

**EVALUATION
D'UN
ABORD VASCULAIRE
CHEZ LE
PATIENT NON ENCORE
DIALYSE**

G.FRANCO
CLINIQUE ARAGO
PARIS

CDUS A UN MOIS

EVALUATION non INVASIVE

AVANT

✓ **PREMIERE PONCTION**

OU

✓ **SUPERFICIALISATION PROGRAMMEE**

RECOMMANDATIONS DE BONNE PRATIQUE*

Première ponction

Doit être précédée d'une évaluation US

PRECISANT

Débit

Profondeur

CALIBRE

Singularité anatomique

**Fistula First Breakthrough Initiative*

POURQUOI ?

37% à 61% DE RETARD DE MATURATION

Dember LM, Beck GJ, Allon M. Effect of clopidogrel on early failure of arteriovenous fistulas for hemodialysis: a randomized controlled trial. JAMA 2008; 299: 2164-2171

Huijbregts HJ, Bots ML, Wittens CH, Schrama YC, Moll FL, Blankstijn PJ. CIMINO study group. Hemodialysis arteriovenous fistula patency revisited: results of a prospective, multicenter initiative. Clin J Am Soc Nephrol 2008; 3: 714-719

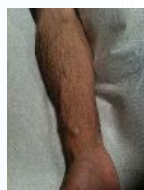
Schinstock CA, Albright RC, Williams AW. Outcomes of arteriovenous fistula creation after the Fistula First Initiative. Clin J Am Soc Nephrol 2011; 6: 1996-2002

**UN QUART DES PATIENTS
aura besoin d'une ou
plusieurs INTERVENTION
pour
RETARD DE MATURATION**

Verest S. Can a policy of careful clinical examination and preference towards upper arm fistulae in high risk patients improve maturation rates of native arterio-venous fistulae? Acta Chir Belg 2014

Lee T. Decreased cumulative access survival in arteriovenous fistulas requiring interventions to promote maturation. Clin J Am Soc Nephrol 2011

EVALUER LA MATURATION

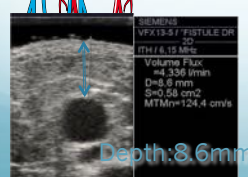
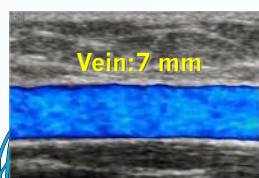


EVALUATION US

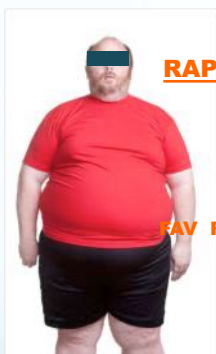
CALIBRE/MORPHOLOGIE

DEBIT

**PROFONDEUR
ETAT DES PARTIES MOLLES**



FAV NATIVE /DEBIT/ IR :LIMITES



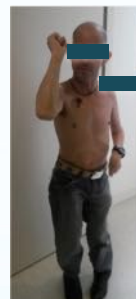
Surface:2,5m²

RAPPORTE à SURFACE CORPORELLE:

CHEZ L'ENFANT
OBESE
ADULTE DE PETITE TAILLE

FAUSSEMENT NORMAL:

FAV FNATIVE NON SUPERFICIALEE STENOSEE
avec
COLLATERALITE



Surface:1,2m²

Disease Outcome Quality Initiative



Critères anatomiques et fonctionnels
définissant une FAV "réussie"

- ✓ Débit > 600 ml/min
- ✓ Diamètre supérieur à 6 mm
- ✓ Moins de 6 mm de la peau

Longueur:10 cm ou 2 segments de 4 cm

National Kidney Foundation. DOQI clinical practice
guidelines for vascular access. *Am J Kidney Dis*
2006

FAV IMPICABLE ? OU FAV IMMATURE ?



