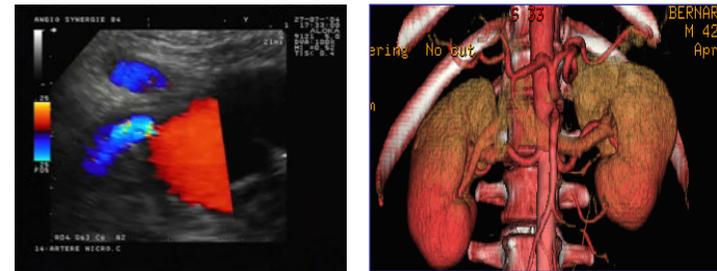
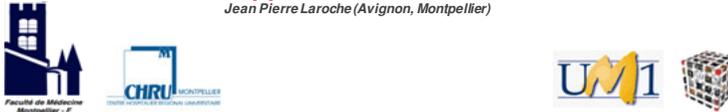


ANGIO SYNERGIE 04
BERNARD M 42
Apr

ring No cut

RD4_043_C01_02
14-ARTERE RECHD.C

Echo Doppler des Artères Rénales
Jean Pierre Laroche (Avignon, Montpellier)



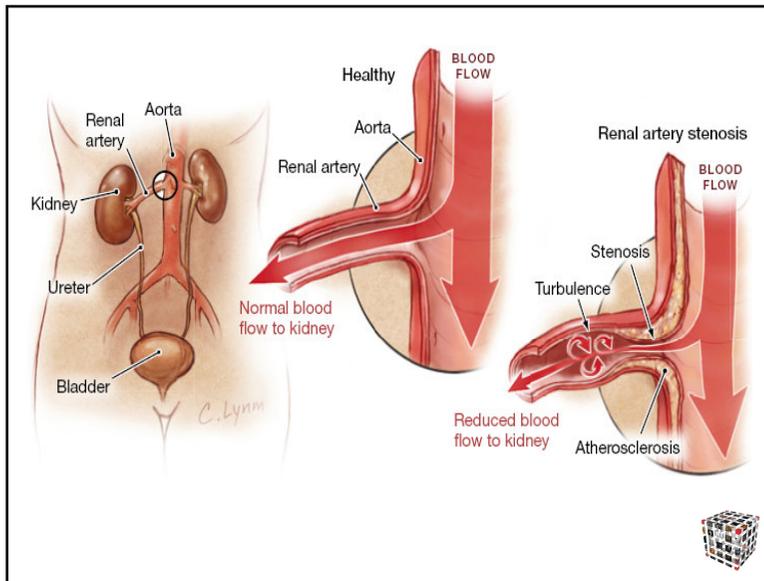
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Apr

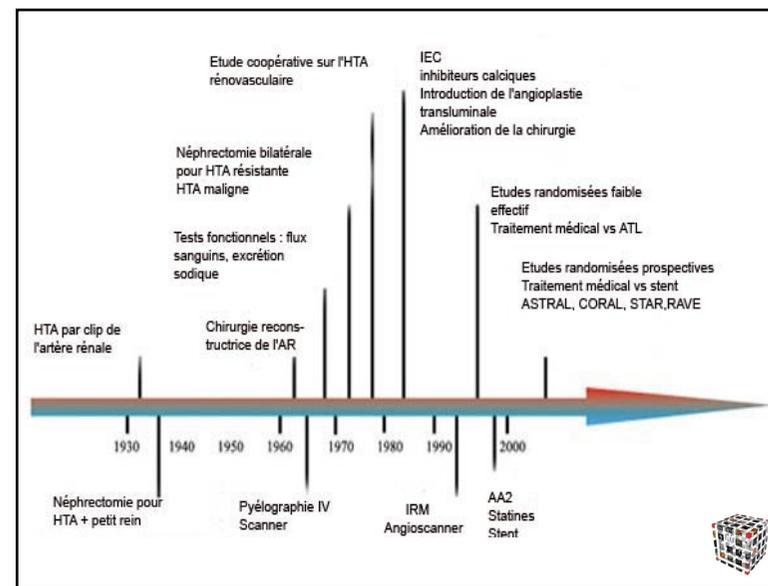
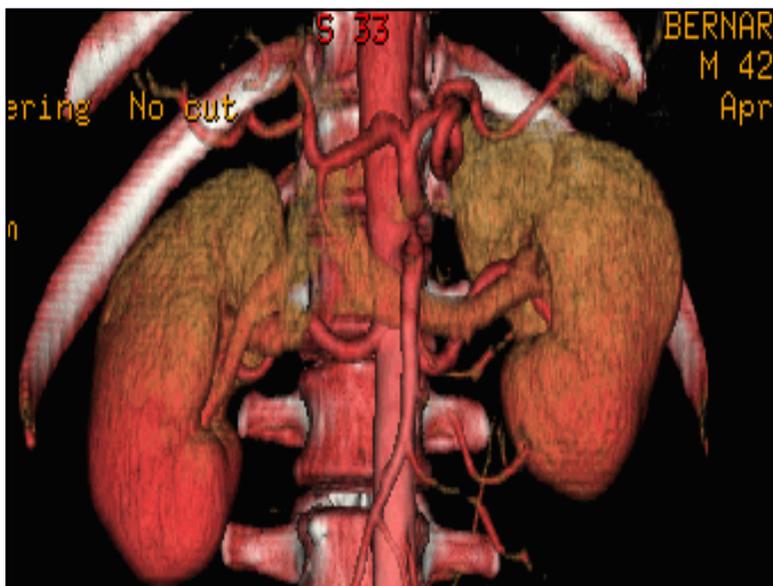
ring No cut

RD4_043_C01_02
14-ARTERE RECHD.C

Echo Doppler des Artères Rénales
Jean Pierre Laroche (Avignon, Montpellier)

1/3





Vascular Medicine

<http://vmj.sagepub.com>

Guidelines for noninvasive vascular laboratory testing: a report from the American Society of Echocardiography and the Society for Vascular Medicine and Biology
 Marie Gerhard-Herman, Julius M Gardin, Michael Jaff, Emile Mohler, Mary Roman and Tasneem Z Naqvi
Vasc Med 2006; 11: 183
 DOI: 10.1177/1358863x06070516

<p>Table 5 Indications for renal duplex ultrasound.²⁴</p> <ul style="list-style-type: none"> Sudden exacerbation of previously well-controlled hypertension New onset hypertension at a young age Malignant hypertension Unexplained azotemia Hypertension and aortic/iliac or infrainguinal atherosclerosis Azotemia after administration of an angiotensin-converting enzyme inhibitor An atrophic kidney Recurrent flash pulmonary edema without cardiac explanation Evaluation of adequacy of renal artery revascularization Detection of restenosis after endovascular therapy 	<p>Table 6 Diagnostic criteria for significant renal artery stenosis.</p> <p>Renal artery to aorta peak systolic velocity ratio is >3.5 PSV > 200 cm/s with evidence of poststenotic turbulence EDV > 150 cm/s (>80% renal artery stenosis) RI > 0.8 (used to predict response of blood pressure, renal function, to renal revascularization) An occluded renal artery demonstrates no flow in the affected vessel</p> <p>EDV, End-diastolic velocity; PSV, peak systolic velocity; RI, resistive index (1 - [EDV/maximum systolic velocity] × 100).</p>
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Vascular Med 2006

Circulation

American Heart Association
 Learn and Live™

JOURNAL OF THE AMERICAN HEART ASSOCIATION

ACC/AHA 2005 practice Guidelines for the Management of Patients With Peripheral Arterial Disease (Lower Extremity, Renal, Mesenteric, and Abdominal Aortic)

Circulation 2006;113:1474-1547
 DOI: 10.1161/CIRCULATIONAHA.106.173994

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75214
 Copyright © 2006 American Heart Association. All rights reserved. Print ISSN: 0009-7322. Online ISSN: 1524-4539

Clinical Clues to the Diagnosis of Renal Artery Stenosis

1. Onset of hypertension before the age of 30 years or severe hypertension after the age of 55.* (Class I; LOE B)
2. Accelerated, resistant, or malignant hypertension.* (Class I; LOE C)
3. Development of new azotemia or worsening renal function after administration of an ACE inhibitor or ARB agent. (Class I; LOE B)
4. Unexplained atrophic kidney or size discrepancy between kidneys of greater than 1.5 cm.† (Class I; LOE B)
5. Sudden, unexplained pulmonary edema. (Class I; LOE B)
6. Unexplained renal dysfunction, including individuals starting renal replacement therapy. (Class IIa; LOE B)
7. Multi-vessel coronary artery disease. (Class IIb; LOE B)
8. Unexplained congestive heart failure. (Class IIb; LOE C)
9. Refractory angina. (Class IIb; LOE C)

