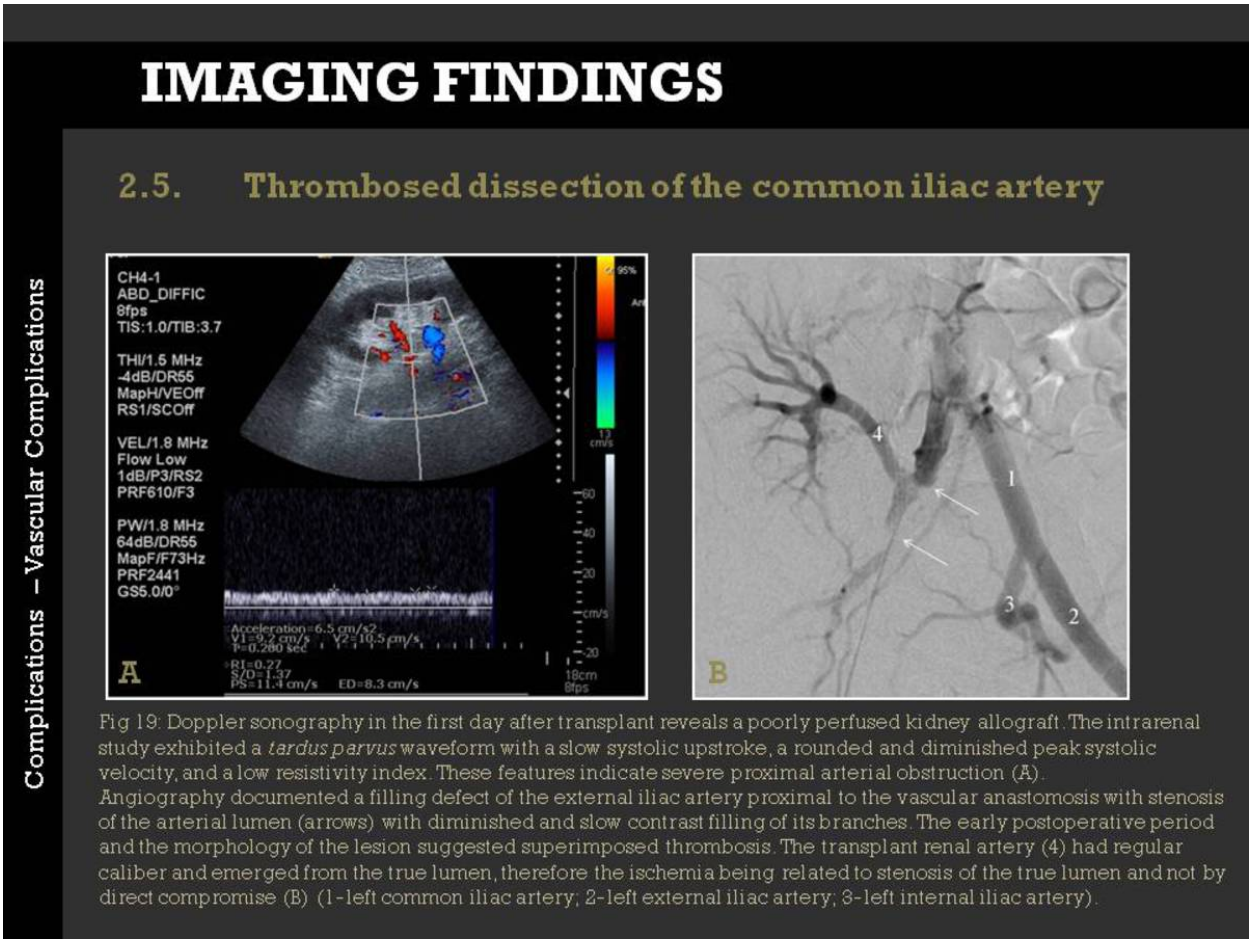

Fig. 37
References: L. Andrade; Radiology, Coimbra, PORTUGAL

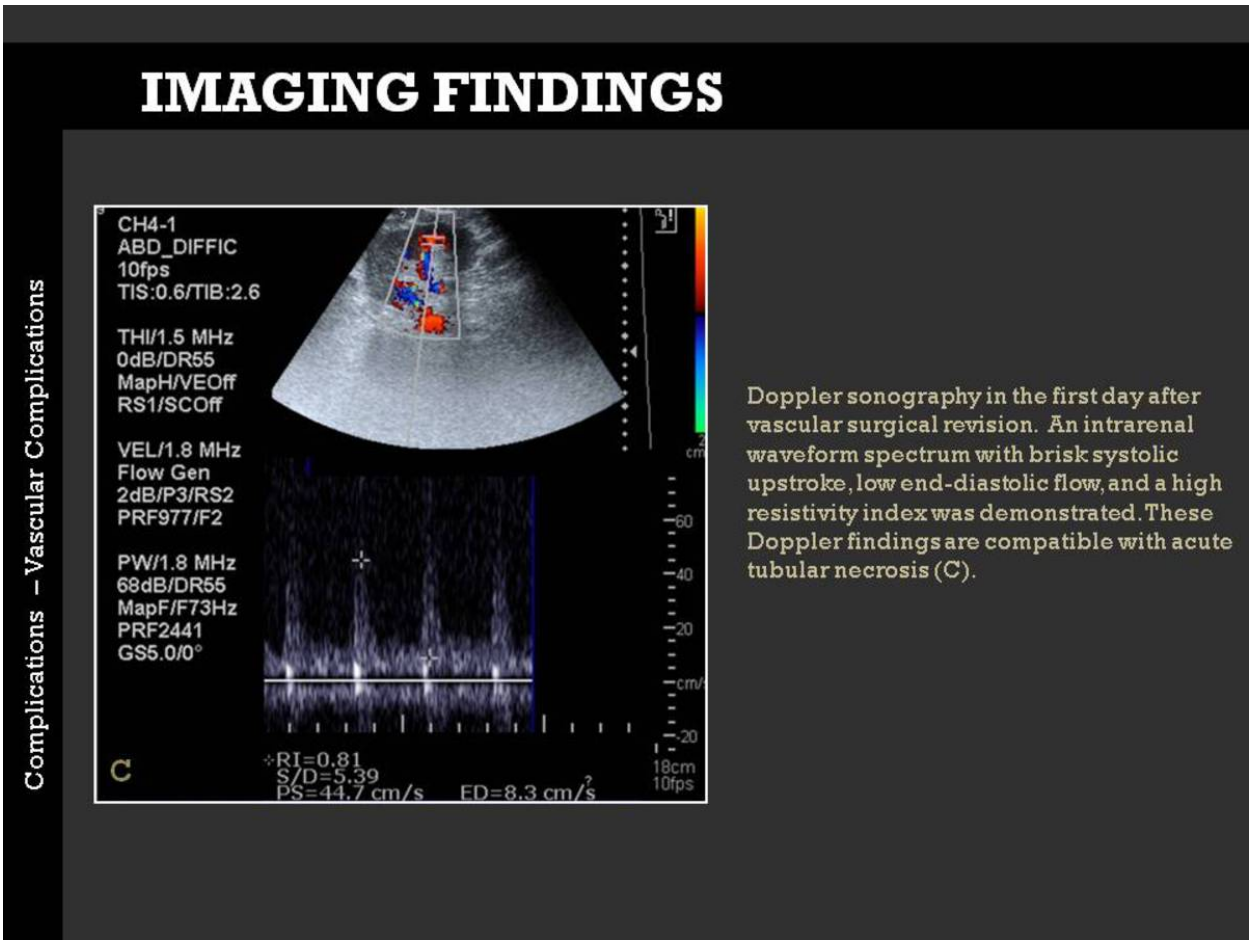

Fig. 38
References: L. Andrade; Radiology, Coimbra, PORTUGAL

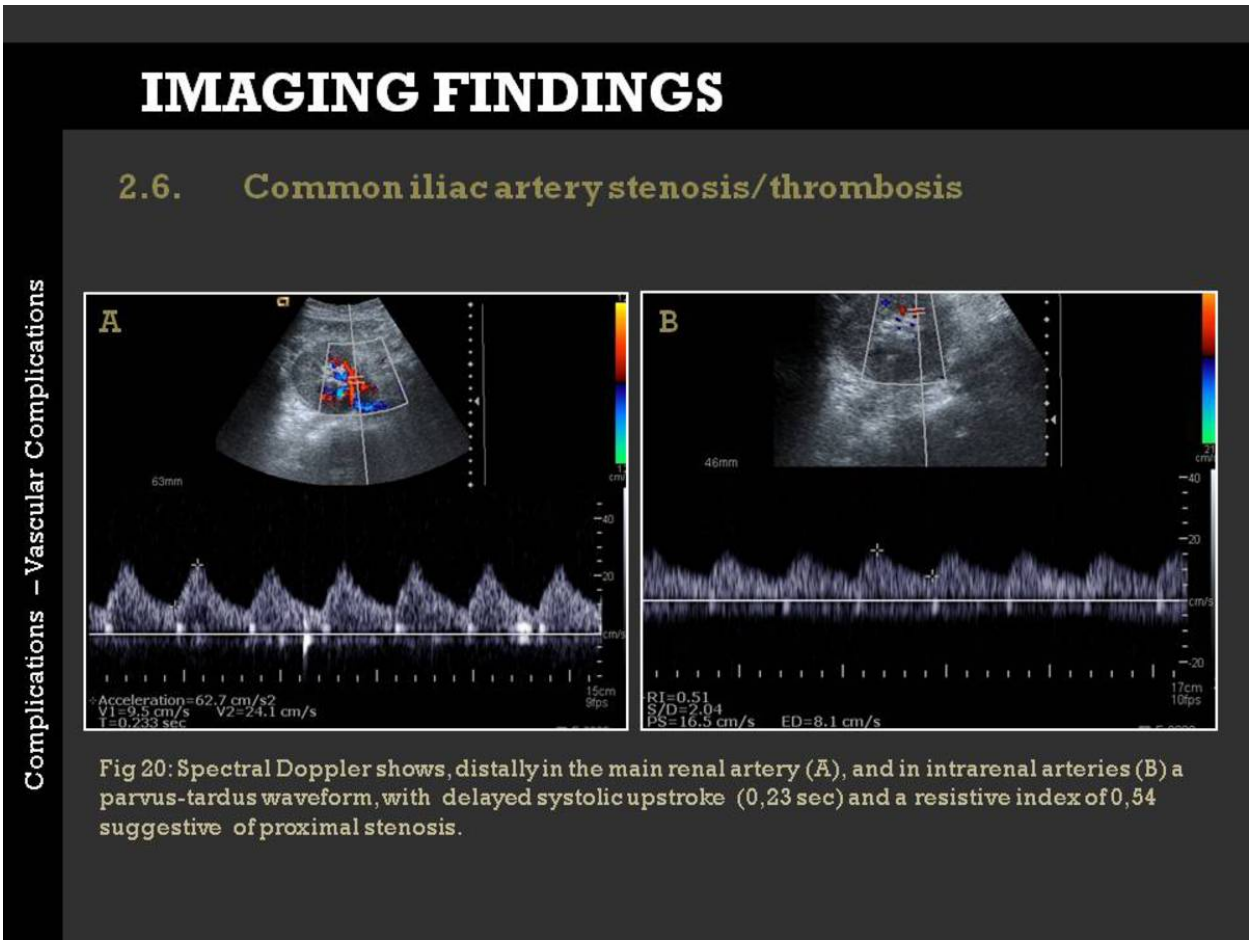

Fig. 39
References: L. Andrade; Radiology, Coimbra, PORTUGAL