PSEUDO RETARD DE MATURATION

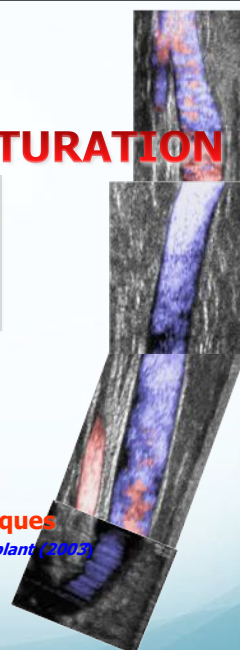
- Dilatation veineuse suffisante
- Débit normal
- Veine trop profonde

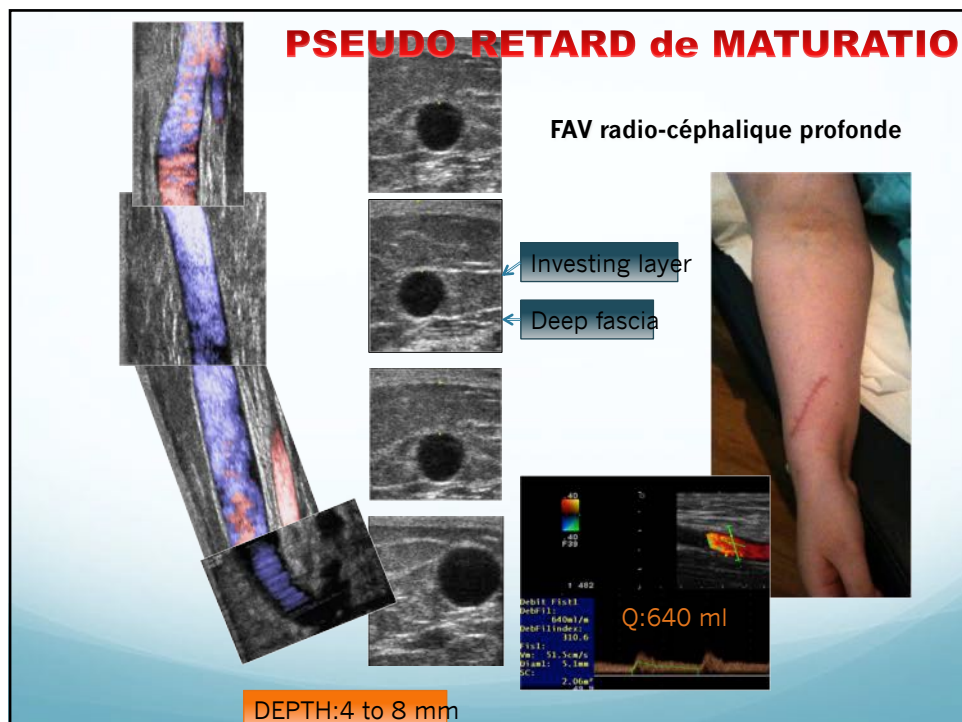
DIAGNOSTIC FACILE PAR US

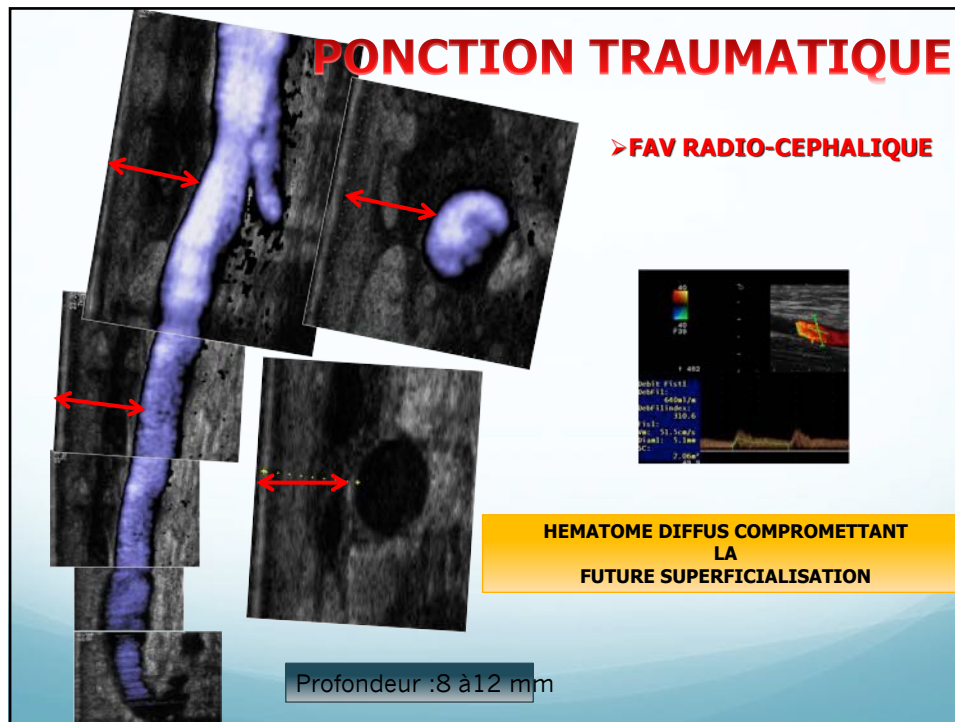


33% des RM n'ont pas de lésions angiographiques

TORDOIR J. Nephrol Dial Transplant (2005)