**Recommandations AHA 2005
 Circulation 2006**



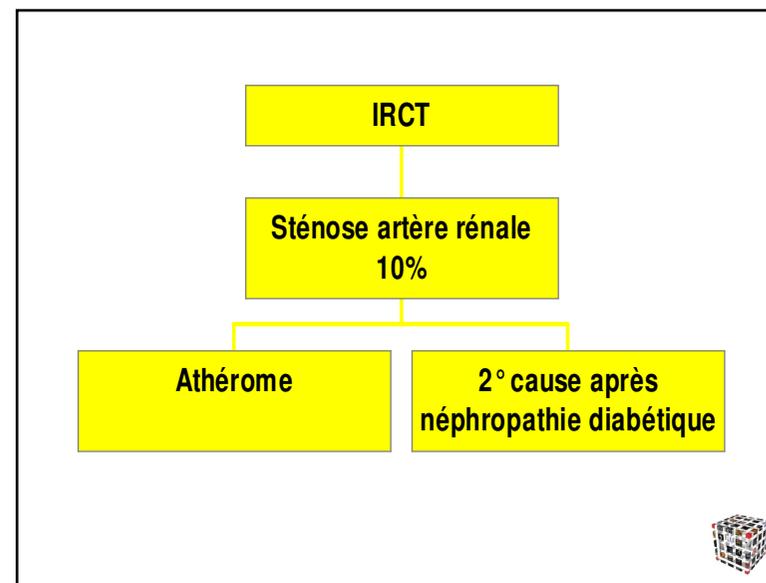
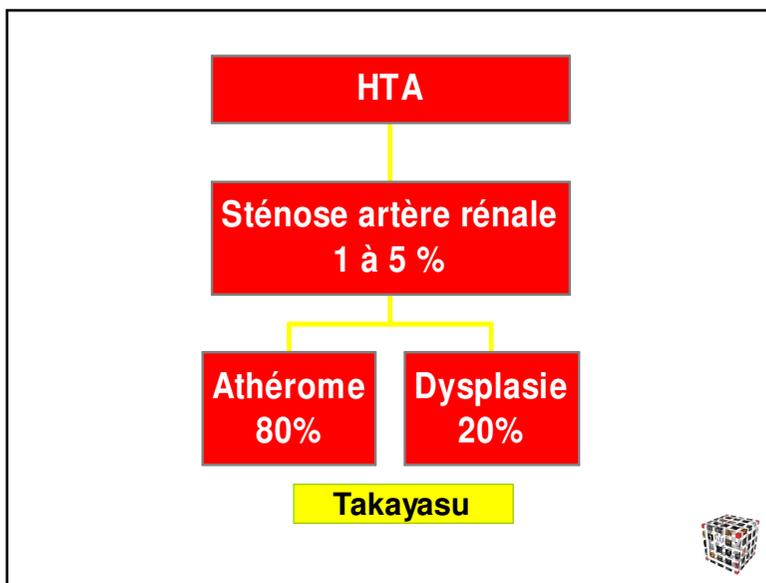
Facteurs de risque de sténose de l'artère rénale athéromateuse

HTA chez un patient polyvasculaire, le plus souvent fumeur actuel ou sevré
 HTA et œdème aigu du poumon *flash*
 HTA réfractaire
 HTA et dégradation de la fonction rénale progressive
 Insuffisance rénale aiguë sous inhibiteur de l'enzyme de conversion ou sous antagoniste des récepteurs AT1 de l'angiotensine II
 HTA et asymétrie de la taille des reins en l'absence d'antécédents urologiques

Facteurs de mauvais pronostic avant revascularisation

Protéinurie massive
 Index de résistance intra-rénal (côté sténose ou le plus sténosé) > 0,80
 Rénine basse
 Taille de rein < 8 cm
 Débit de filtration glomérulaire < 60 mL/min stable
 Sténose unilatérale
 Scintigraphie rénale post-captopril négative

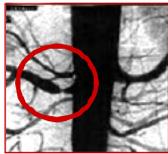
Presse Med 2009

Sténose artère rénale

■ ATHEROME

Age > 50
 Sexe : idem
 Ostium/Proximalité
 Thrombose
 DEL, Chirurgie

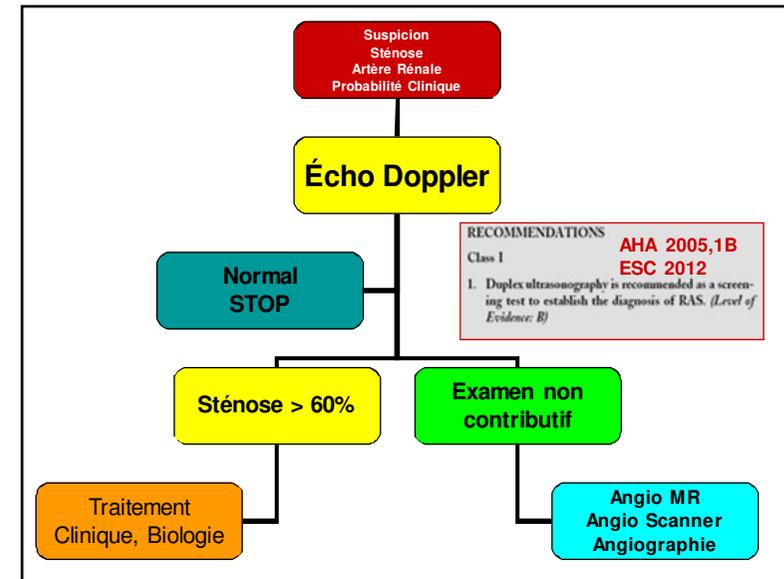
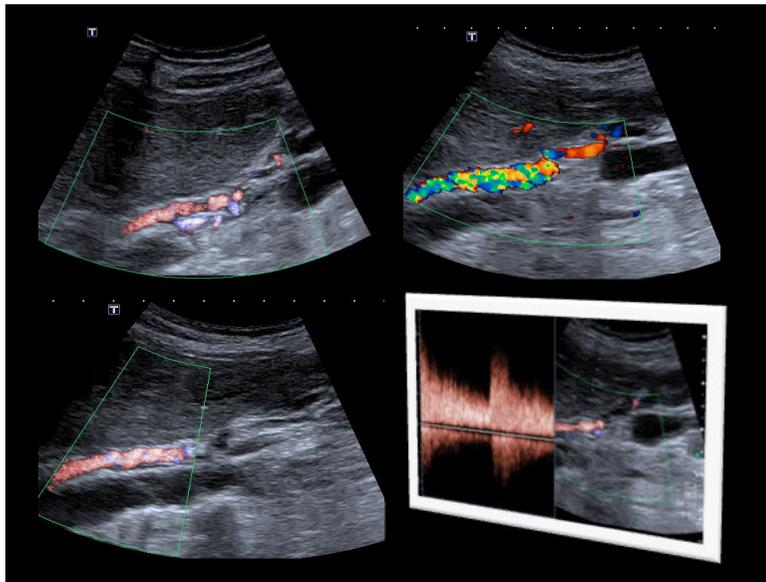
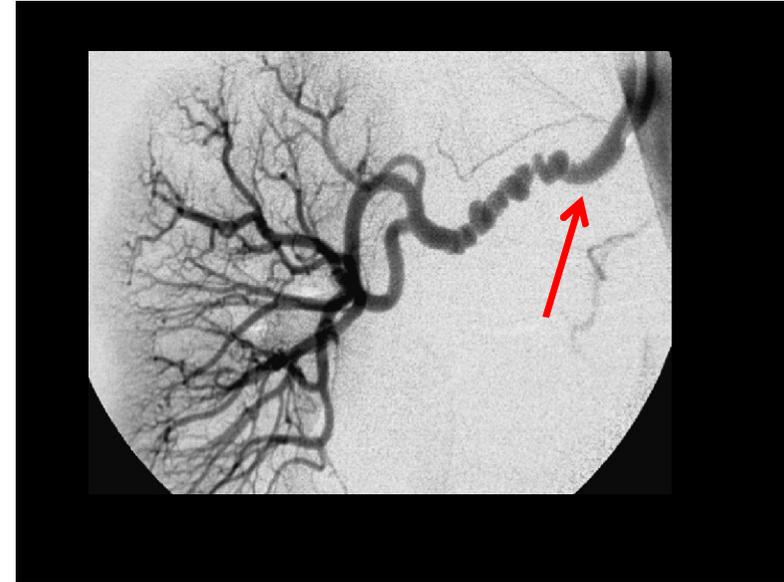