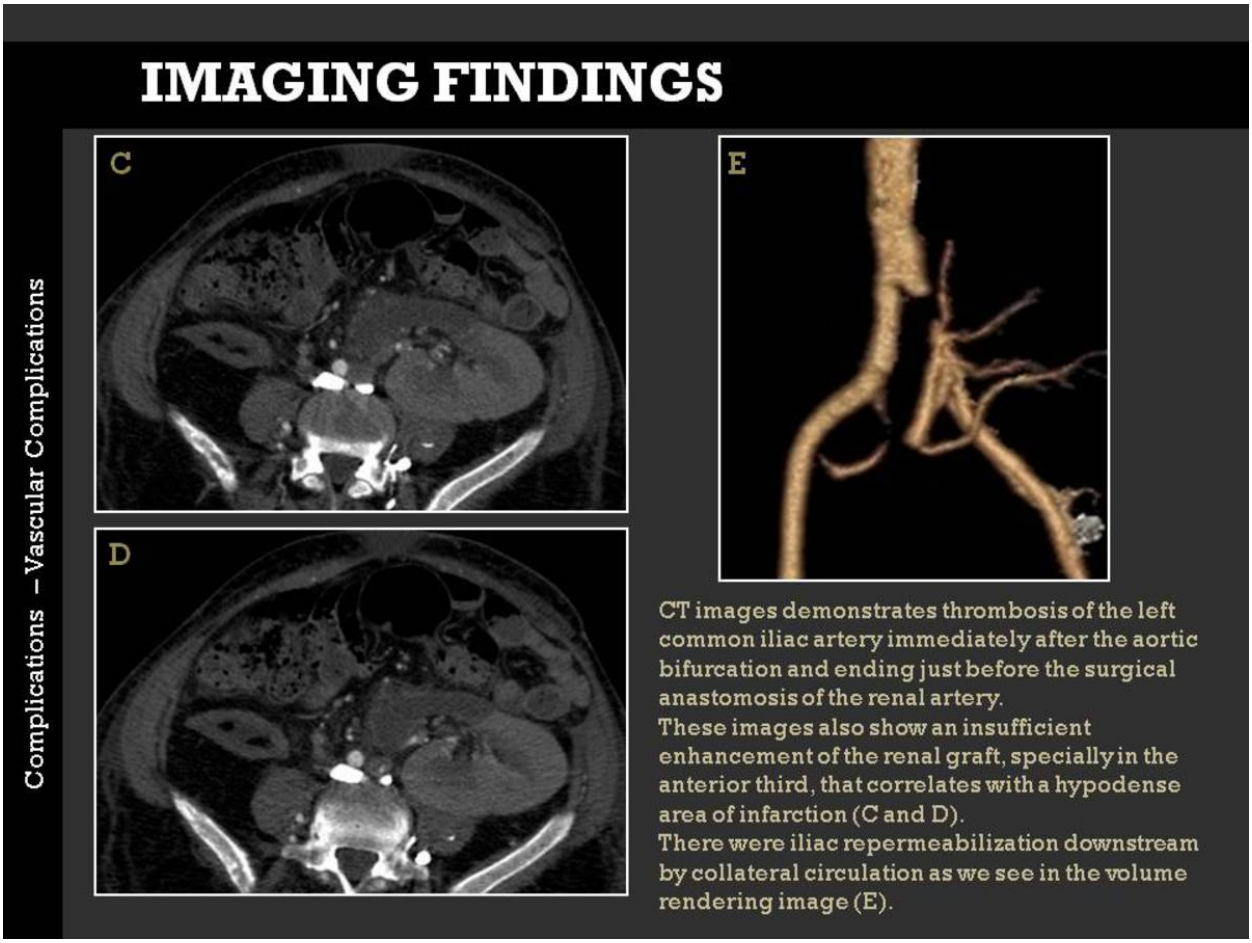

Fig. 40
References: L. Andrade; Radiology, Coimbra, PORTUGAL

Fig. 41
References: L. Andrade; Radiology, Coimbra, PORTUGAL

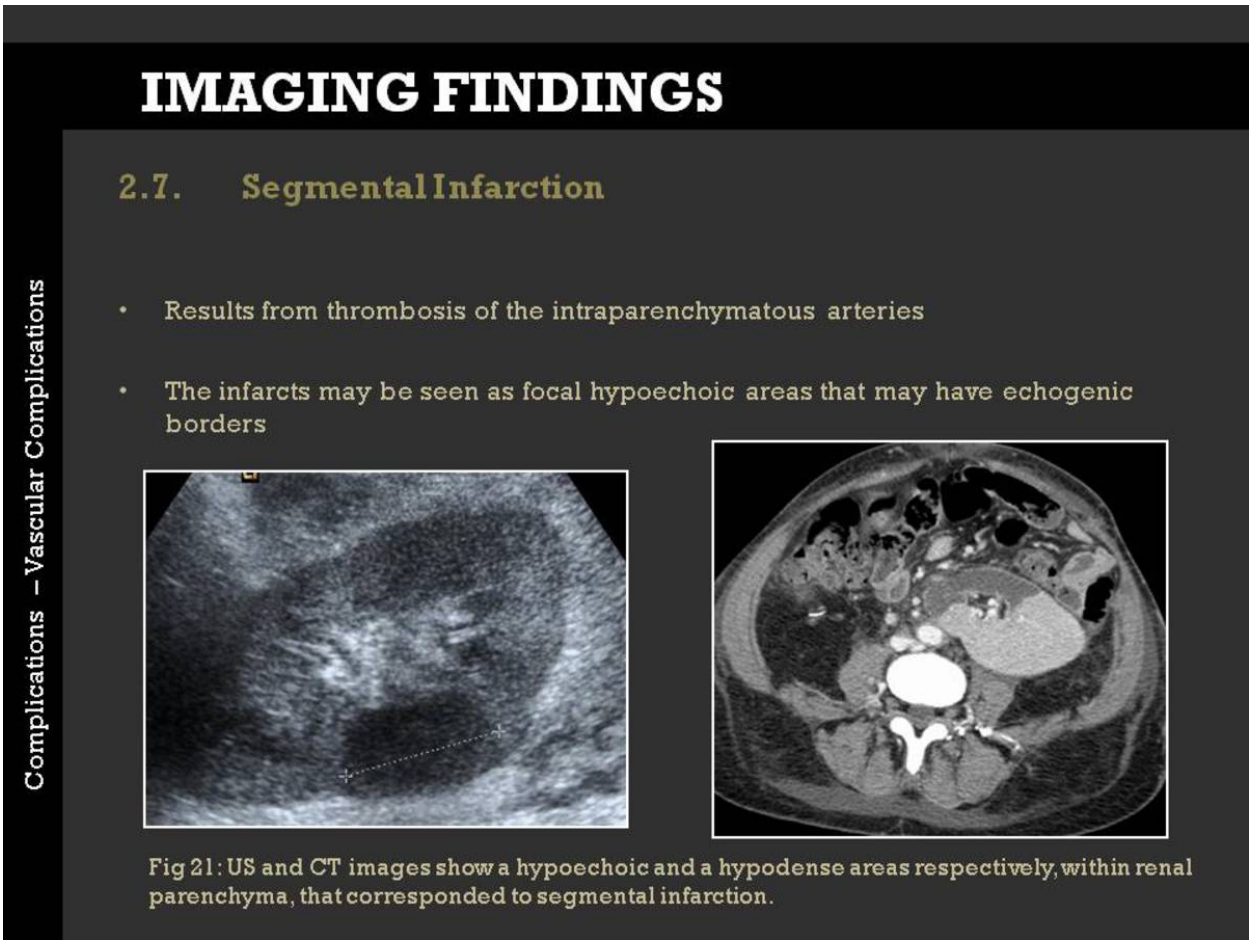

Fig. 42
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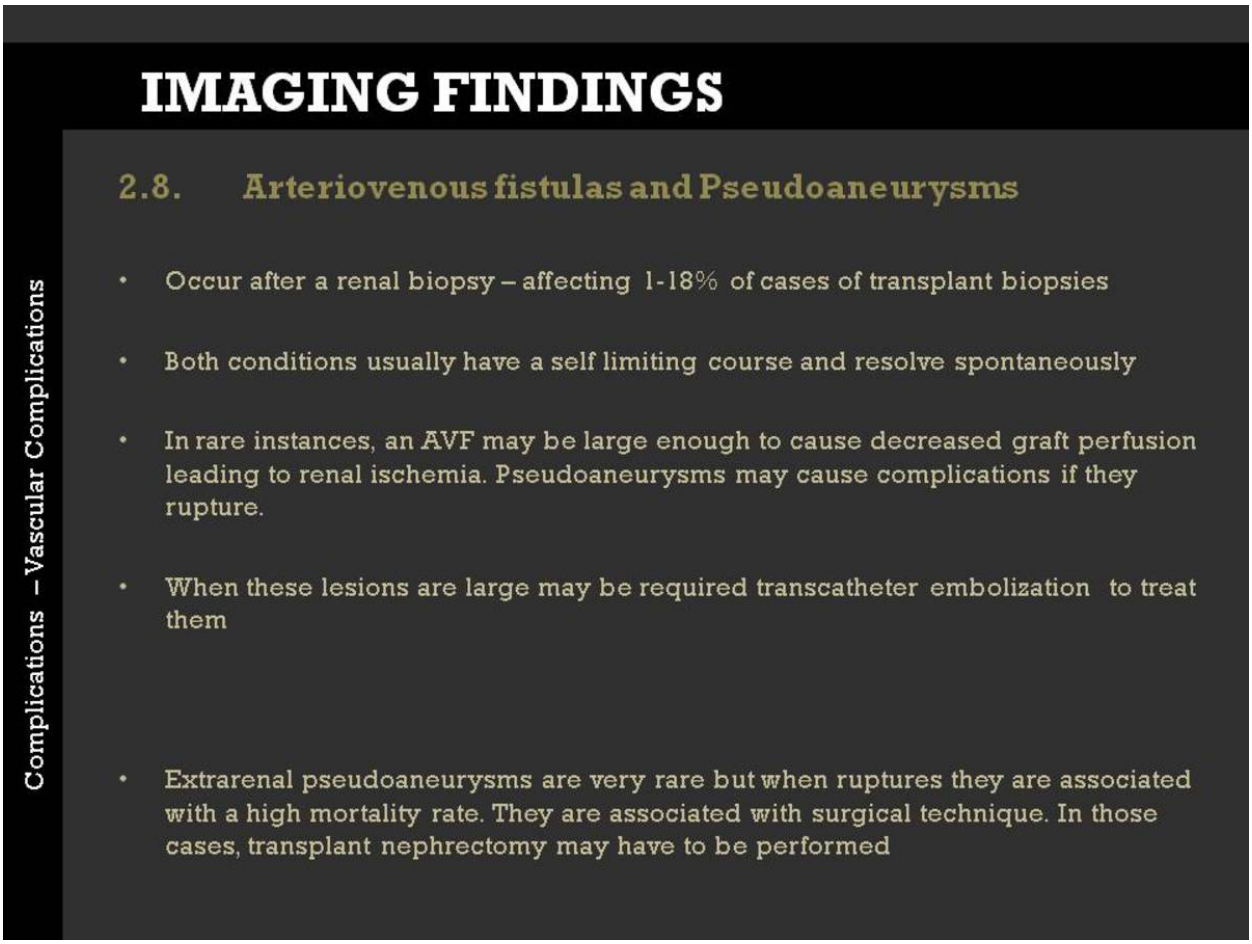