➤ LESIONS ARTERIELLES

➤ LESIONS VEINEUSES

➤ LESIONS MIXTES AV

RM:STENOSE SIGNIFICATIVE ?



NECESSITE DE CRITERES PRECIS

Strandness DE ,Summer DS.J Vasc surg 1989

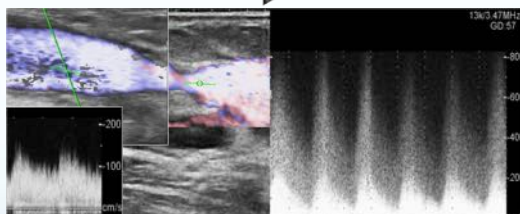
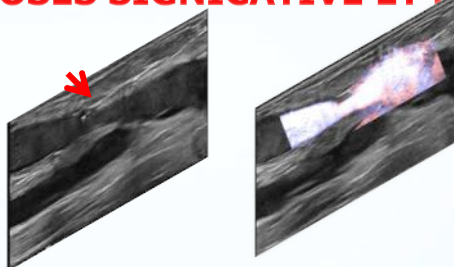
CRITERES HABITUELS DE STENOSE RATIO PSV:2 INADAPTES

26% de FAV nouvellement créés sont normales
54% sont porteuses de sténose significatives

Grogan J .J Vasc Surg.2005

CRITERES DE STENOSES SIGNIFICATIVE ET FAV

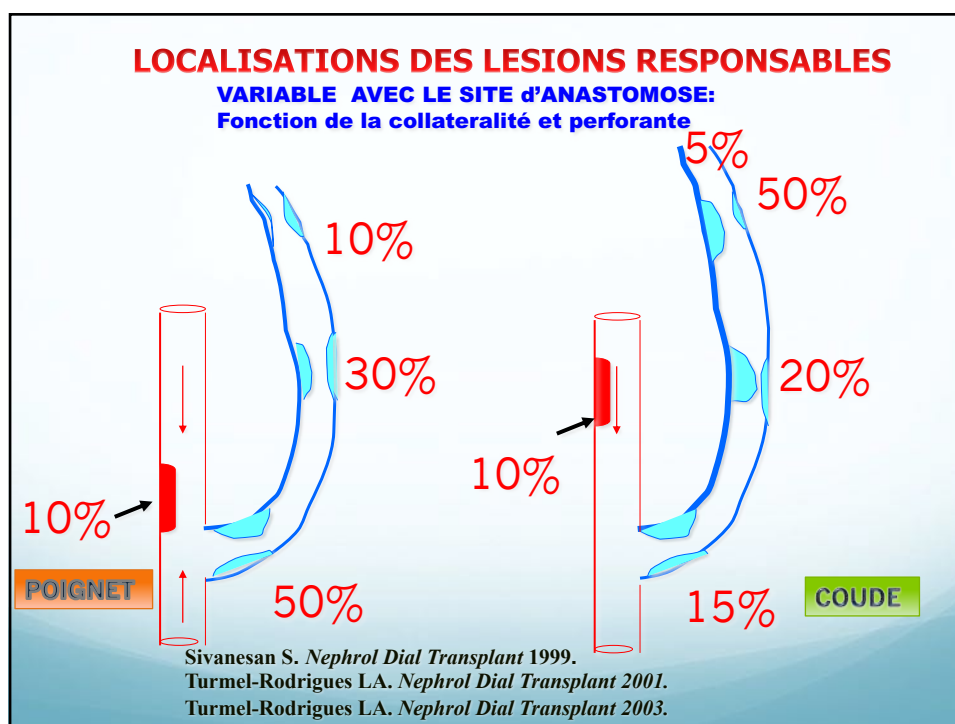
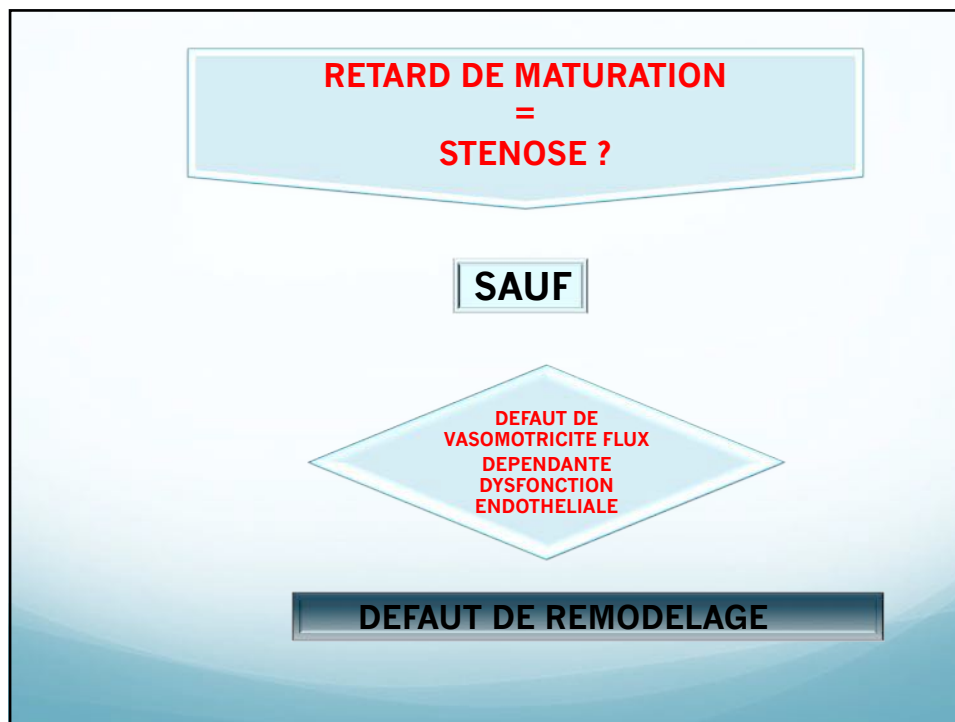
- **PSV RATIO>3**
- **BLOOMING/IMPEDANCE/ Δ P**
- **DIAMETRE RESIDUEL**
- **IR**