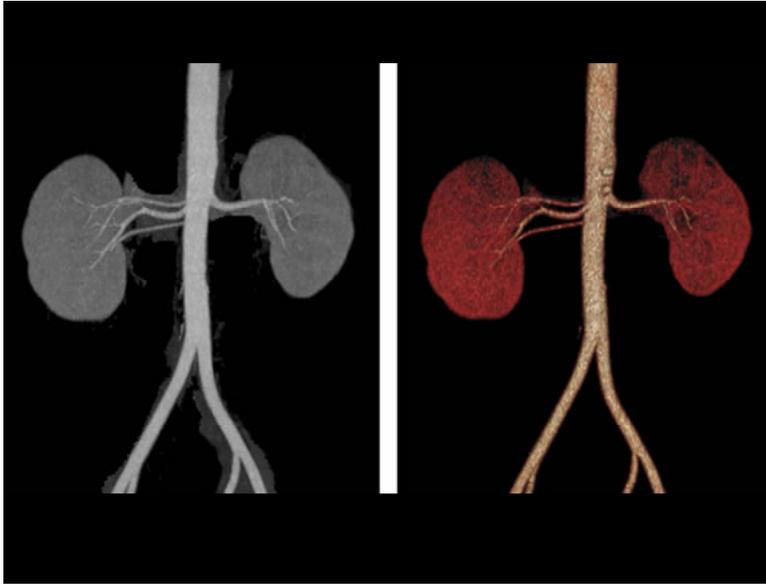
■ DYSPLASIE

Age < 30/40
 Sexe : femme
 Mediale/Distalité.
 Anévrisme
 DEL



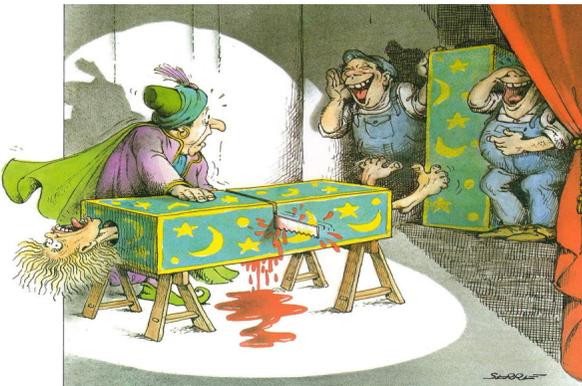
- Atnip RG : Vascular Disease (Strandness DE), 1994 -





Le Matériel

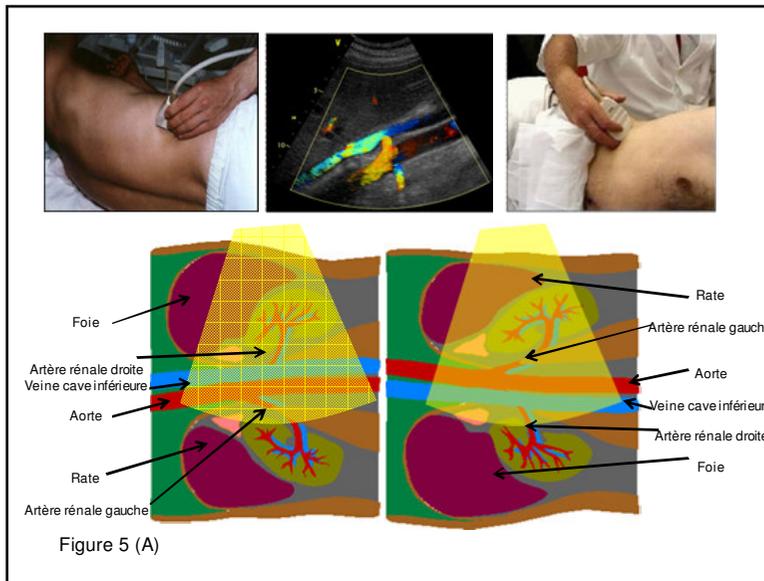
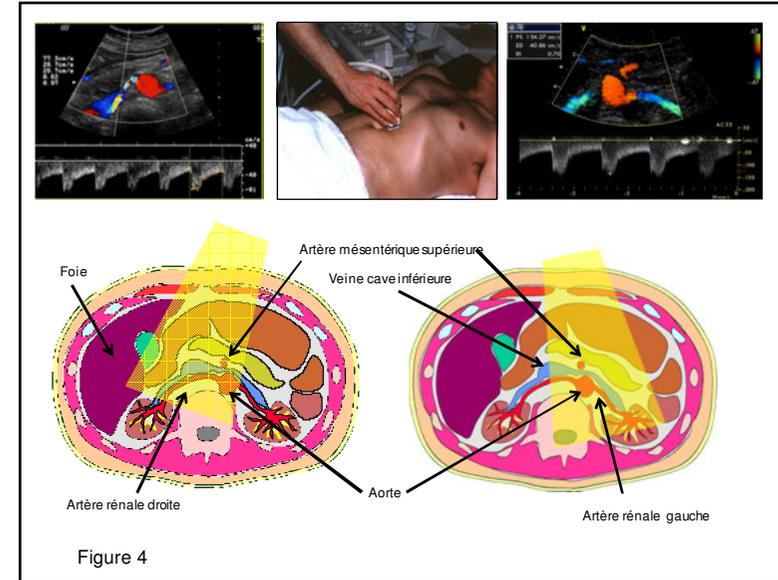
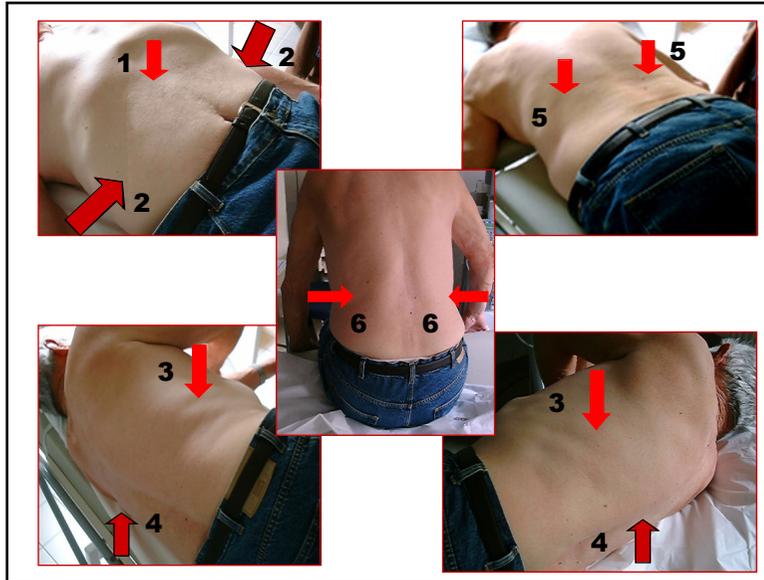
- Écho Doppler Couleur
- Sondes de basse fréquence, convexe, phased array



Méthodologie : Les voies d'abord

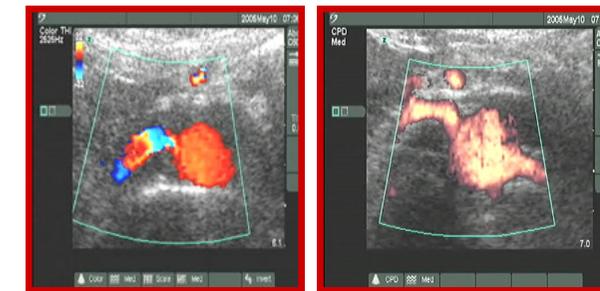
Organes	Position du Patient Voies d'abord
Aorte	Décubitus Dorsal
Reins	Décubitus Latéral Gauche et Droit Procubitus
Artères Rénales	Décubitus Dorsal Décubitus Latéral Droit et Gauche Procubitus Assis
Perfusion Rénale	Décubitus Latéral Droit et Gauche





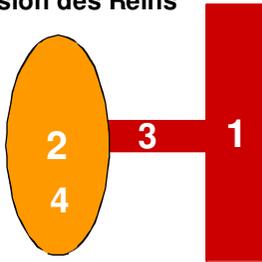
Méthodologie : Préparation du patient

- De préférence à jeun (Théorie)
- En cas d'échec : préparation colique (Zymoplex, X Prep, Prépacol).
- Faisabilité : 98%

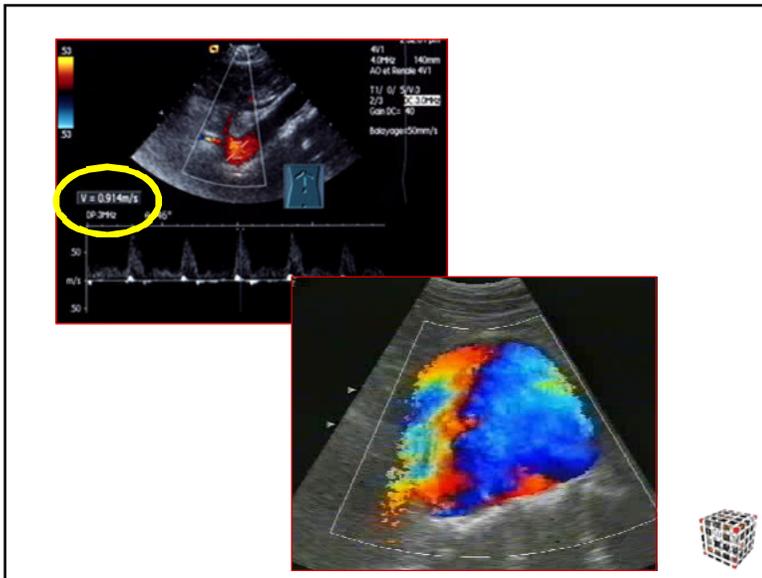


Méthodologie : les différents temps de l'examen

- 1. Aorte : détection anévrisme, plaque paroi, VSM
- 2. Reins : échographie rénale avec mensurations des reins
- 3. Artères Rénales : ostium, portion moyenne, distalité
- 4. Perfusion des Reins