Fig. 43
References: L. Andrade; Radiology, Coimbra, PORTUGAL

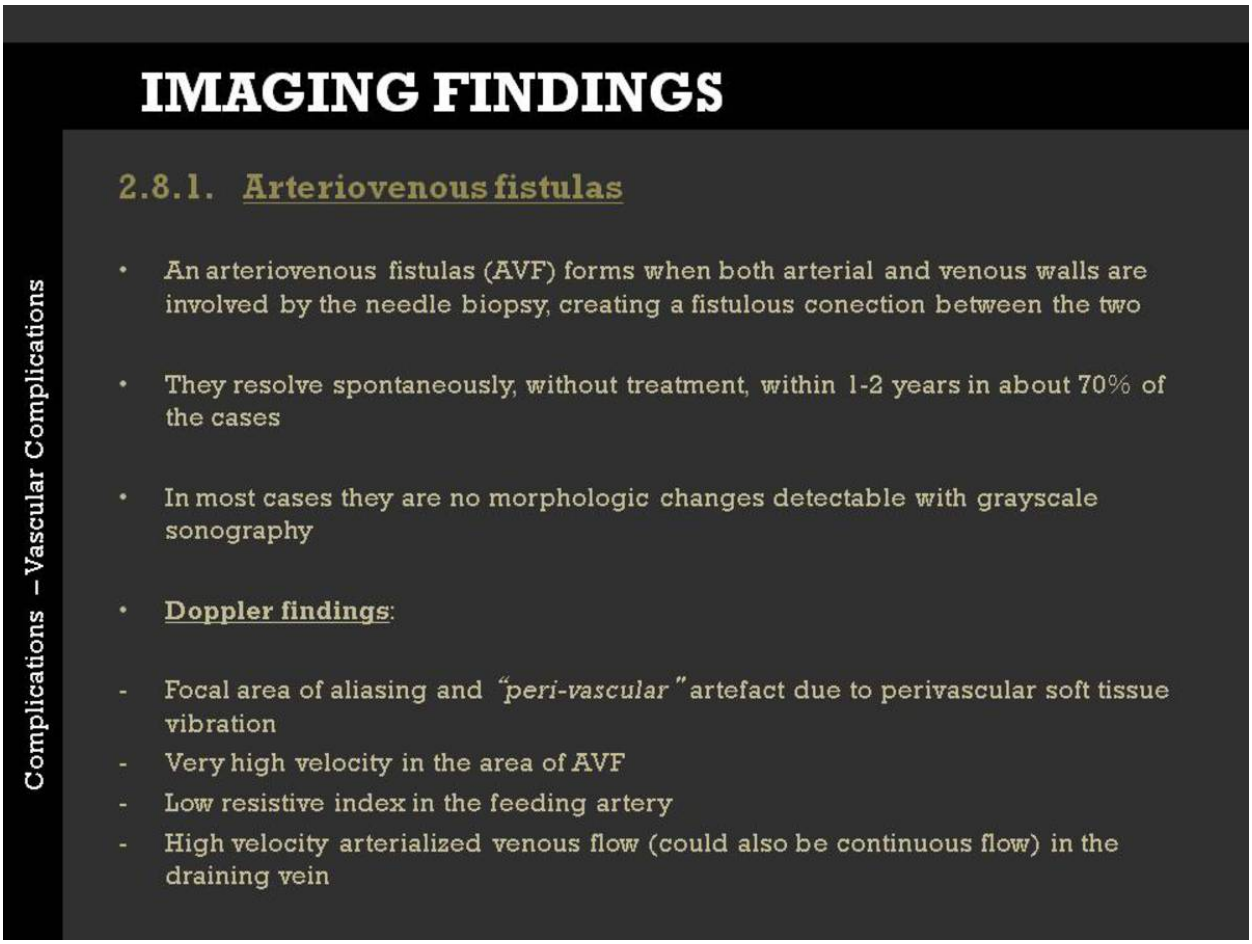

Fig. 44
References: L. Andrade; Radiology, Coimbra, PORTUGAL

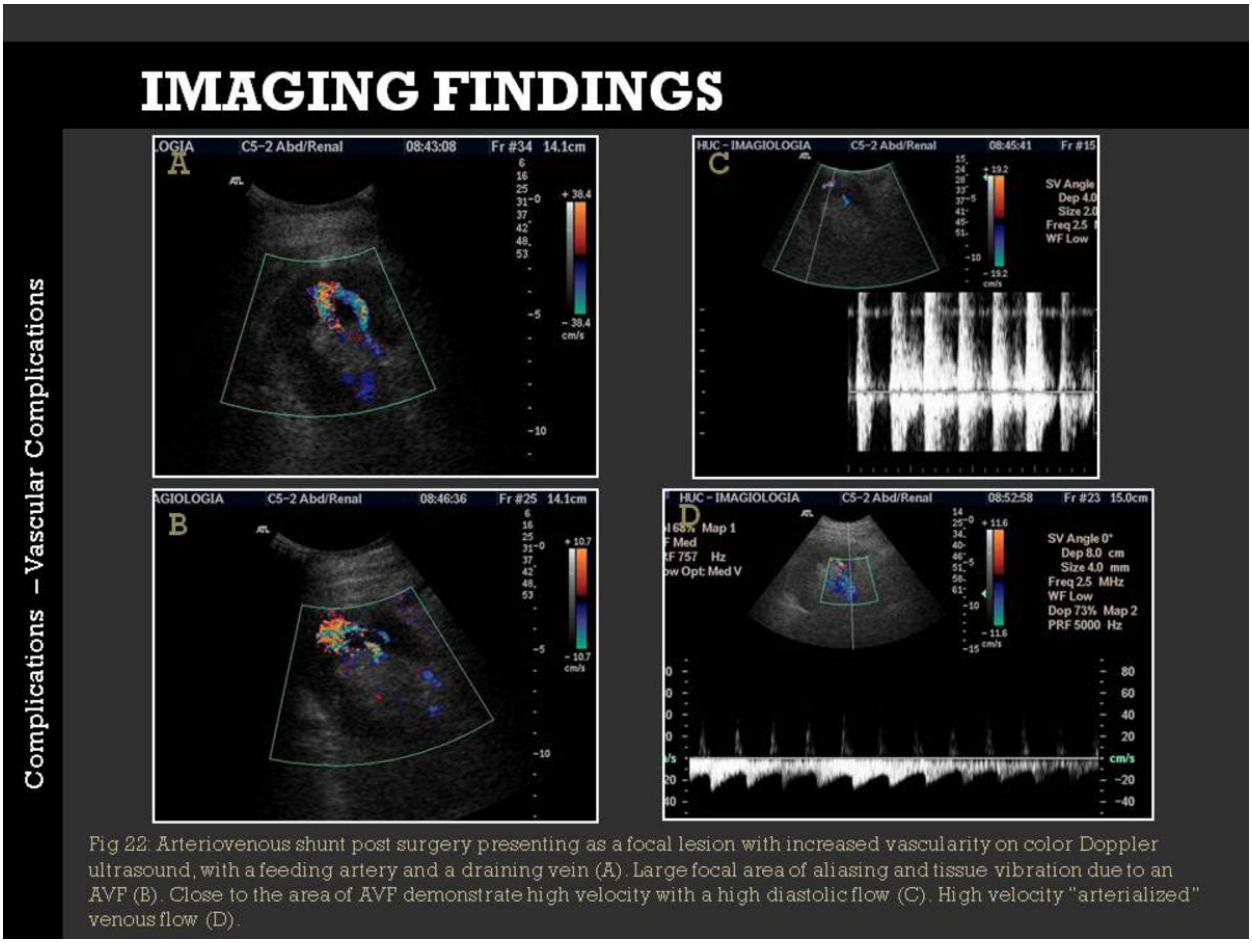

Fig 22: Arteriovenous shunt post surgery presenting as a focal lesion with increased vascularity on color Doppler ultrasound, with a feeding artery and a draining vein (A). Large focal area of aliasing and tissue vibration due to an AVF (B). Close to the area of AVF demonstrate high velocity with a high diastolic flow (C). High velocity "arterialized" venous flow (D).

