

# Vascular access surgery

## Pre-operative evaluation

# Introduction

- 4000 new haemodialysis patients a year
- 900 AVF created a year in HKL
  - Radio-Cephalic
  - Brachio-Cephalic
  - Brachio-Basilic
  - (Brachio-Venae Comitantes)

# Prerequisites

- Good arterial inflow
- Good vein qualities
- Healthy skin

# Evaluation - general

- History
- Examination

# Evaluation - general

- Ability to lie flat
- Symptoms of fluid overload
- Cardiac function
- Uraemia
- Choice of anaesthesia

# Evaluation - artery

- Physical examination
- Good strong / normal pulse
- Present distal pulse

# Evaluation - vein

- Physical examination
- Duplex

# Duplex evaluation

- Clinical and duplex evaluation superior to clinical evaluation alone
- Prevents unnecessary exploration



# Arterial scan

- Pulsatile flow
- Luminal diameter  $> 2.0$  mm
- Arterial wall calcification
- Arterial flow  $> 20$  mls/min

# Vein scan

- Compressible vein
- Entire length of forearm /arm vein
- Luminal diameter  $> 2.5\text{mm}$  ( $> 2\text{mm}$  acceptable)
- Thickened vein wall

# REFERENCES

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