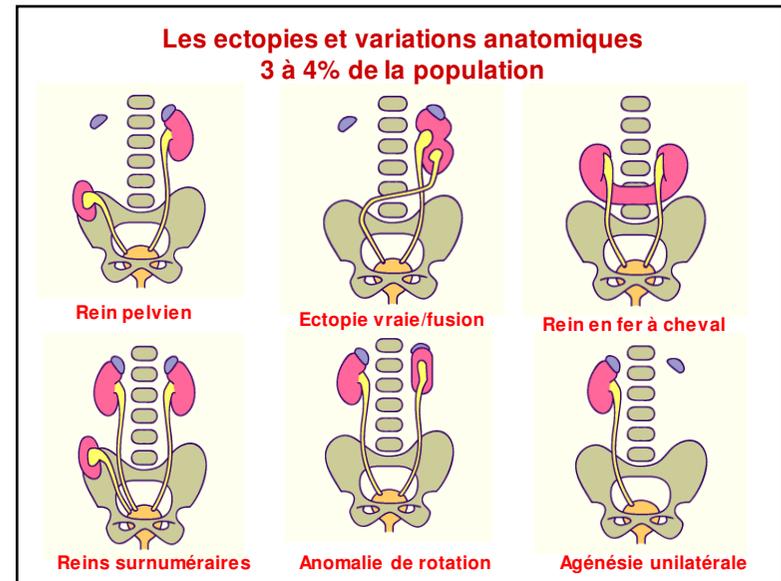
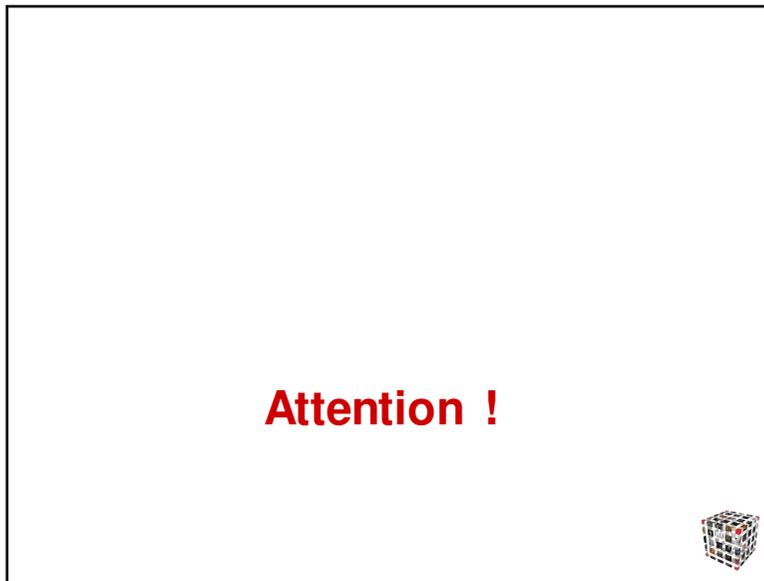
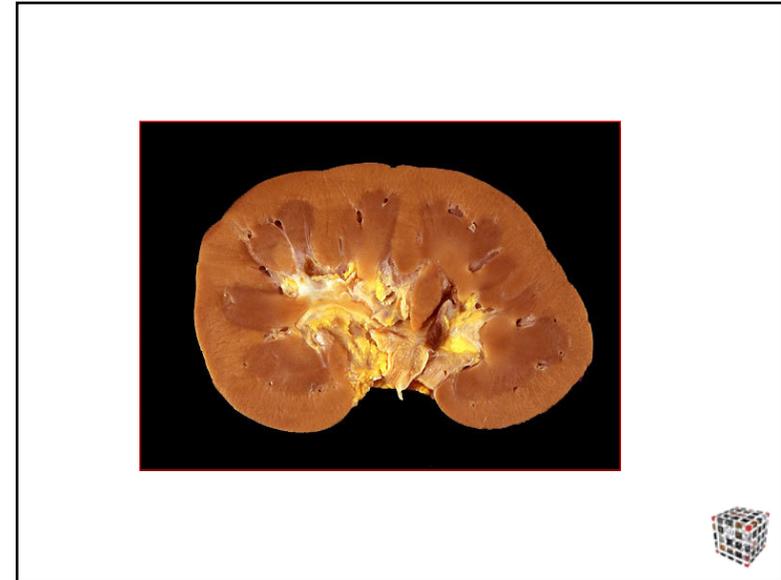
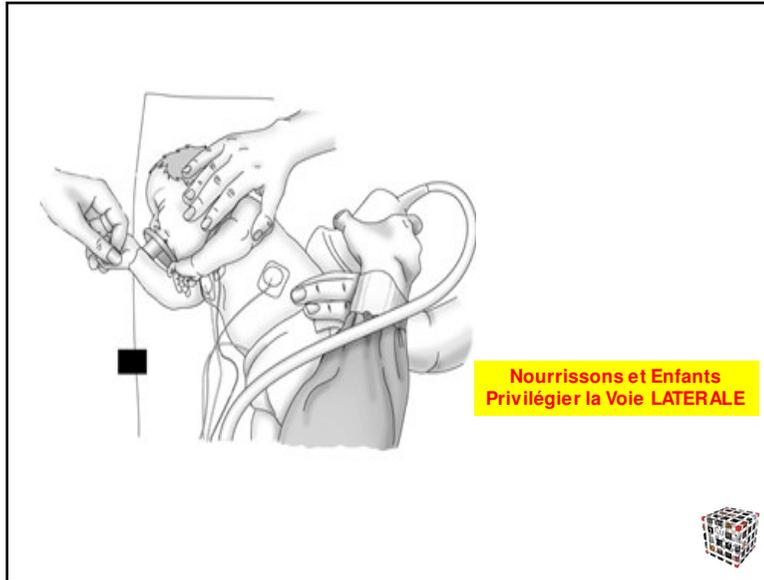


Méthodologie : Temps 1, Étude de l'Aorte Abdominale sous rénale

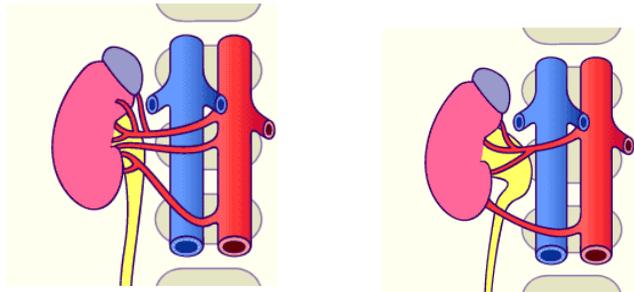


Méthodologie : Temps 2, Échographie des Loges Rénales

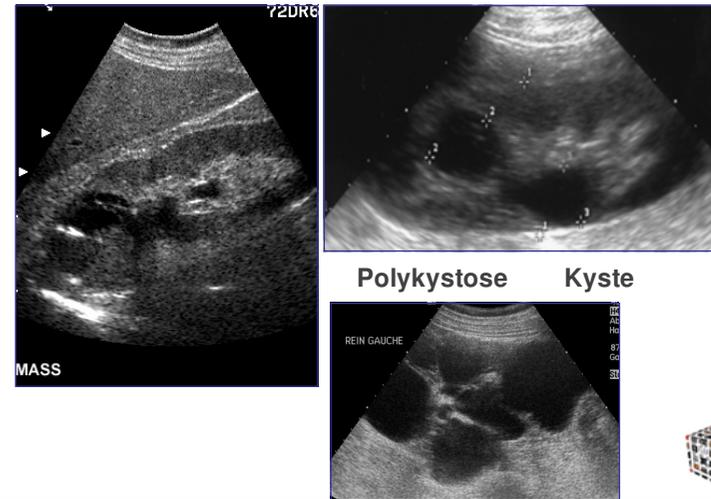




Variations anatomiques artérielles



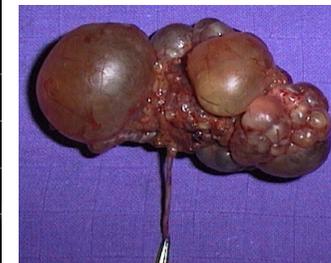
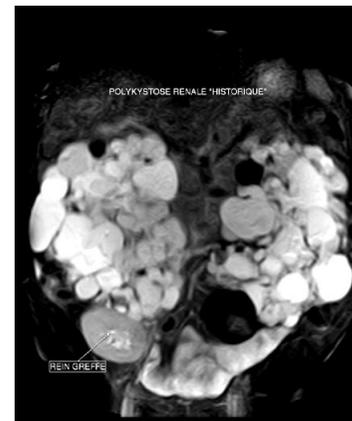
Morceaux choisis