Fig. 45
References: L. Andrade; Radiology, Coimbra, PORTUGAL

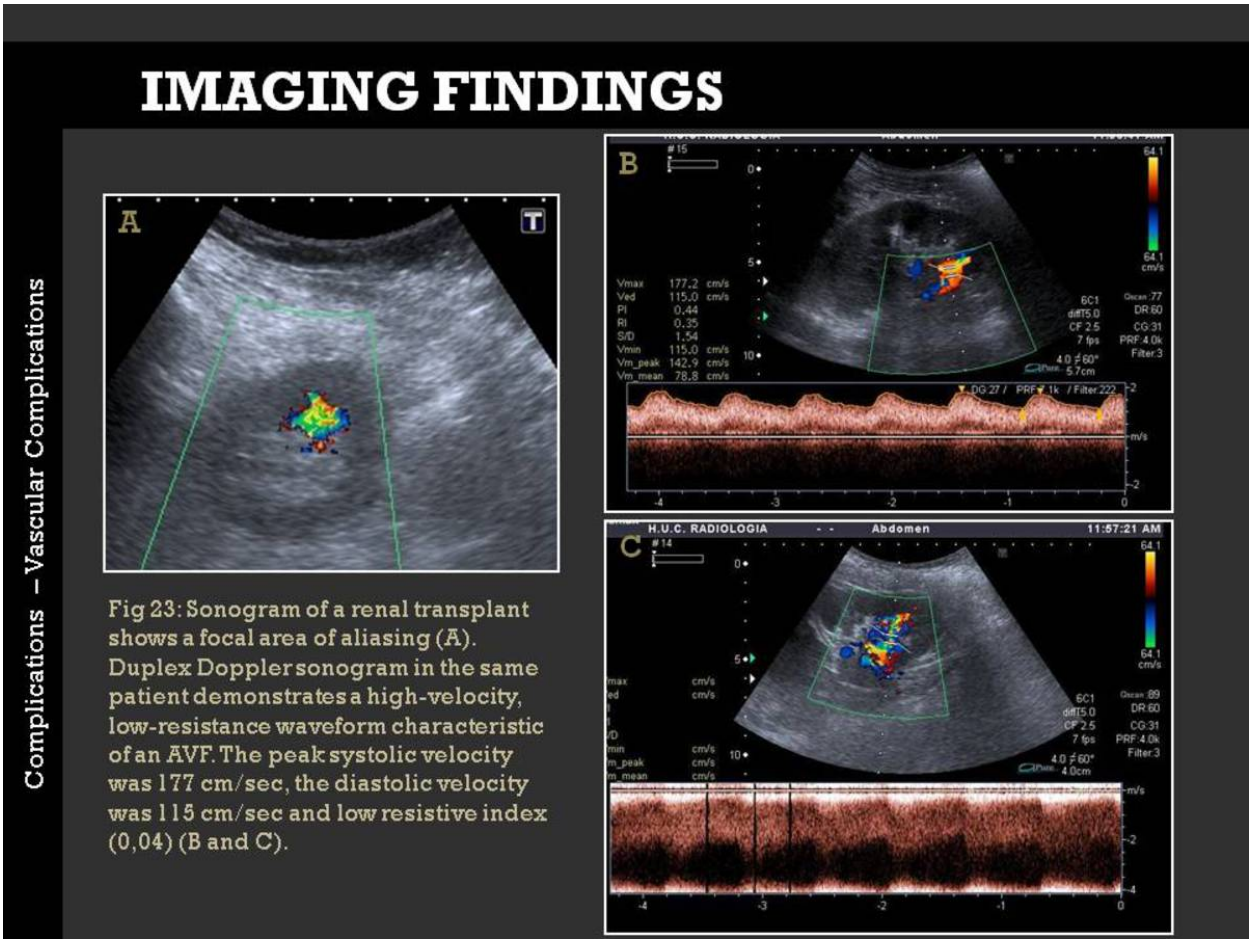

Fig. 46
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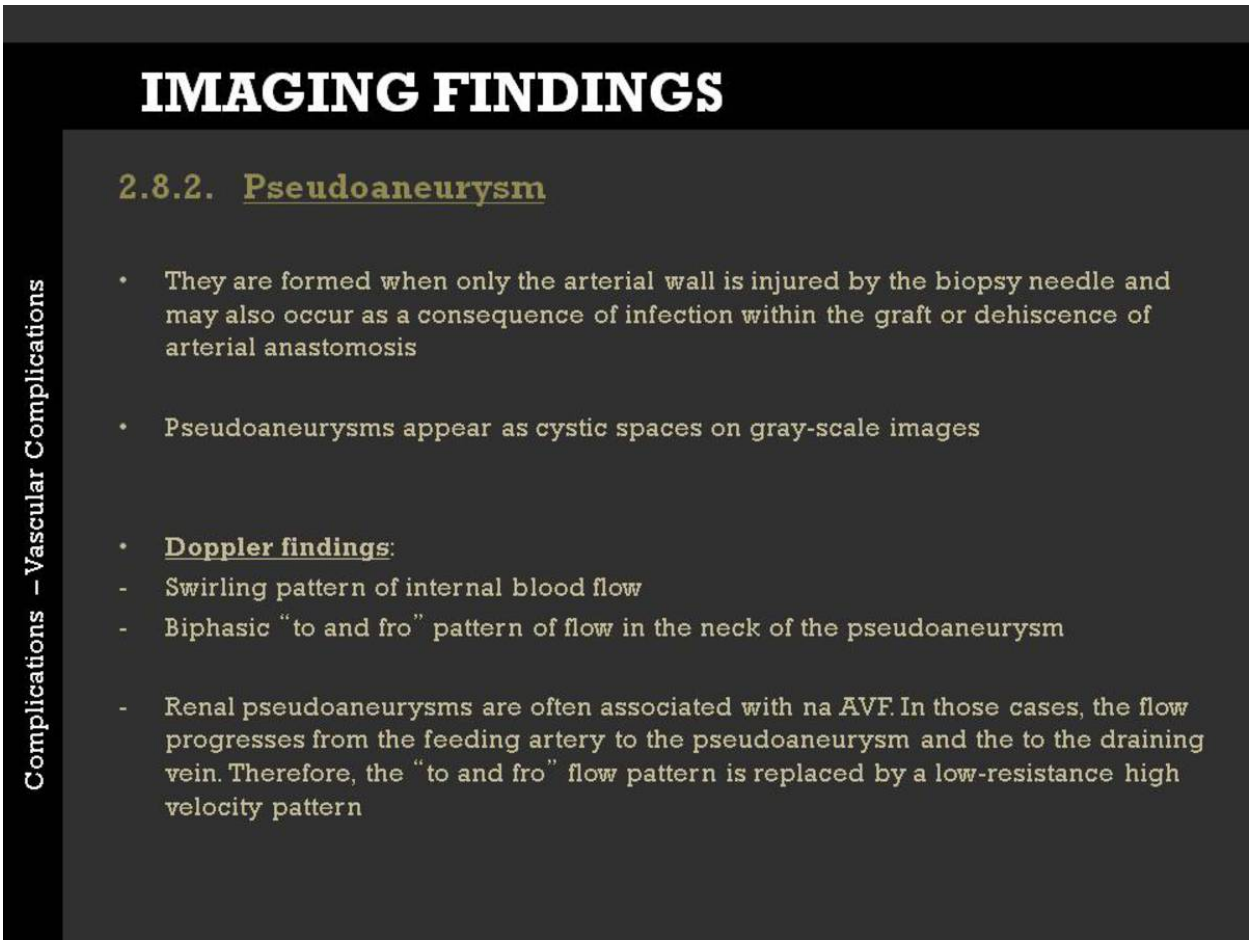