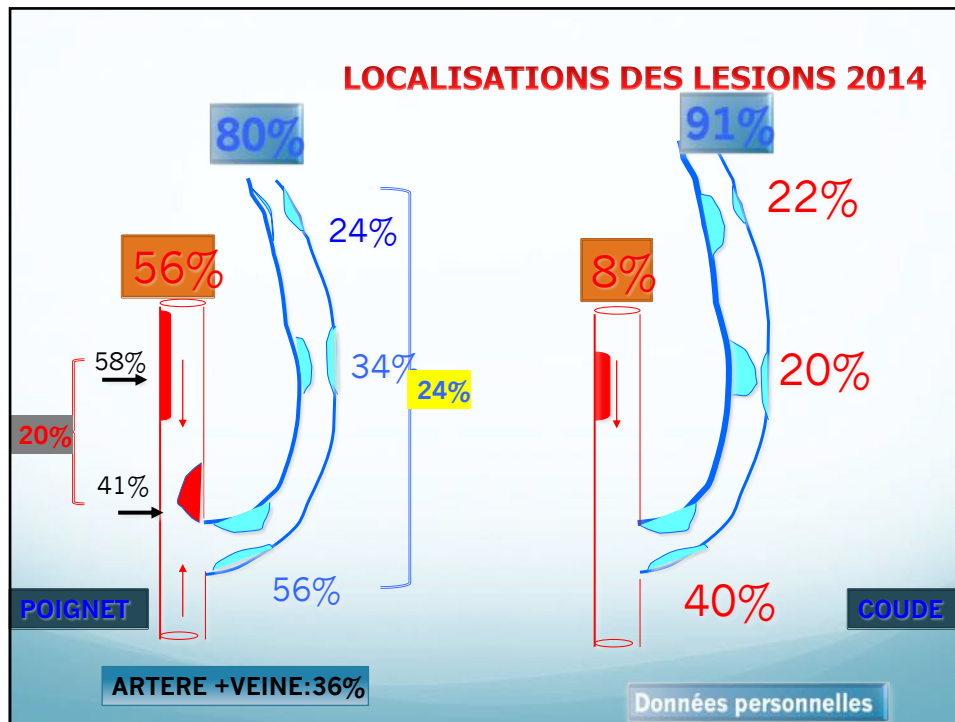


V1:150 cm/s DR: 2,2mm V2: 850 cm/s RATIO
PSV:5,6 IR :0,7

Diamètre résiduel de 2.7 mm est une valeur seuil seuil à retenir

Fahrtash F et al. Defining a significant stenosis in an autologous radio-cephalic arteriovenous fistula for hemodialysis. *Semin Dial.* 2011