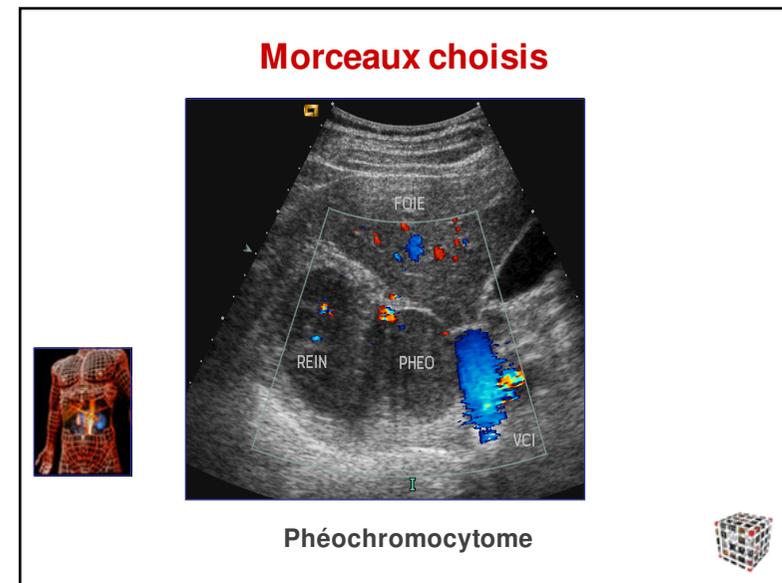
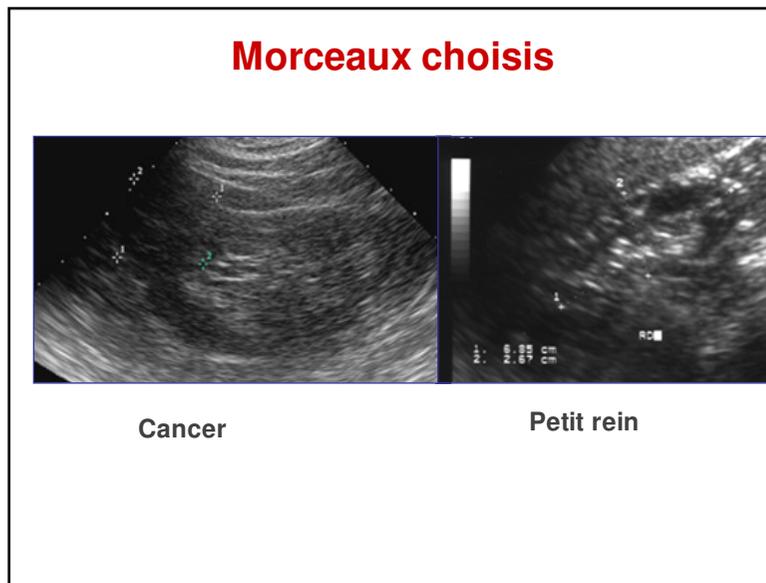
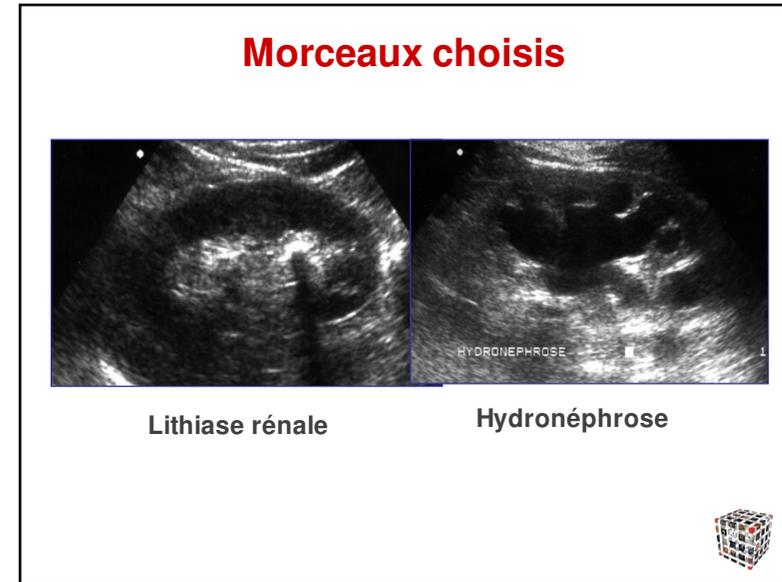
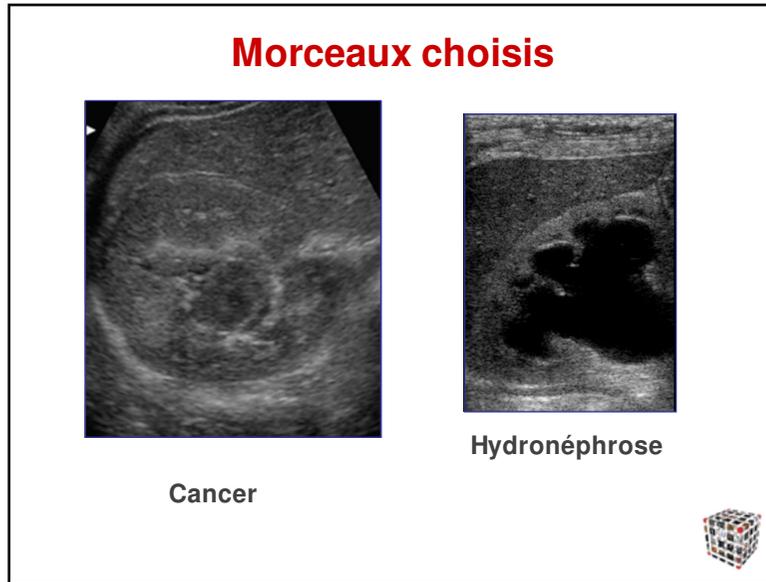