Fig. 47
References: L. Andrade; Radiology, Coimbra, PORTUGAL

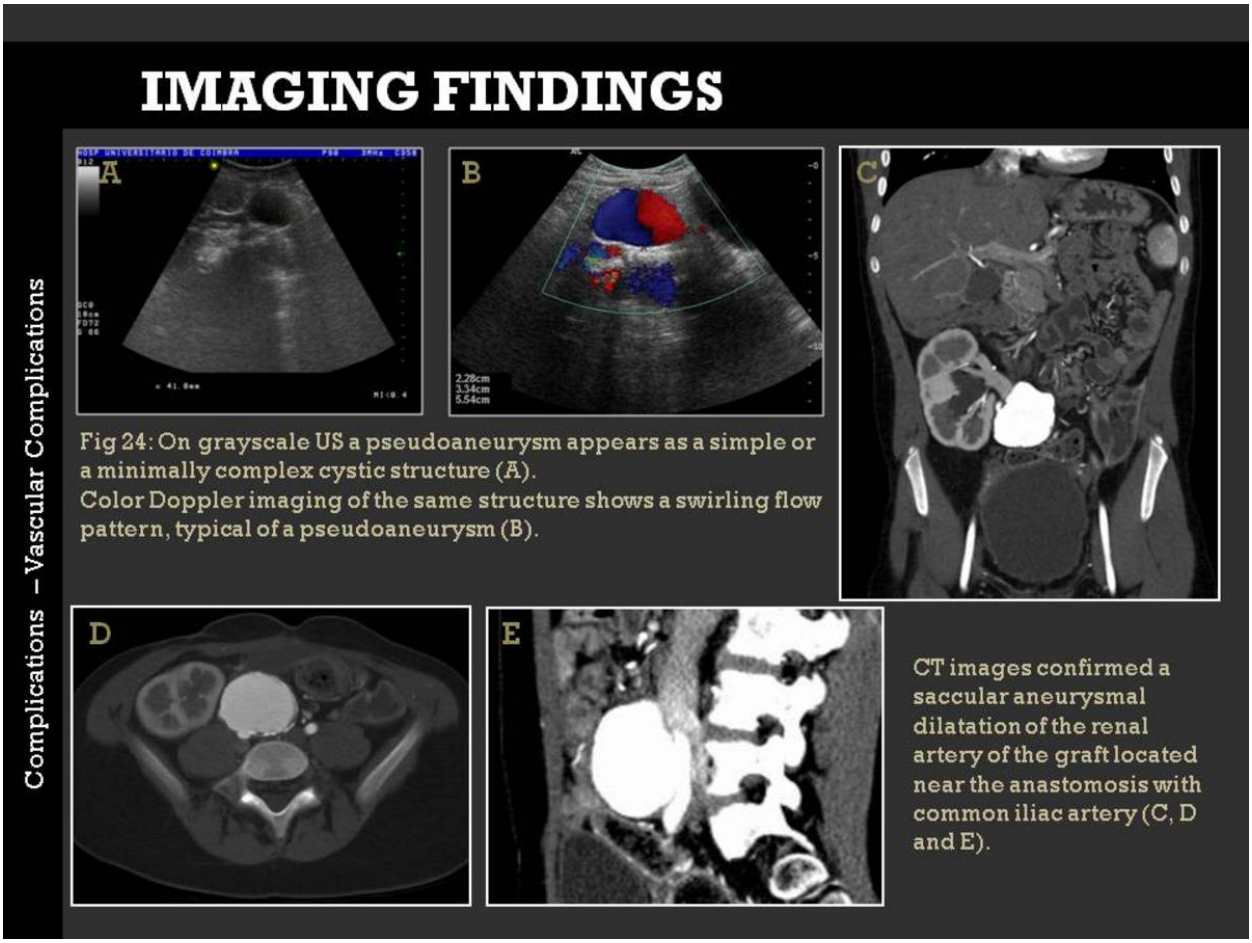

Fig. 48
References: L. Andrade; Radiology, Coimbra, PORTUGAL

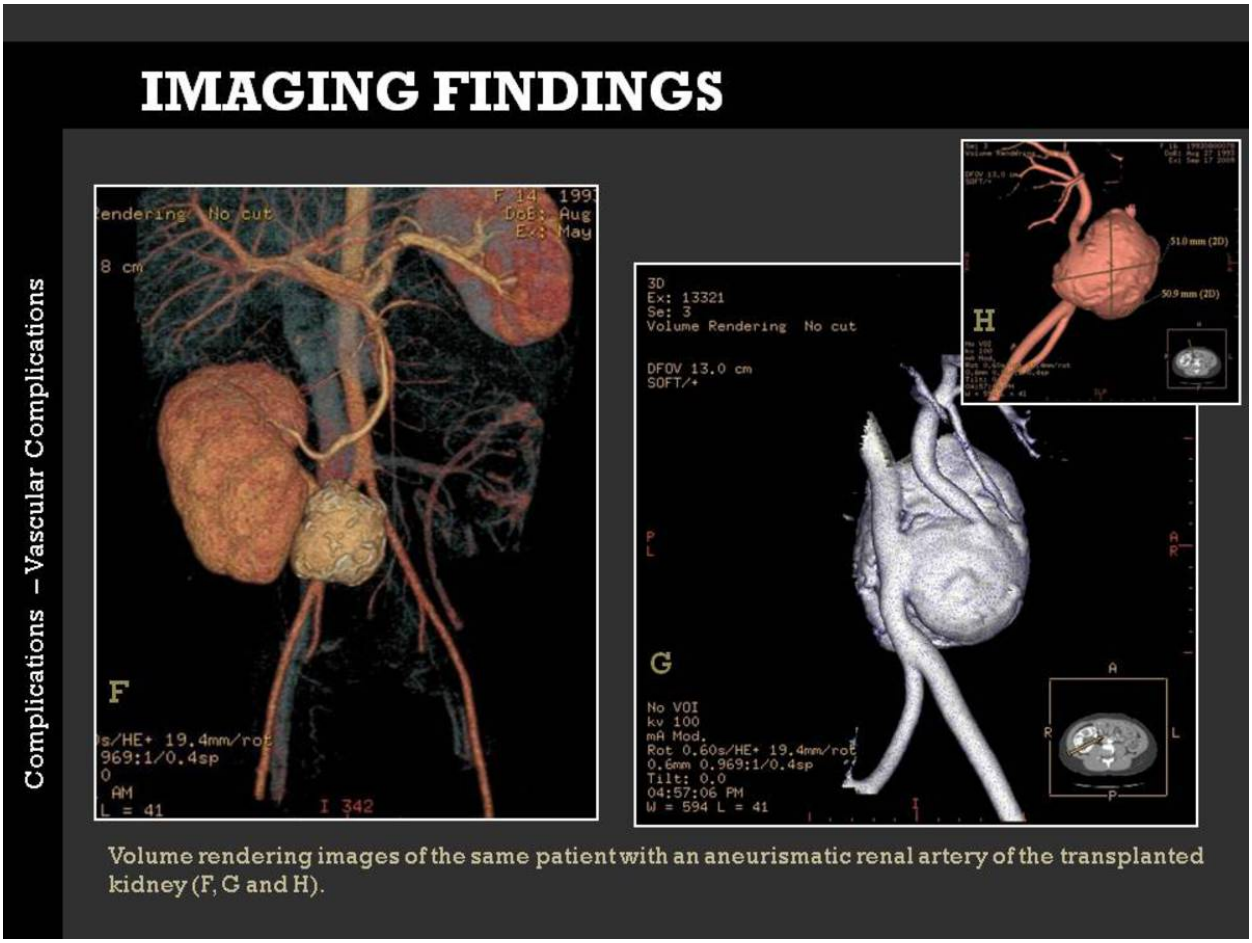

Fig. 49
References: L. Andrade; Radiology, Coimbra, PORTUGAL

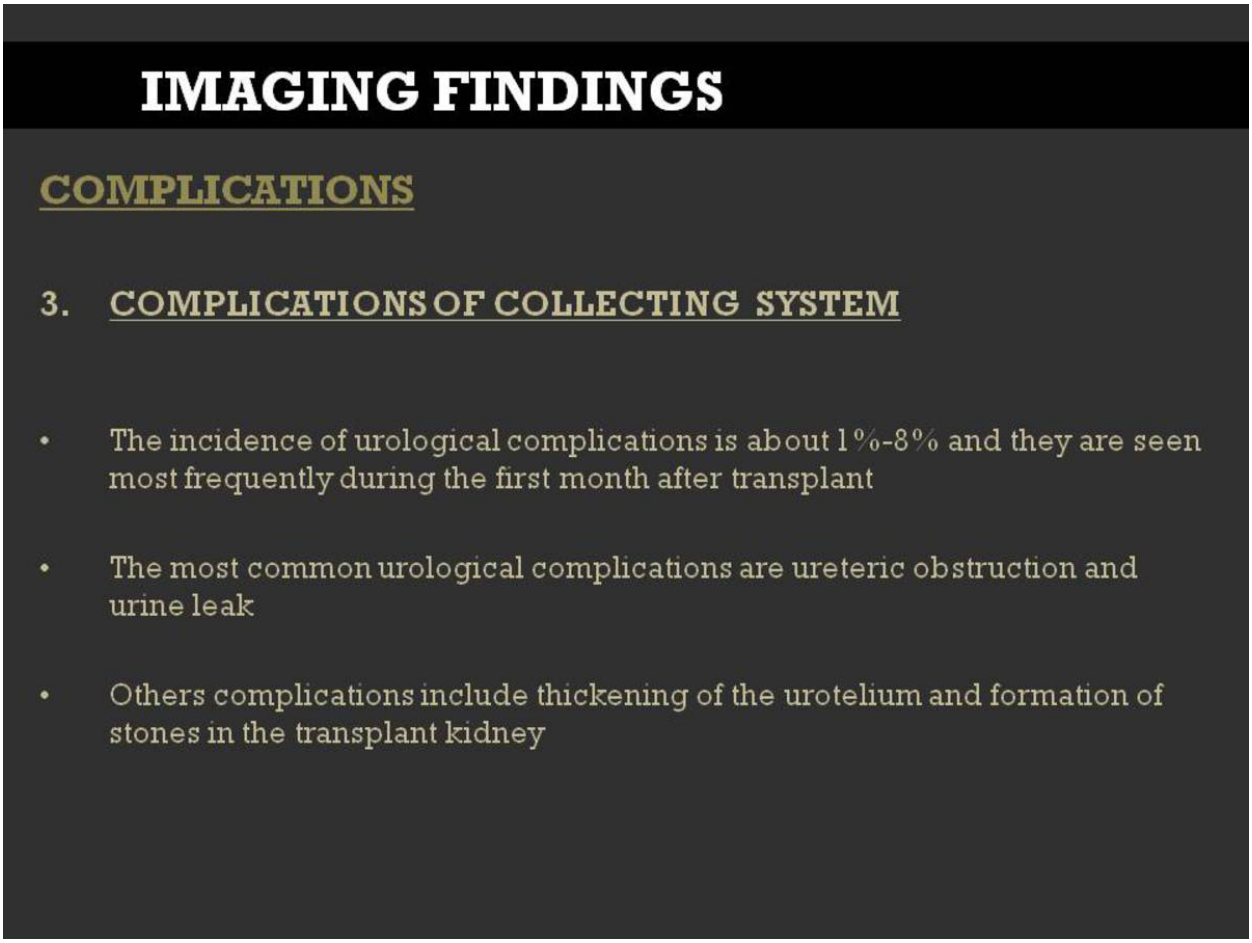

Fig. 50
References: L. Andrade; Radiology, Coimbra, PORTUGAL

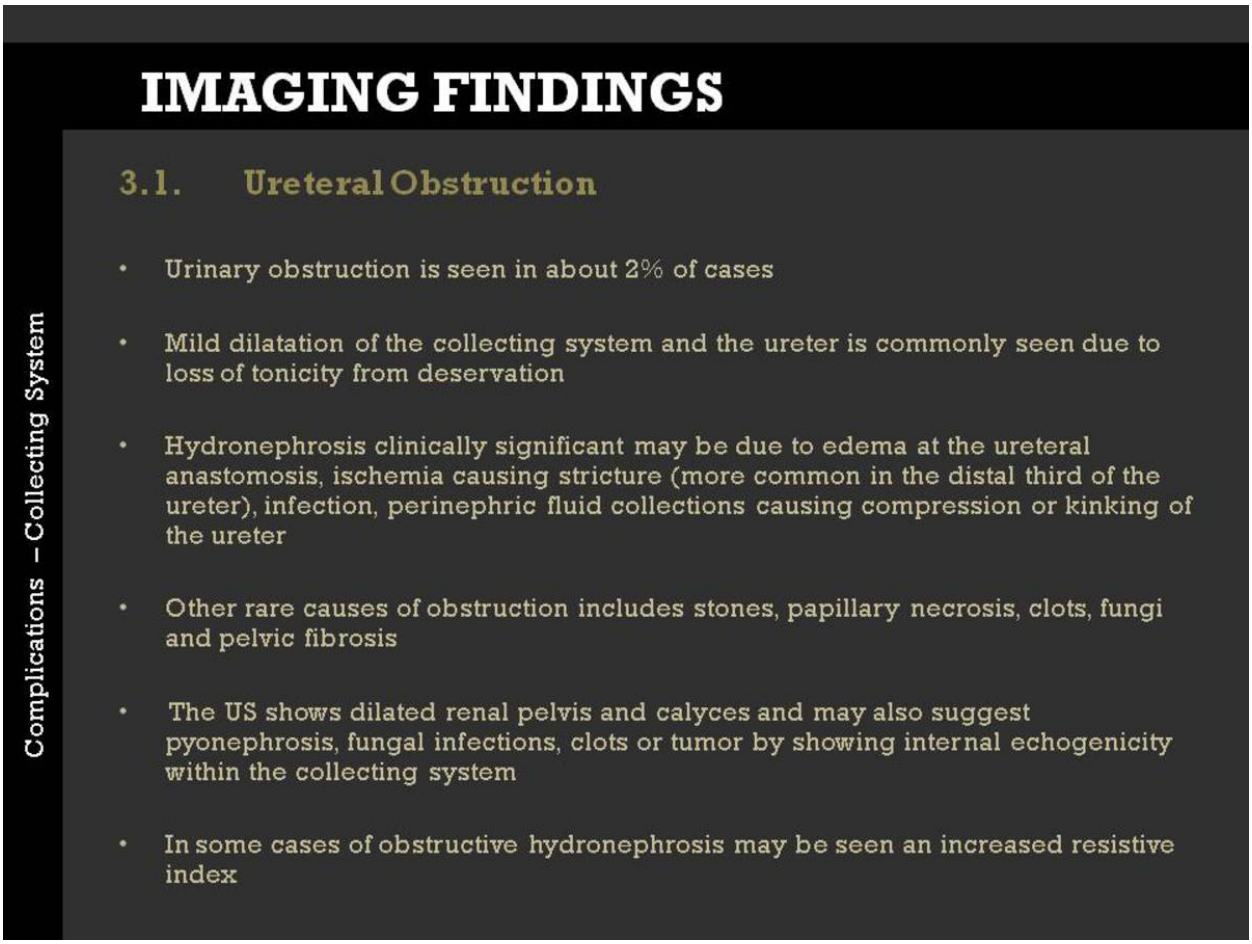

Fig. 51
References: L. Andrade; Radiology, Coimbra, PORTUGAL

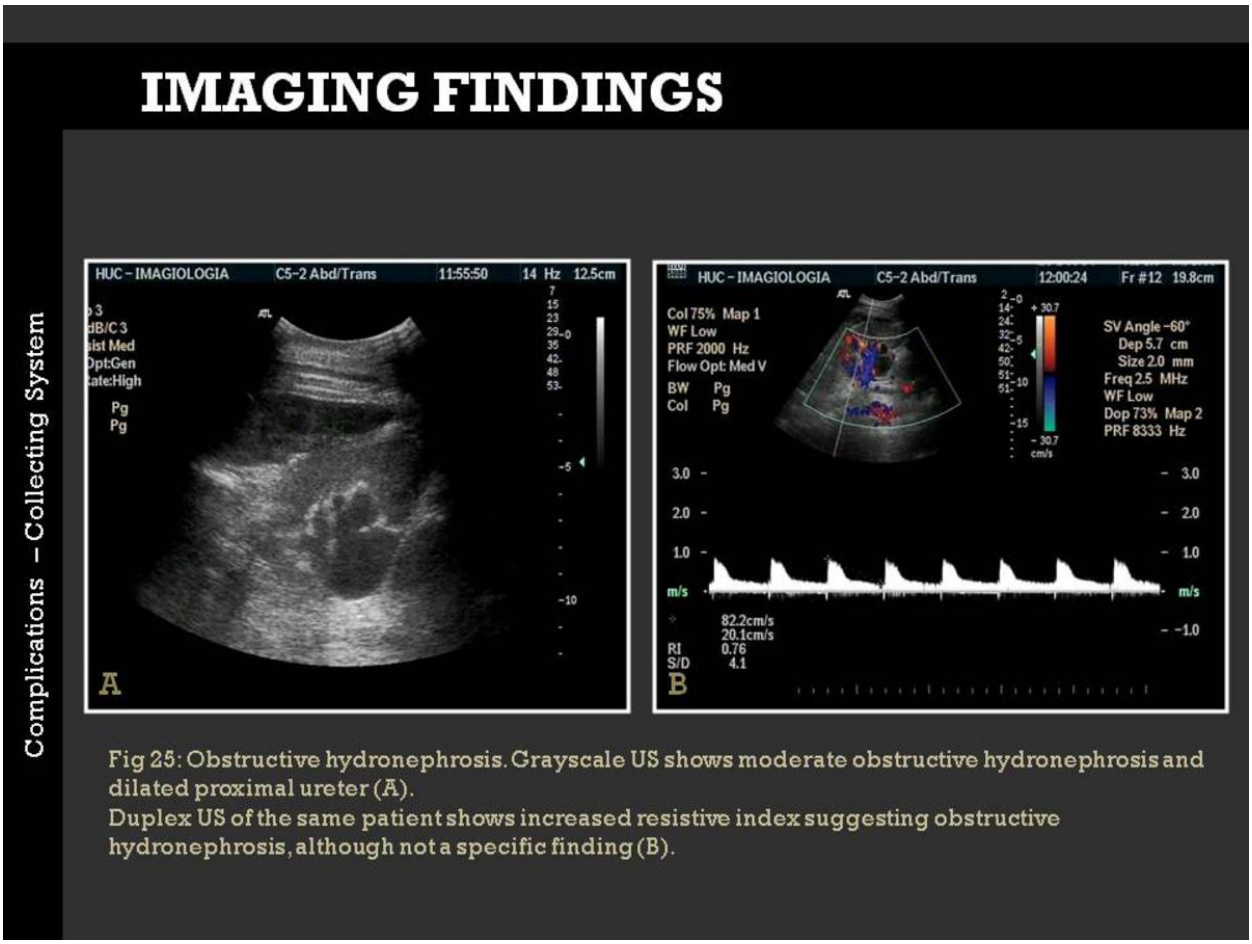

Fig 25: Obstructive hydronephrosis. Grayscale US shows moderate obstructive hydronephrosis and dilated proximal ureter (A).
Duplex US of the same patient shows increased resistive index suggesting obstructive hydronephrosis, although not a specific finding (B).