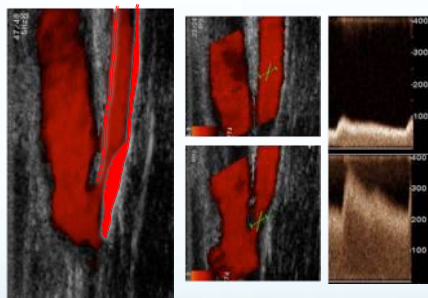
LESIONS ARTERIELLES

- **EVOLUTIVE:**
SPASME
DISSECTION
REMODELAGE IRREGULIER
- **SOUS ESTIMEE**
DEVENUE SIGNIFICATIVE

AXES DE L'AVT BRAS ++++

STENOSE DU VERSANT ARTERIEL DE L'AAV

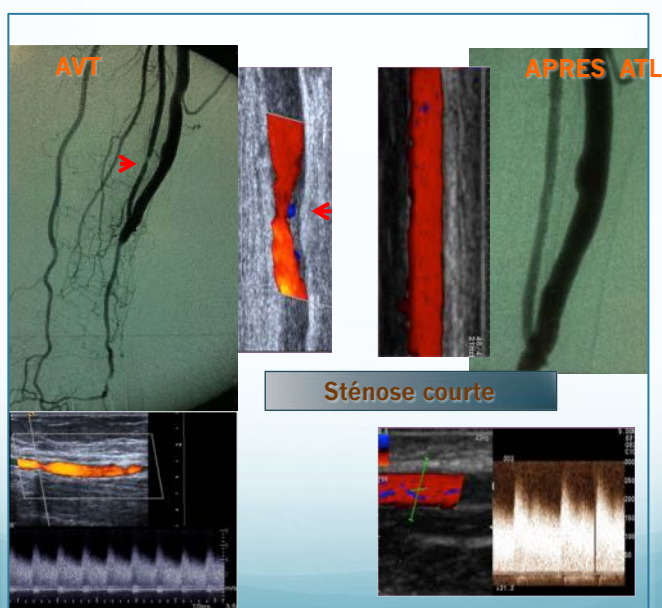
STENOSE AR 70%: TALON de AAV
Hyperplasie intimale secondaire