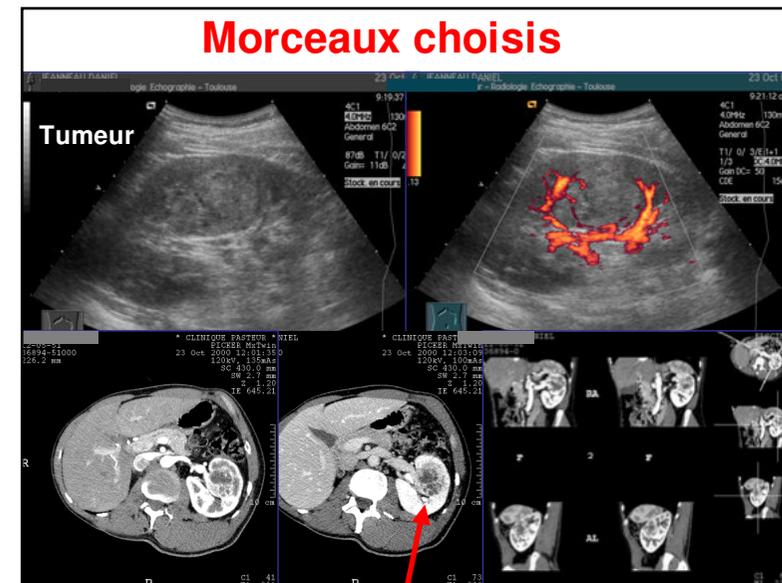
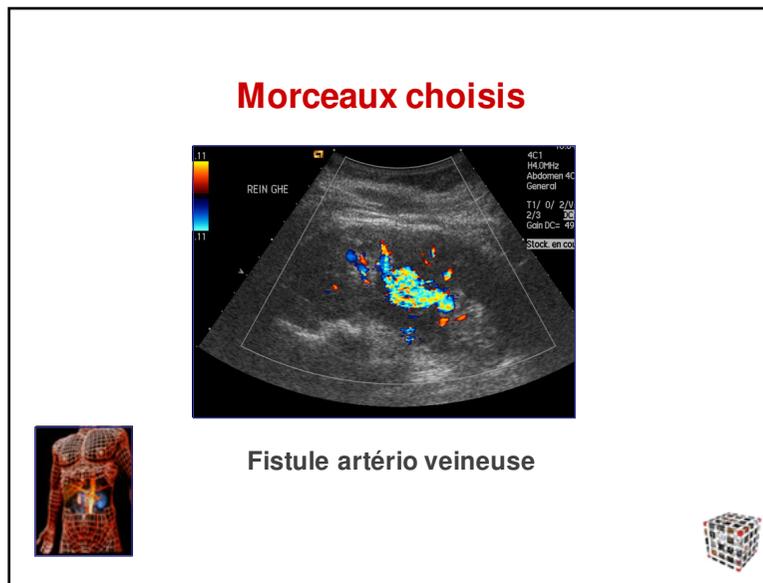
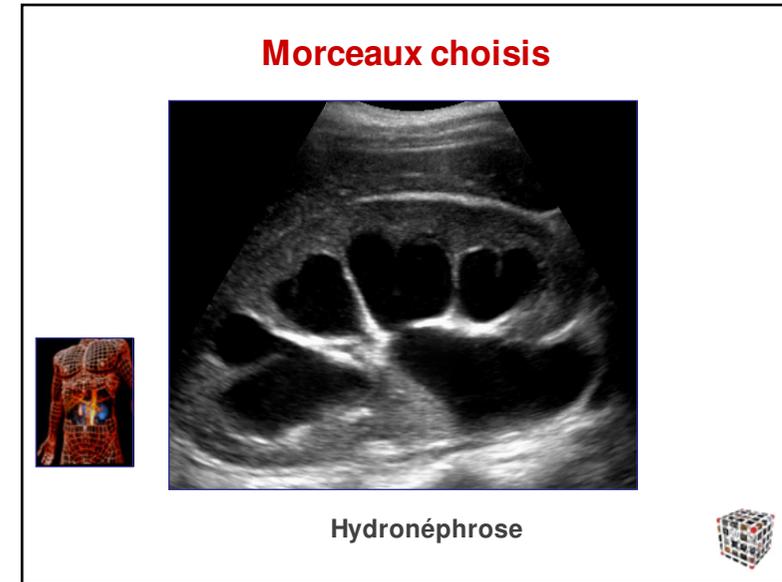
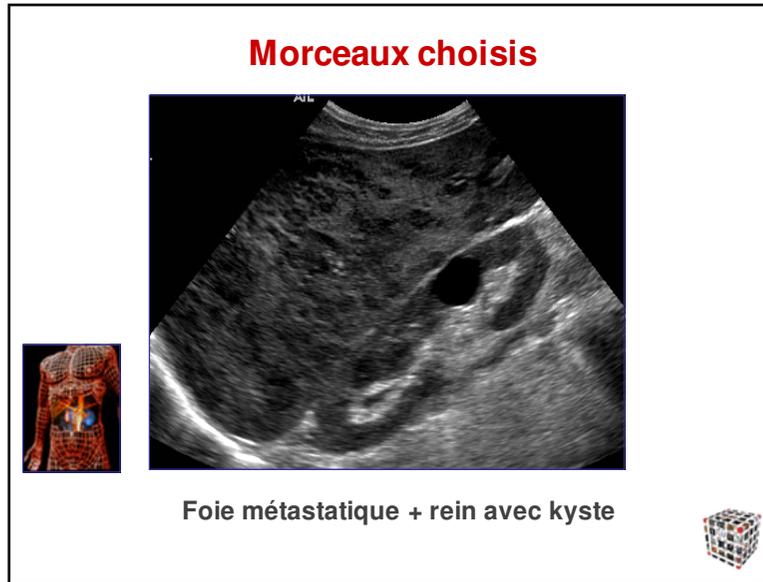
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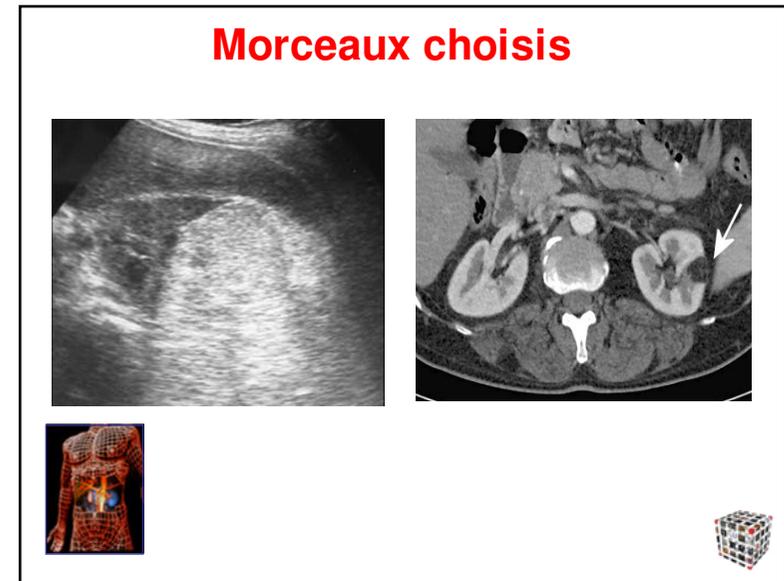
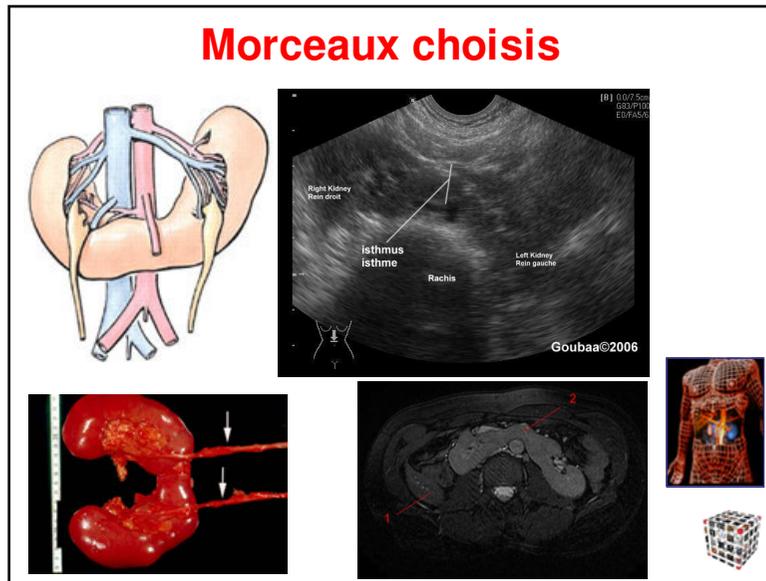
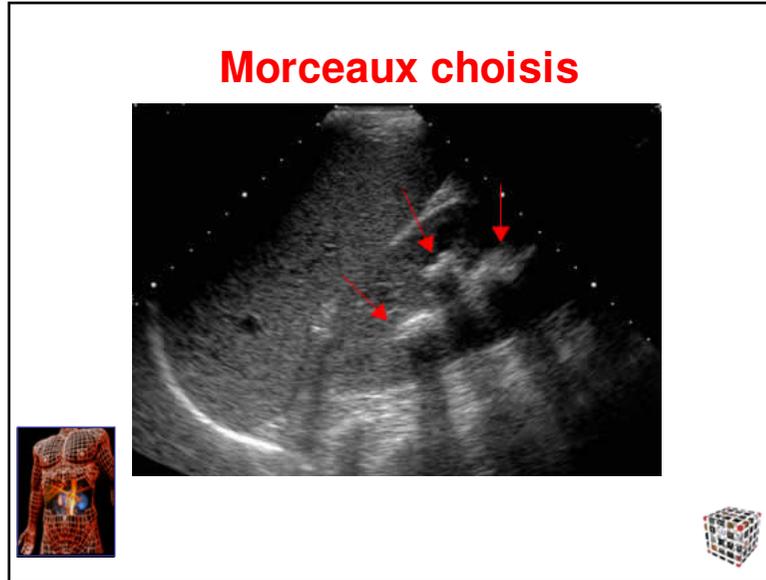