Fig. 52
References: L. Andrade; Radiology, Coimbra, PORTUGAL

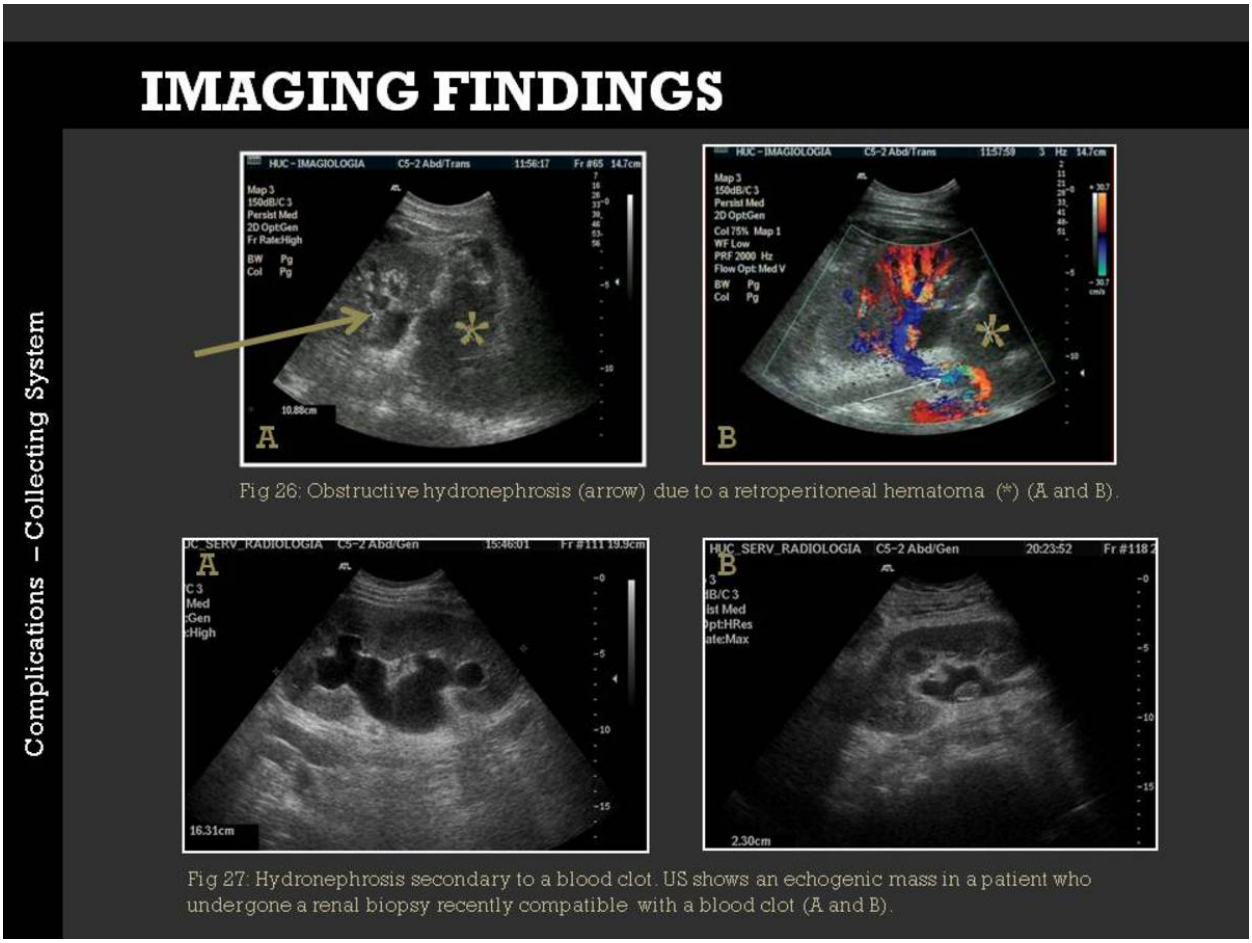

Fig. 53
References: L. Andrade; Radiology, Coimbra, PORTUGAL

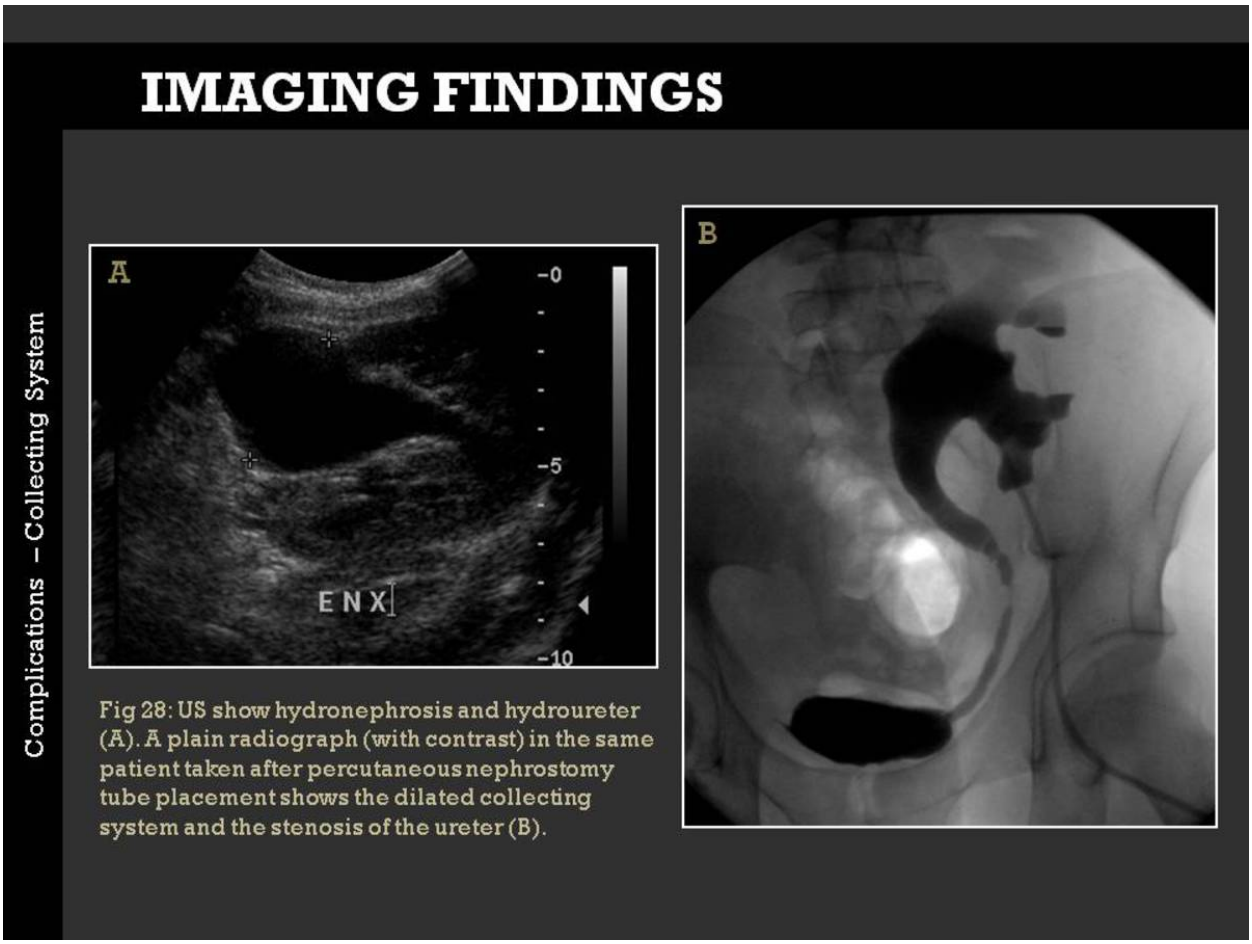

Fig. 54
References: L. Andrade; Radiology, Coimbra, PORTUGAL

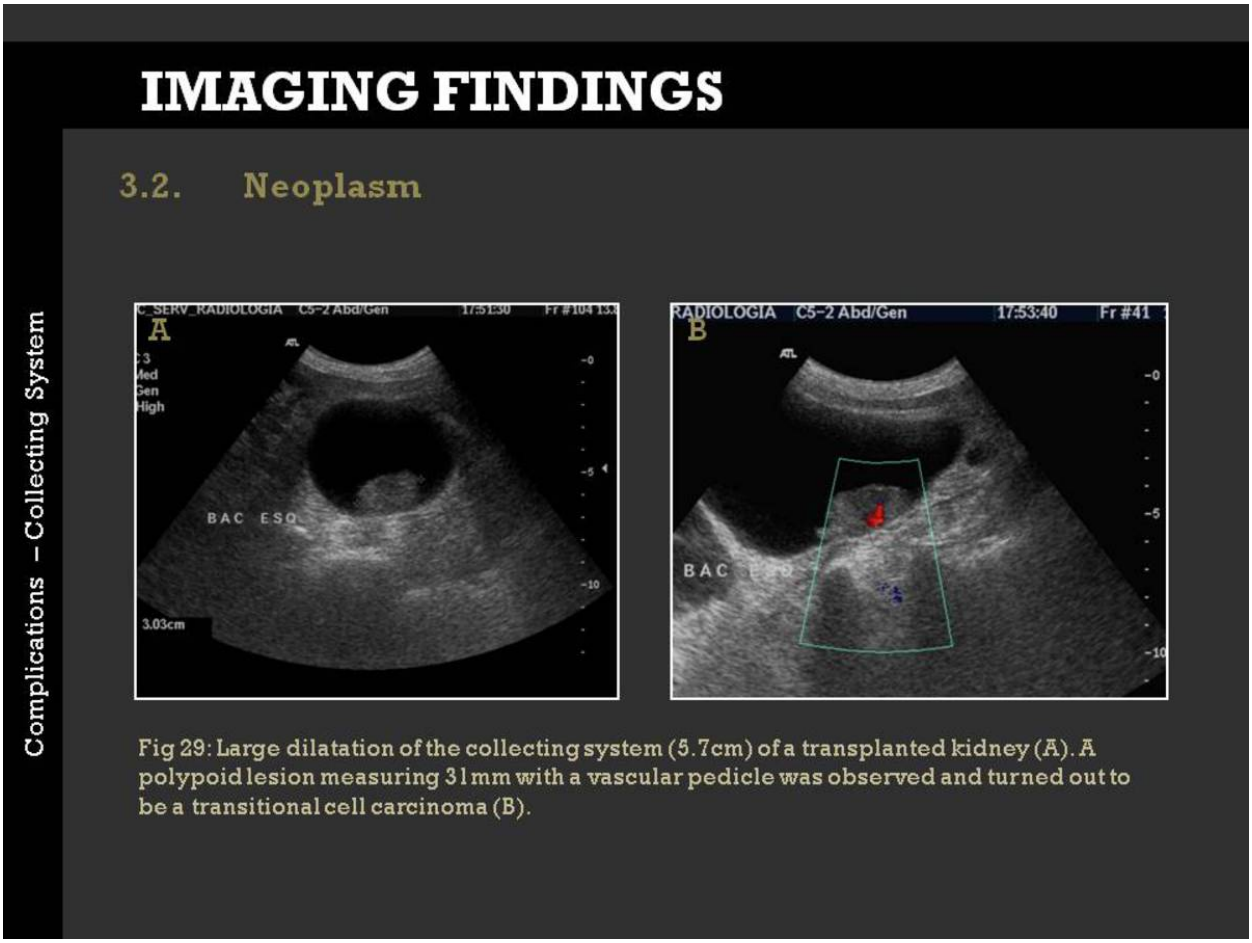

Fig. 55
References: L. Andrade; Radiology, Coimbra, PORTUGAL

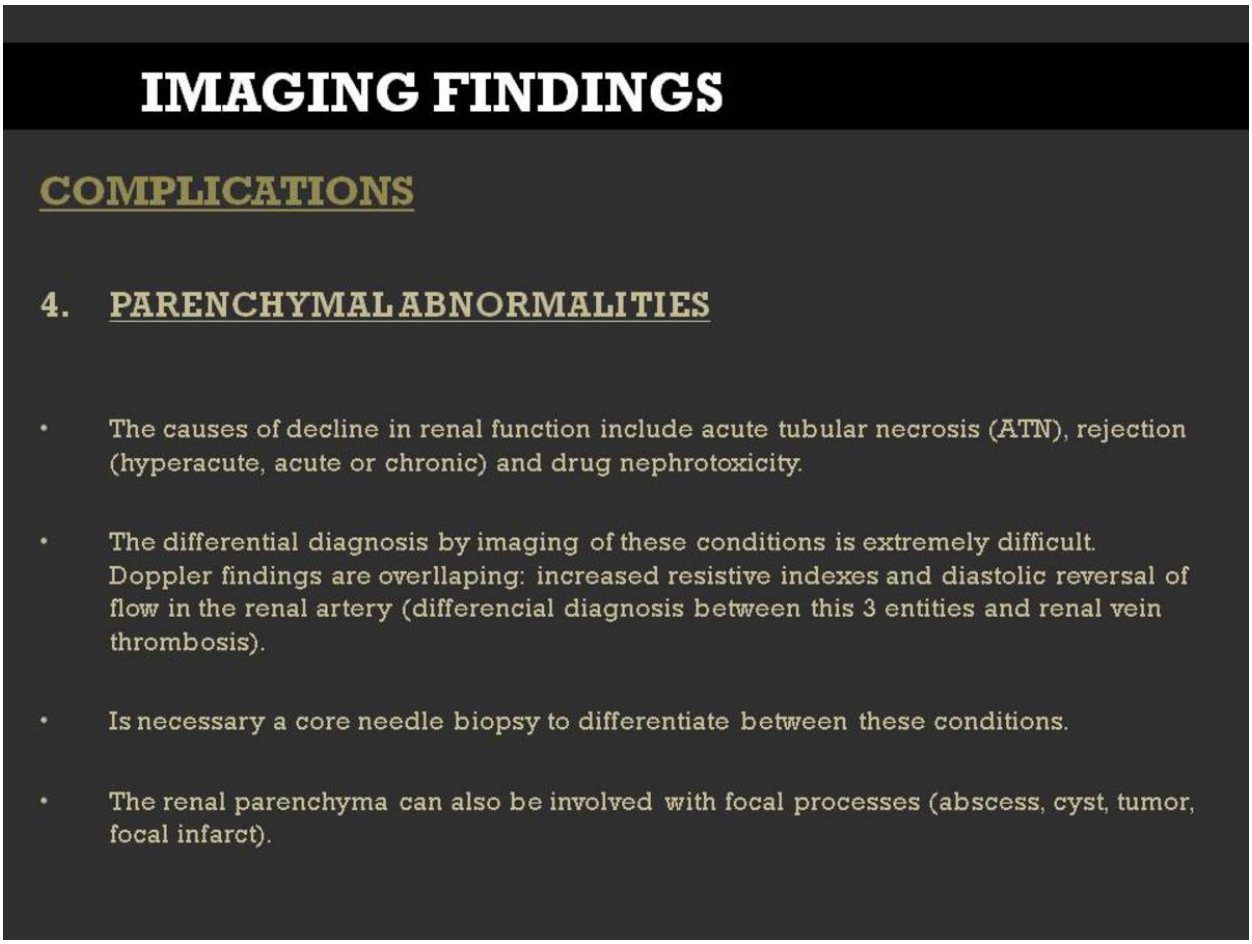