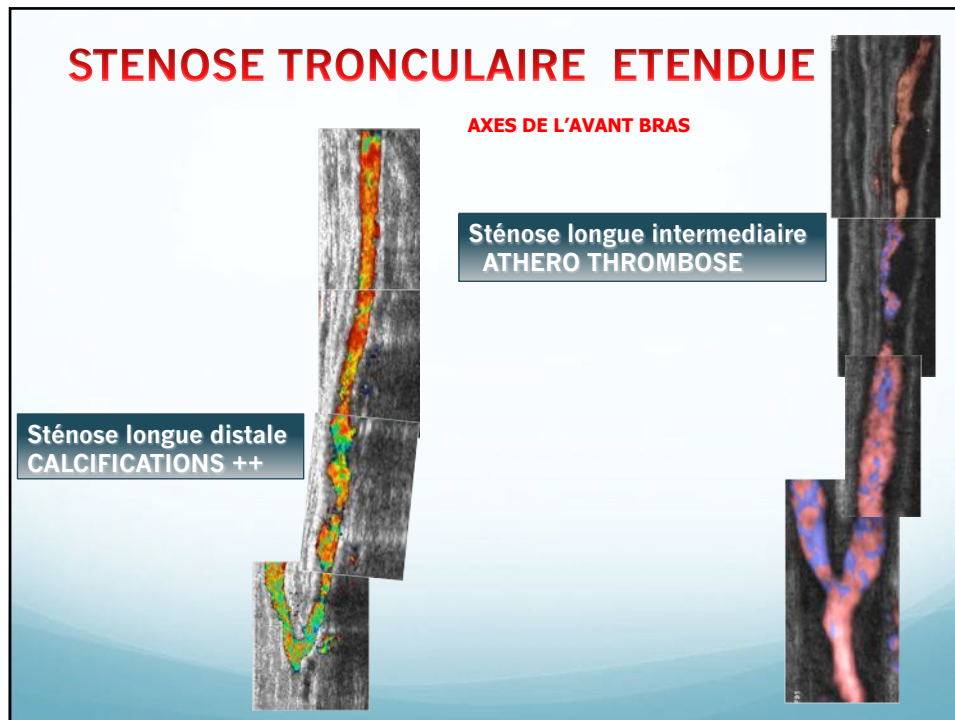


PSV RATIO:4
 Diametre residuel < 2mm

STENOSE TRONCULAIRE SEGMENTAIRE

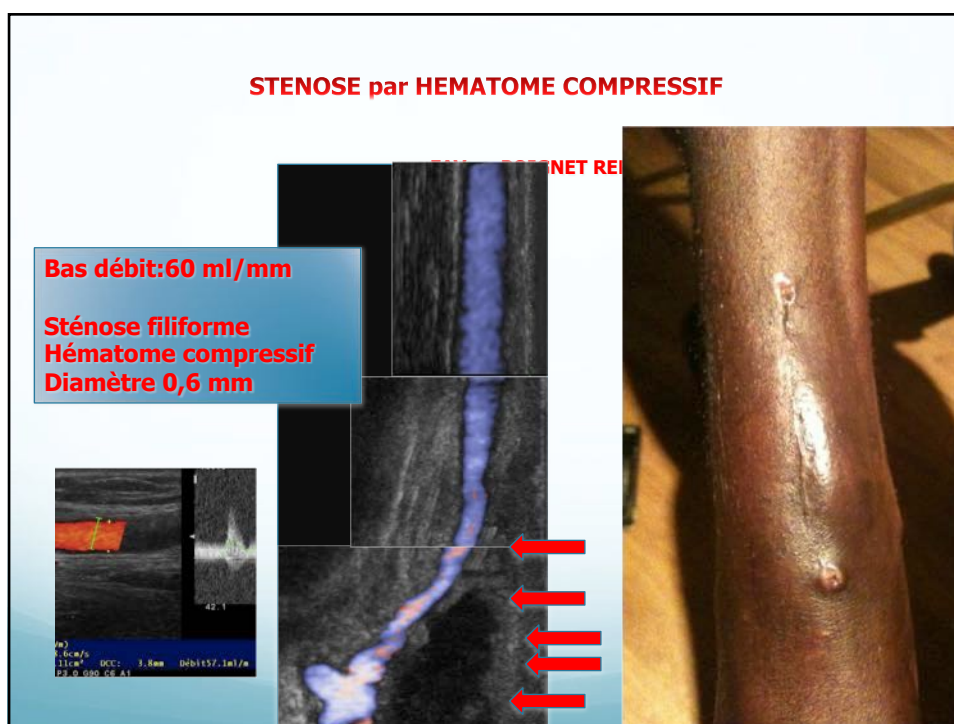
DEFAUT DE REMODELAGE
MAJORATION DE LESIONS PRE-EXISTANTE



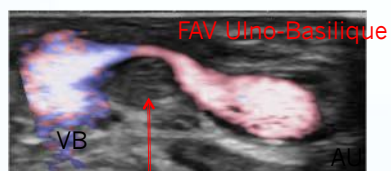


LÉSIONS VEINEUSES

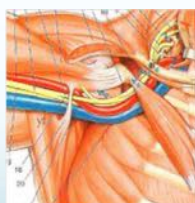
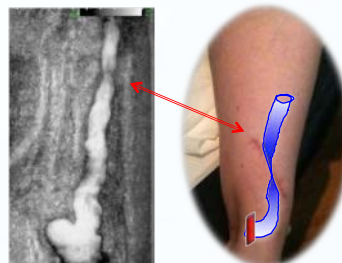
- Sténose du versant veineux de l'AAV
- Sténose intermédiaire
- Sténose proximale