Polykystose

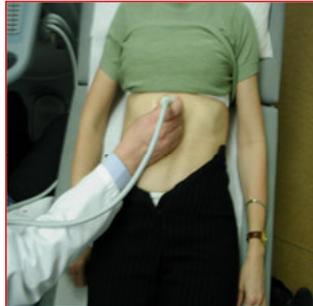




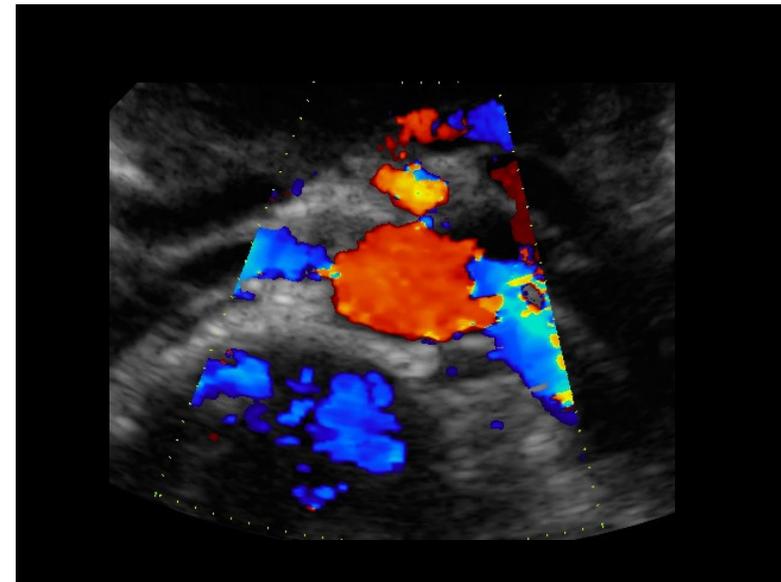
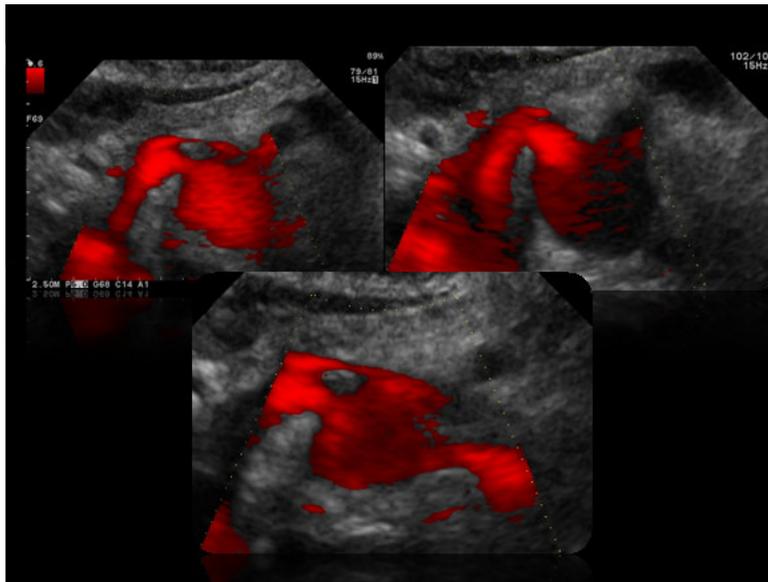
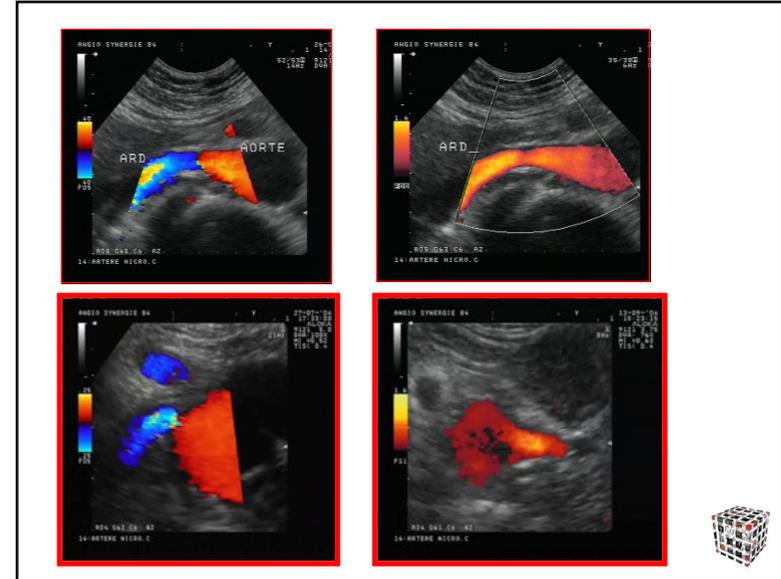


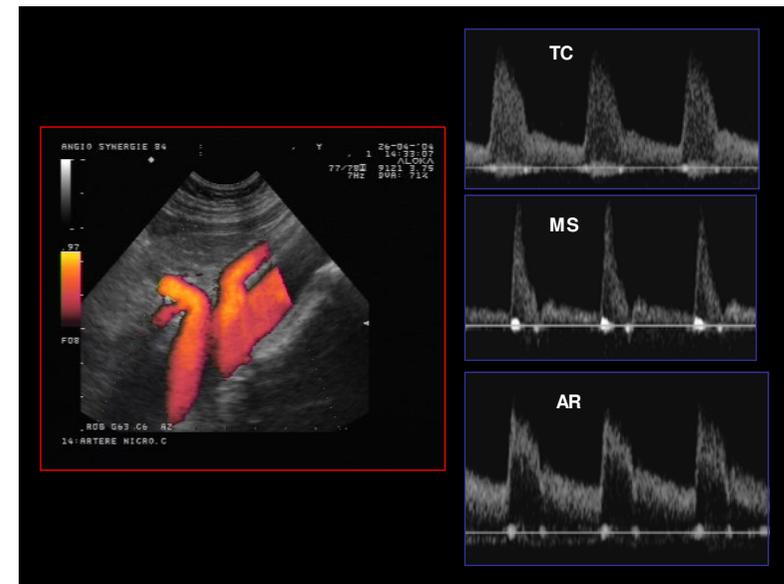
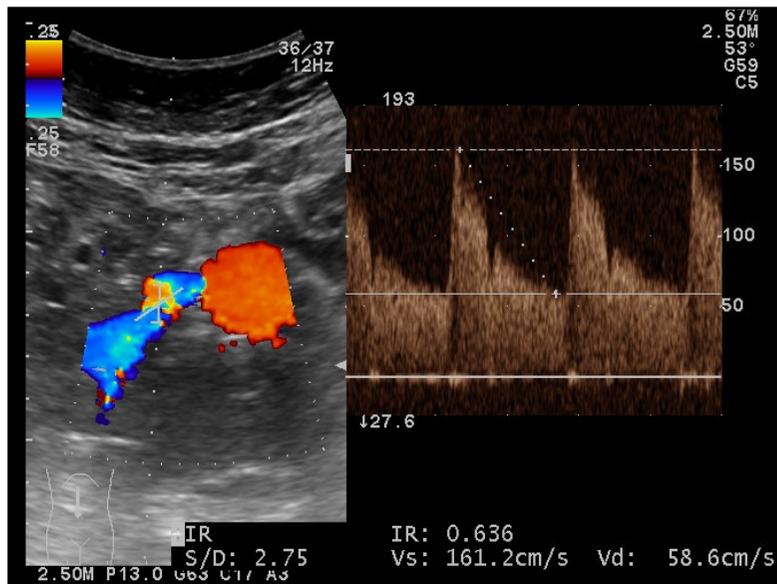
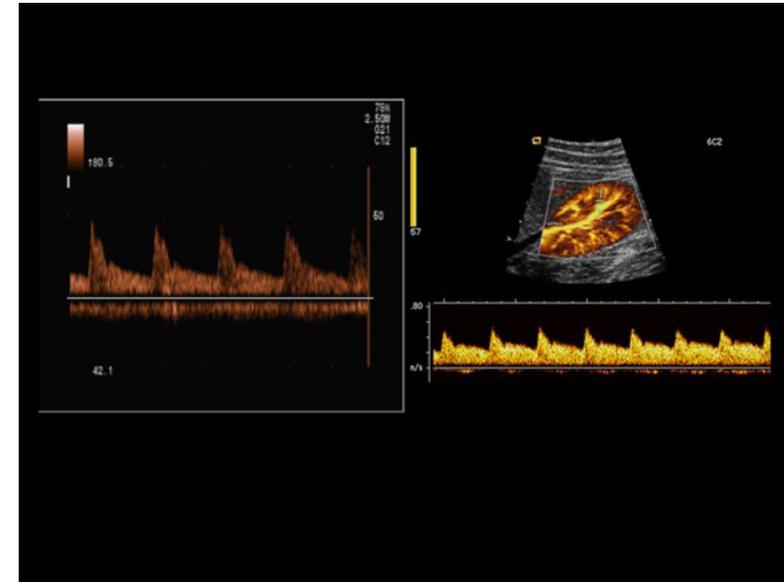
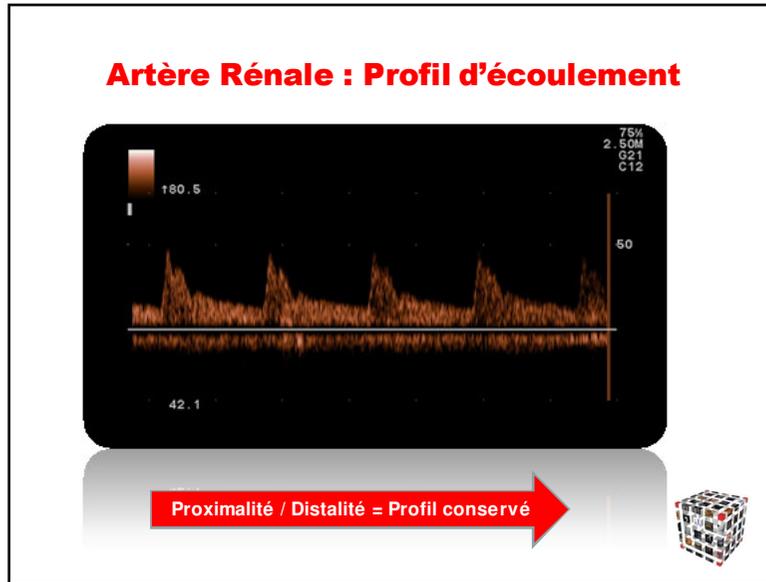