Fig. 56
References: L. Andrade; Radiology, Coimbra, PORTUGAL

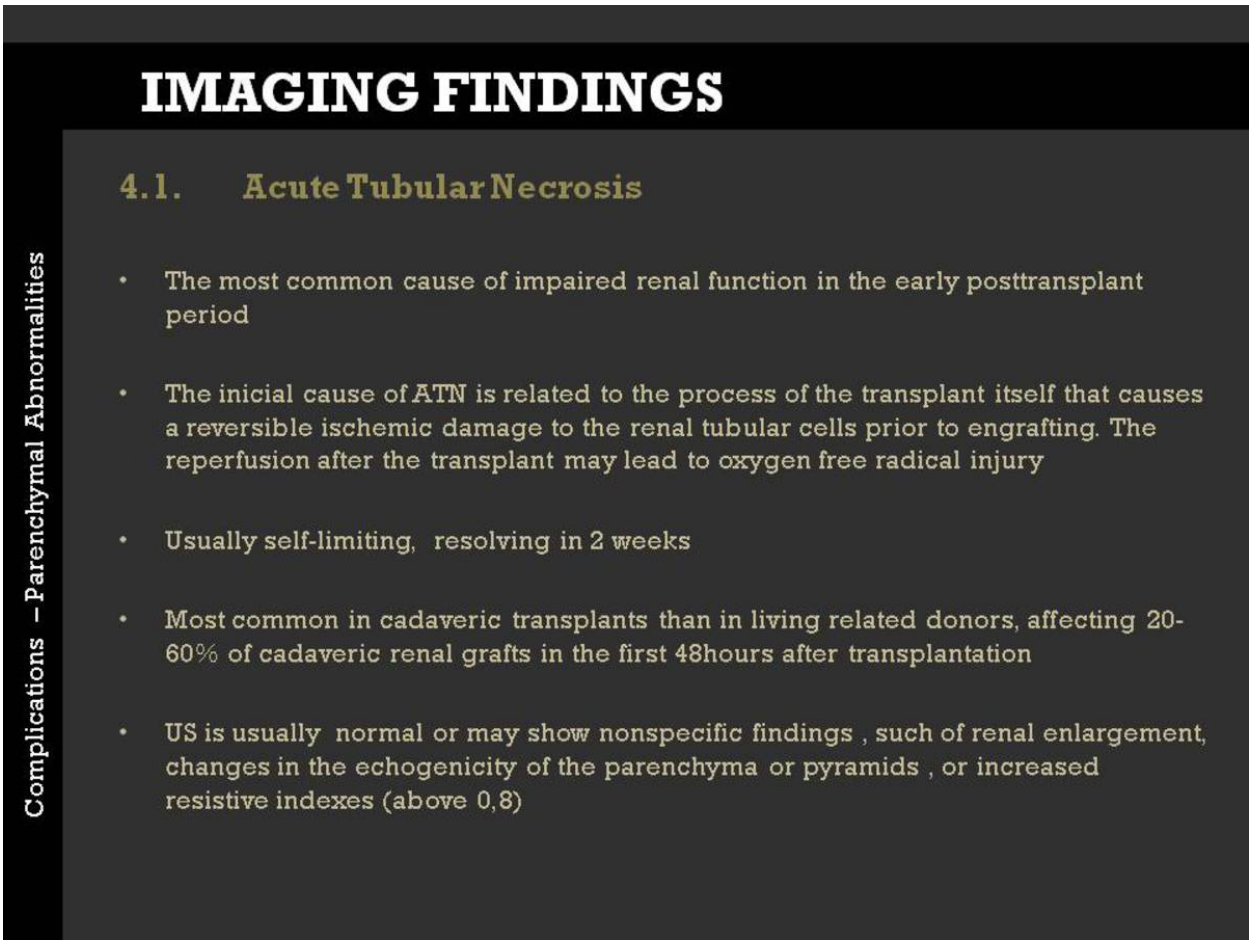

Fig. 57
References: L. Andrade; Radiology, Coimbra, PORTUGAL

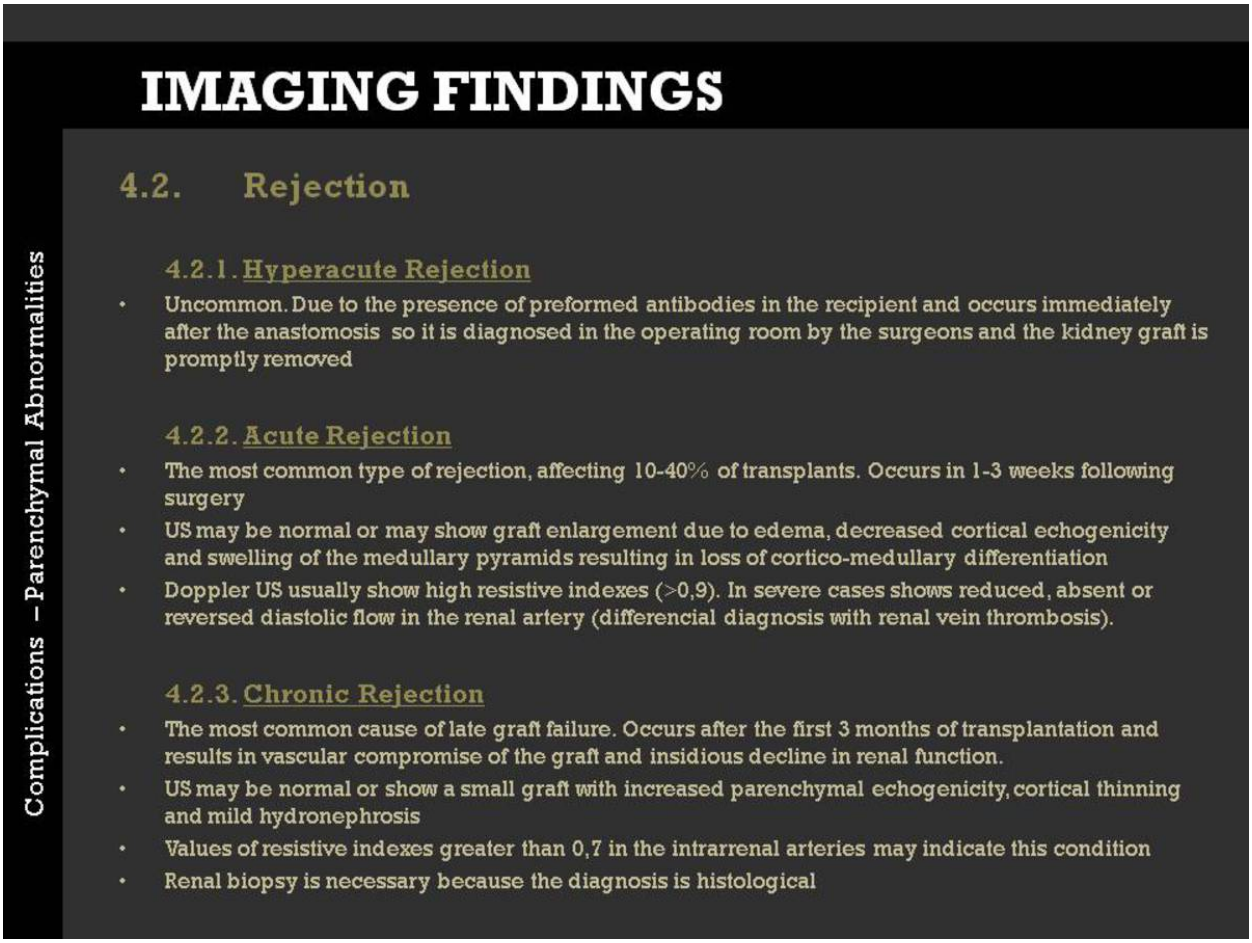

Fig. 58
References: L. Andrade; Radiology, Coimbra, PORTUGAL

Fig. 59
References: L. Andrade; Radiology, Coimbra, PORTUGAL

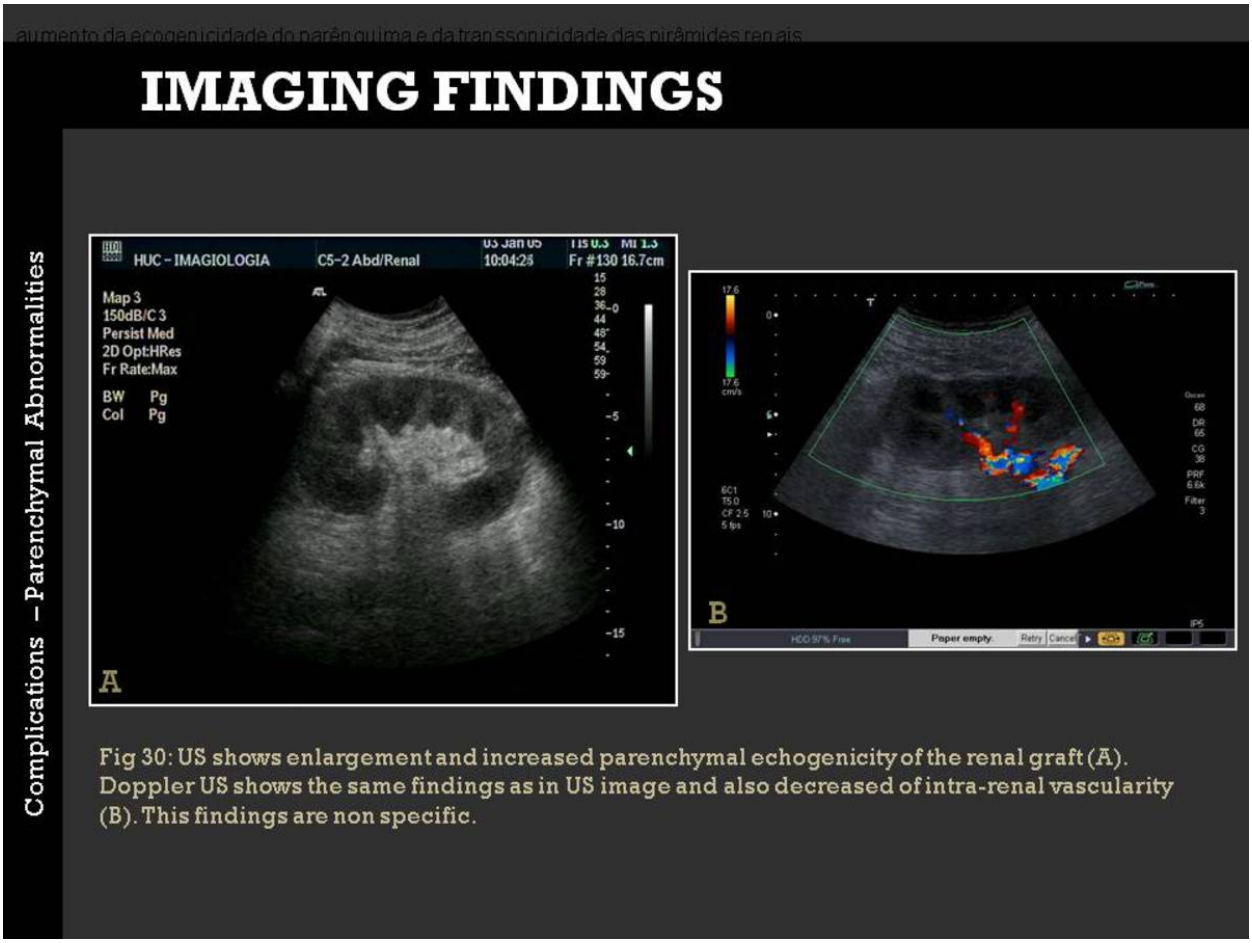

Fig. 60