STENOSE par COMPRESSION FIBREUSE



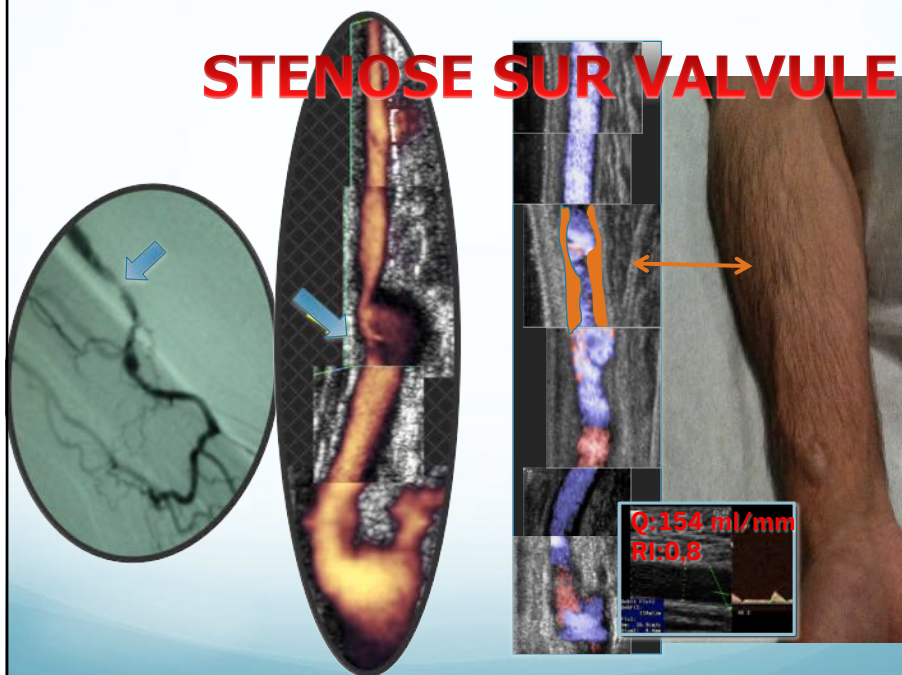
Flechisseur ulnaire du carpe



CONTRAINTES EXTRINSEQUES:
CROISEMENT AVEC CICATRICE
DISSECTION
APONEVROSE
TENDON



STENOSE SUR VALVULE

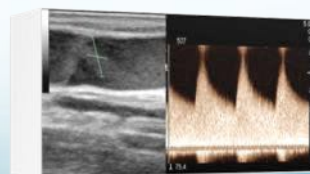
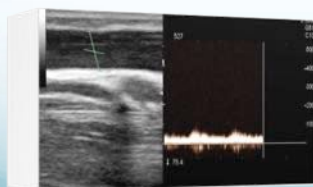
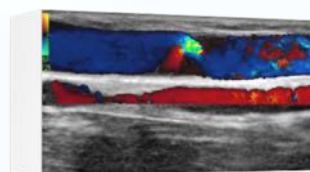
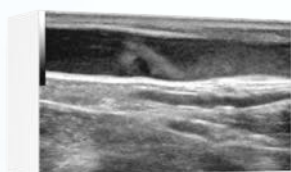