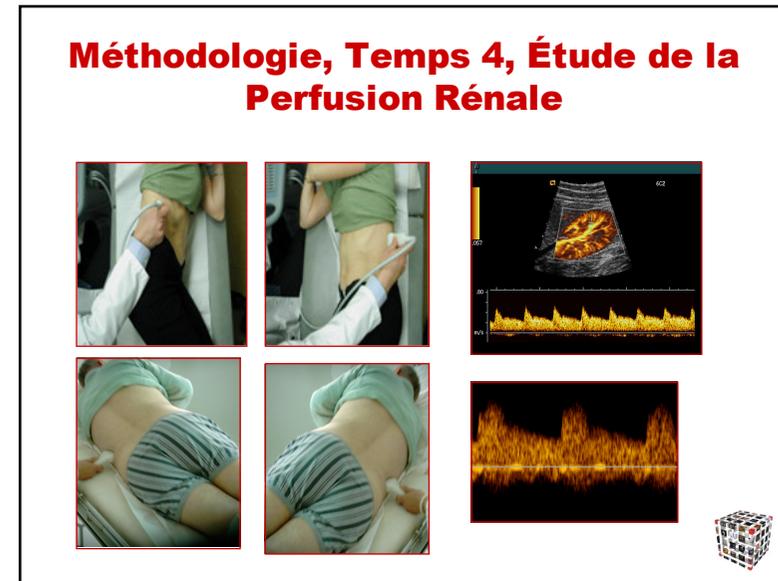
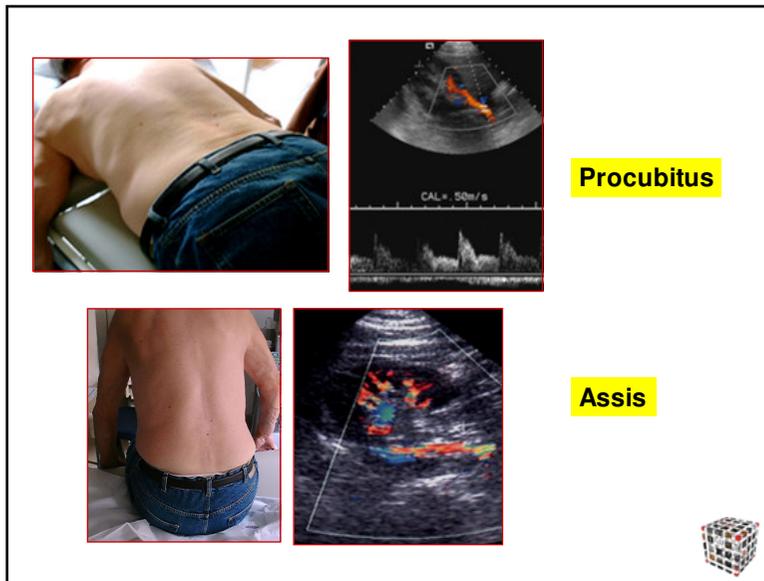
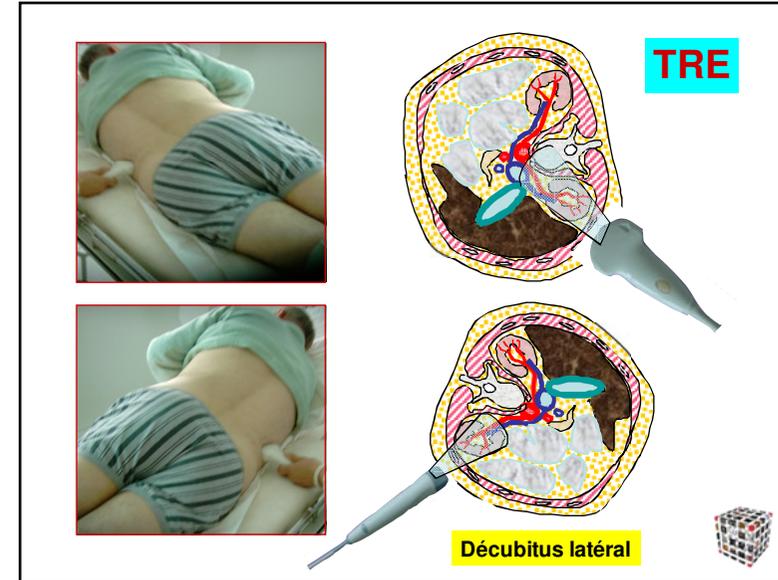
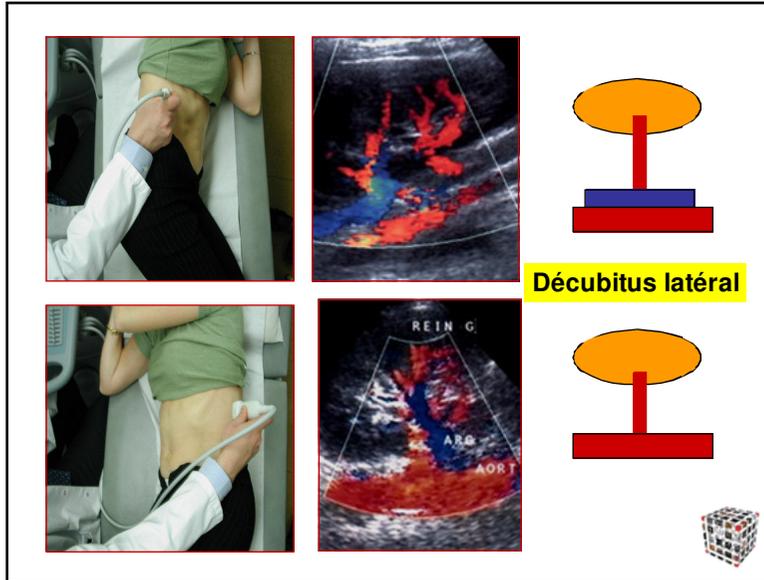
Méthodologie, Temps 3, Étude des Artères Rénales



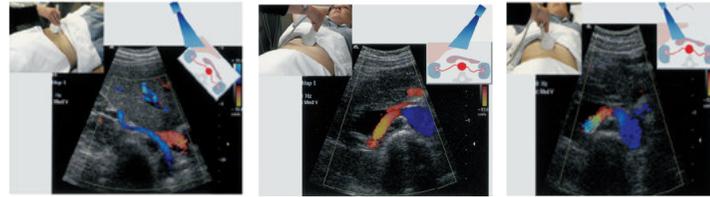
Voie Antérieure, Décubitus Dorsal



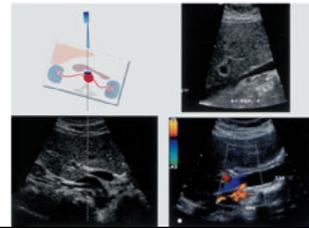




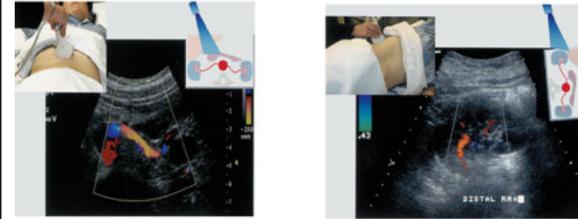
Méthodologie, Temps 5, variantes



AR droite, voie sous hépatique voie trans duodénale voie trans duodénale

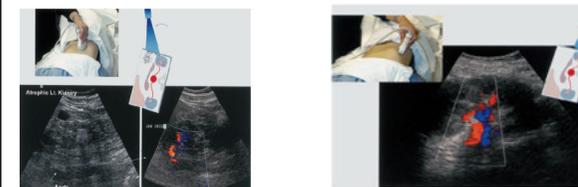


Méthodologie, Temps 5, variantes



AR gauche : voie trans duodénale

voie trans rénale

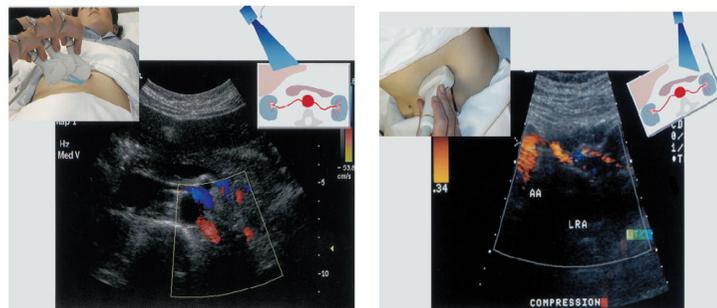


Voie pararénale

Voie trans rénale



Méthodologie, Temps 5, variantes



AR gauche : voie trans hépatique

voie trans gastrique



Variations Anatomiques