References: L. Andrade; Radiology, Coimbra, PORTUGAL

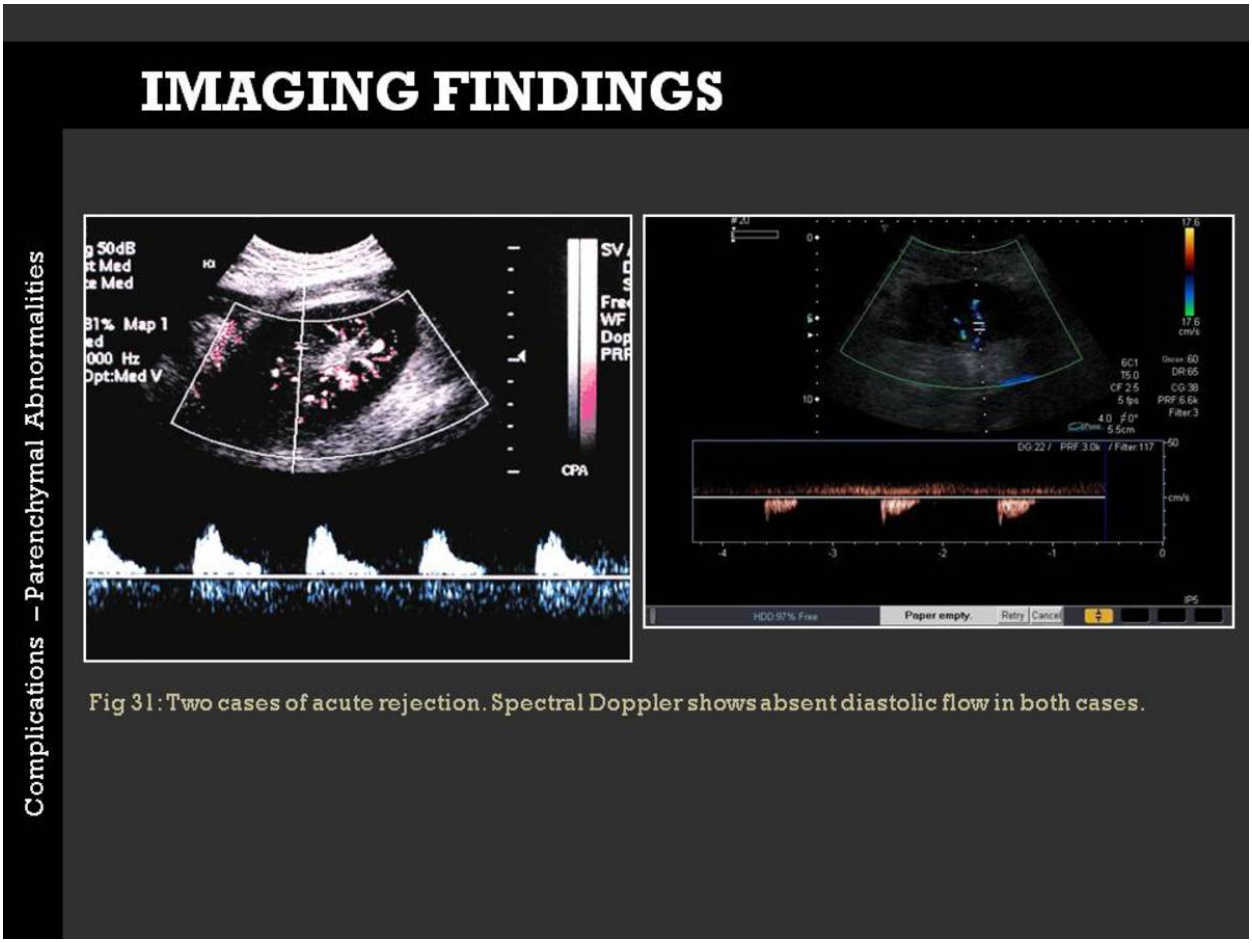

Fig. 61
References: L. Andrade; Radiology, Coimbra, PORTUGAL

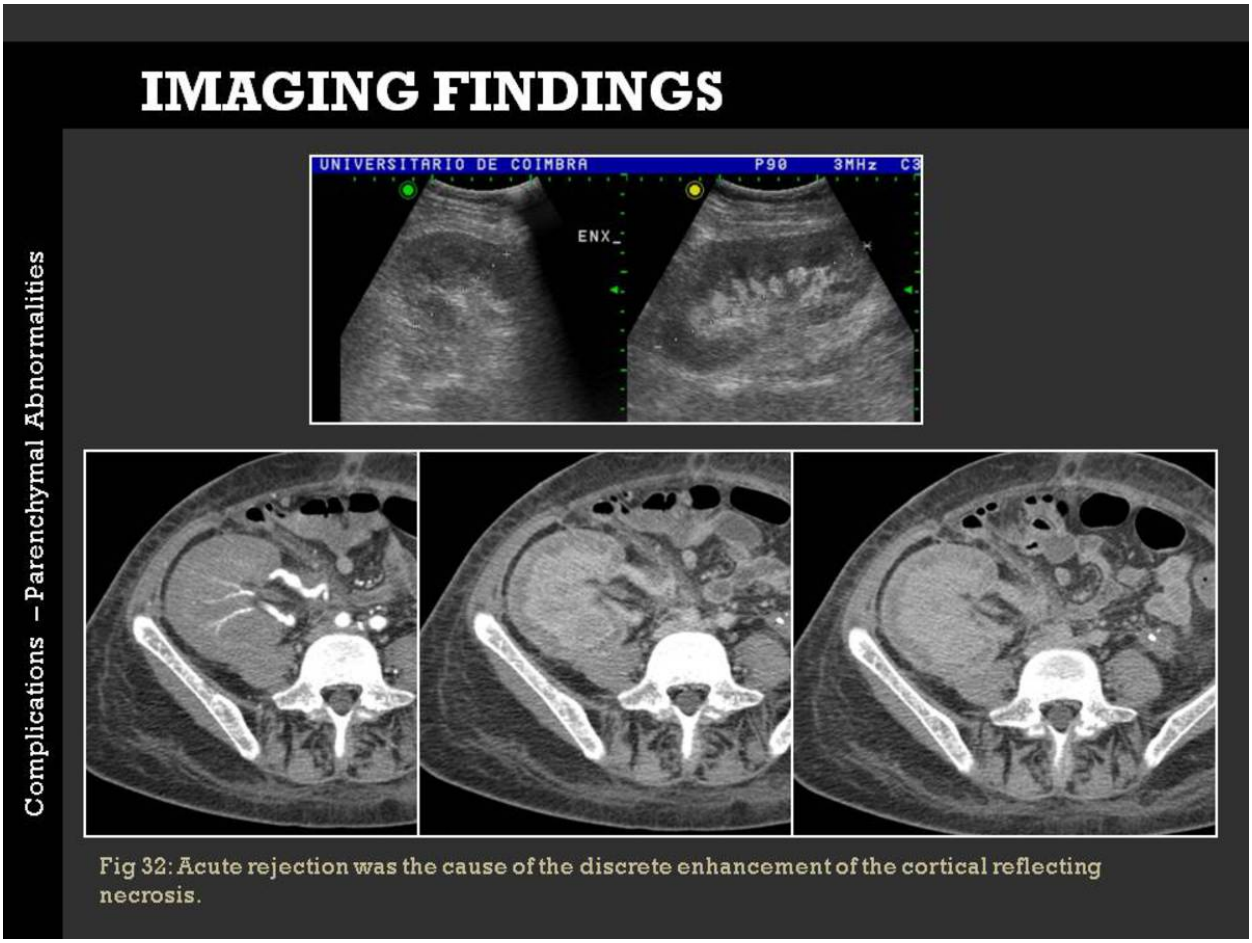

Fig. 62
References: L. Andrade; Radiology, Coimbra, PORTUGAL

Conclusion

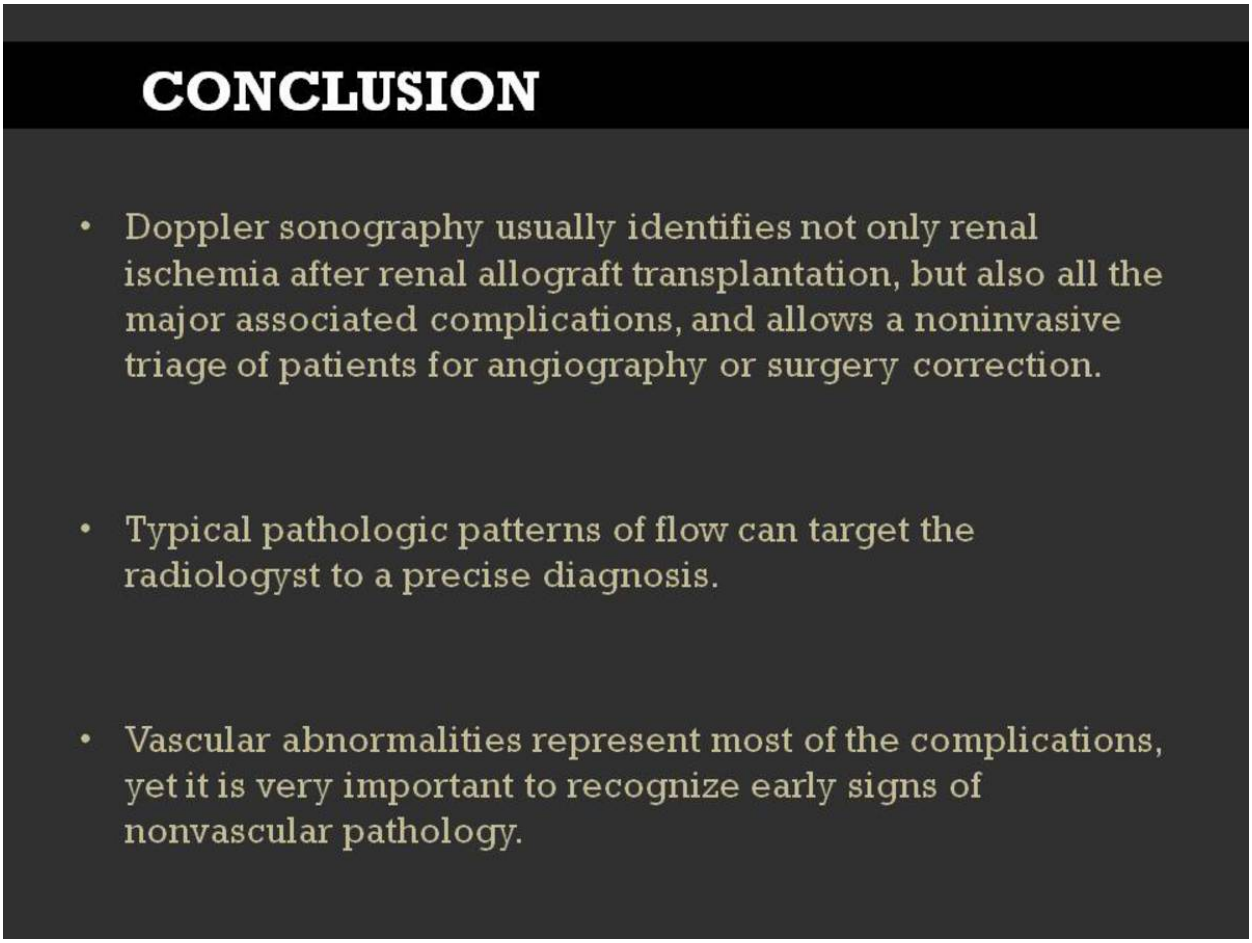

Fig. 63
References: L. Andrade; Radiology, Coimbra, PORTUGAL

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