MECANISME DE LA STENOSE VALVULAIRE

CONTRÔLE à 1 MOIS

MAPPING ET PHLEBO PRE OP NORMAUX

Maturation correcte mais



PSV RATIO:6

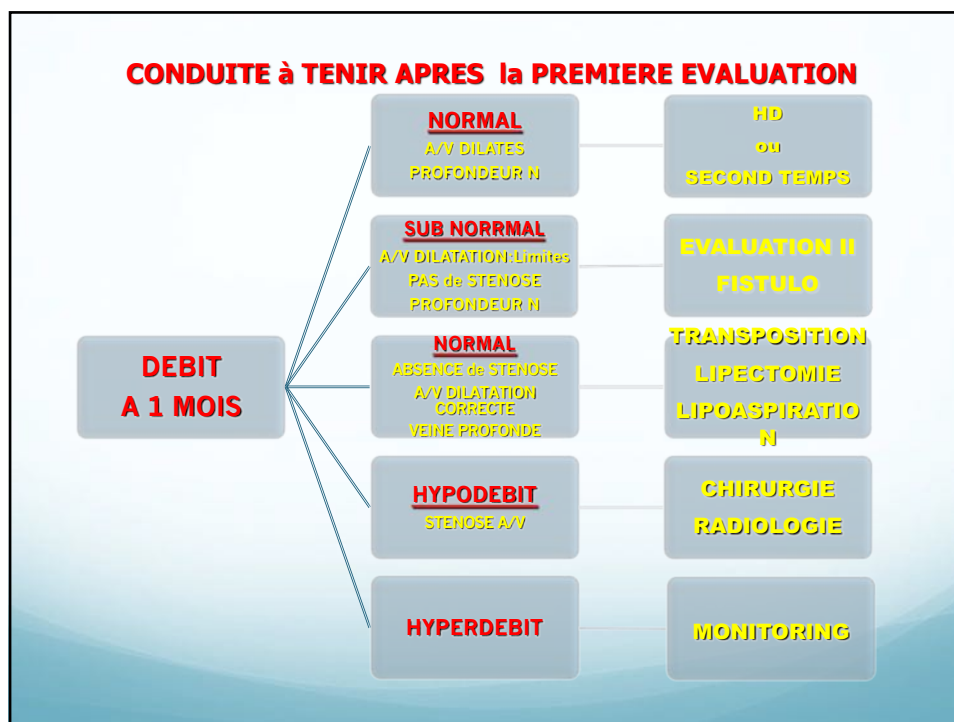
SURVEILLANCE A DISTANCE DU PATIENT NON DIALYSE

DEFAUT DE SURVEILLANCE

STENOSE EVOLUTIVE A 1 AN SUR VALVULE

DECOUVERTE JUSTE AVT LA MISE EN DIALYSE



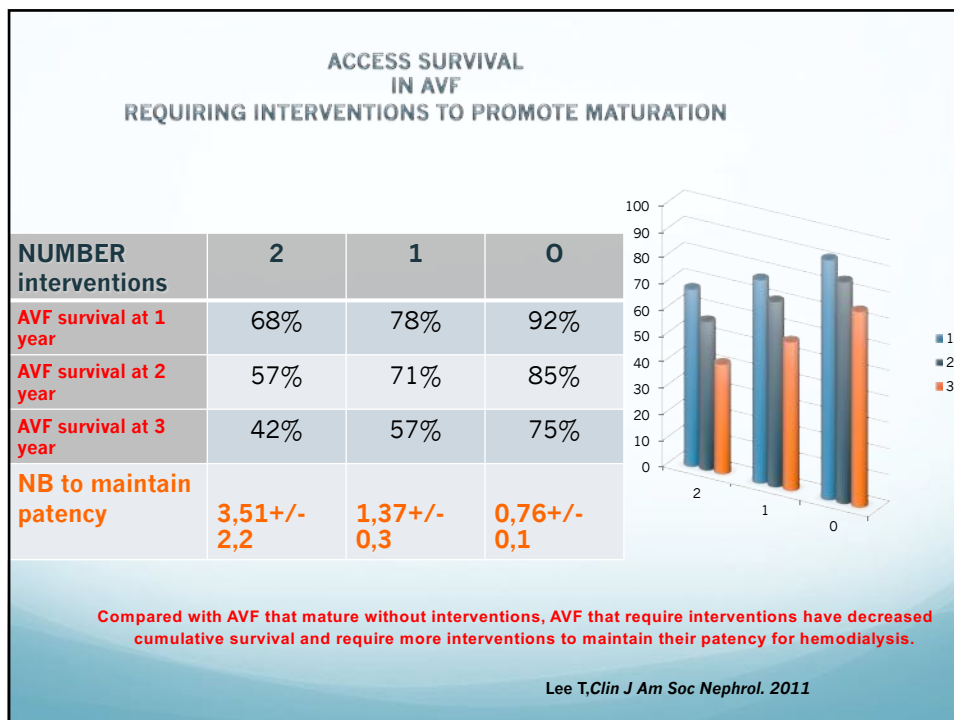


LE TRAITEMENT APRES BILAN US DES FAV IMMATURE

AUGMENTE de 47% L'UTILISABILITE

Ferring M., Henderson J., Wilmink T. Accuracy of early postoperative clinical and ultrasound examination of arteriovenous fistulae to predict dialysis use. *J Vasc Access* 2014; 15: 291-297

Singh P., Robbin ML., Lockhart ME., Allon M. Clinically immature arteriovenous hemodialysis fistulas: effect of US on salvage. *Radiology* 2008; 246: 299-305



L'IMAGE N'A LE SENS QUE CELUI QU'ON LUI DONNE

