

The Role of the Vascular Testing Unit

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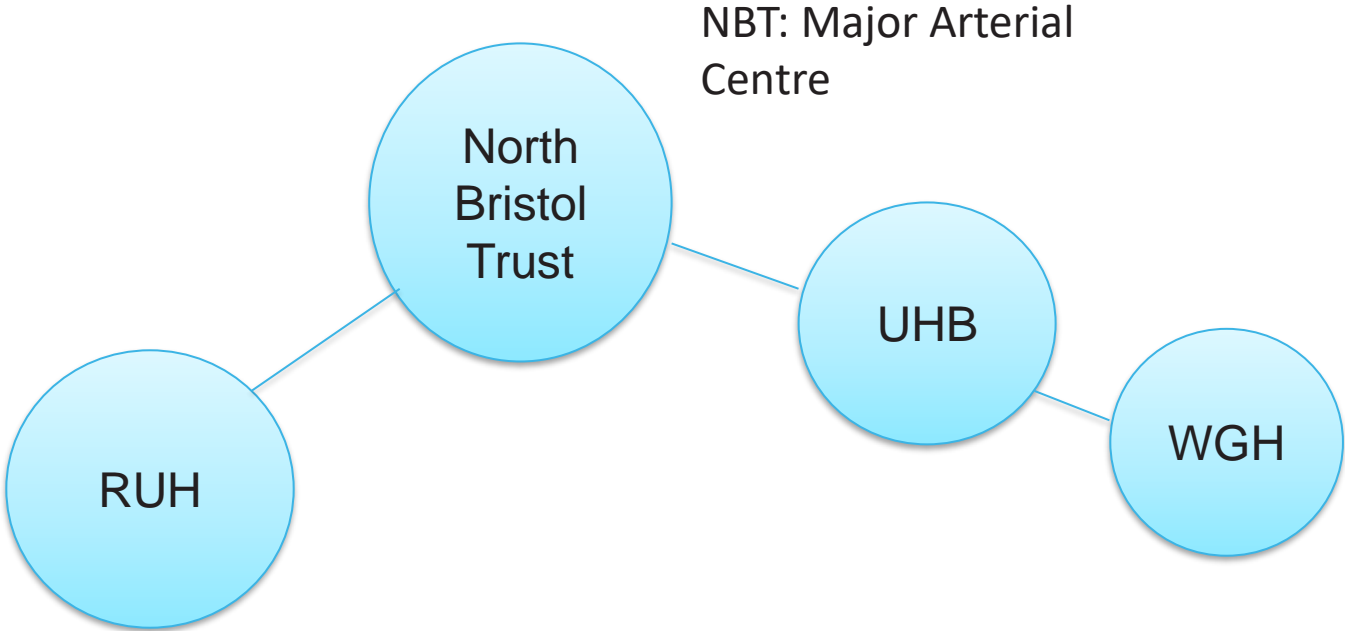


To understand the role of the Vascular Testing Unit

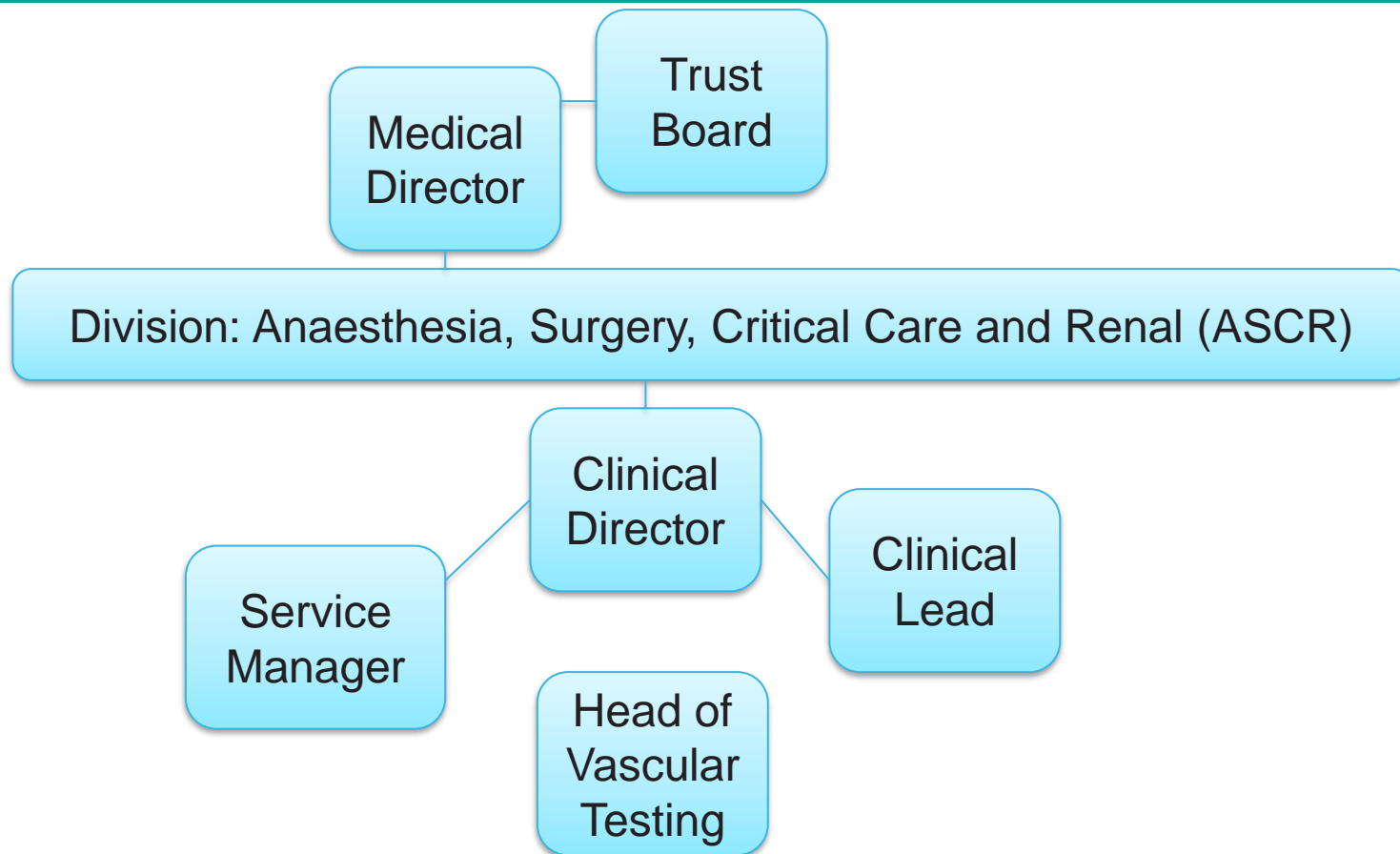
- Overview of Structure
- Diagnostic Investigations
- Patient pathway
- Teaching, research and Professionalism

National Structure

July 2013 Vascular Services Centralised forming
'Major Arterial Centres' Nationwide



Local Structure



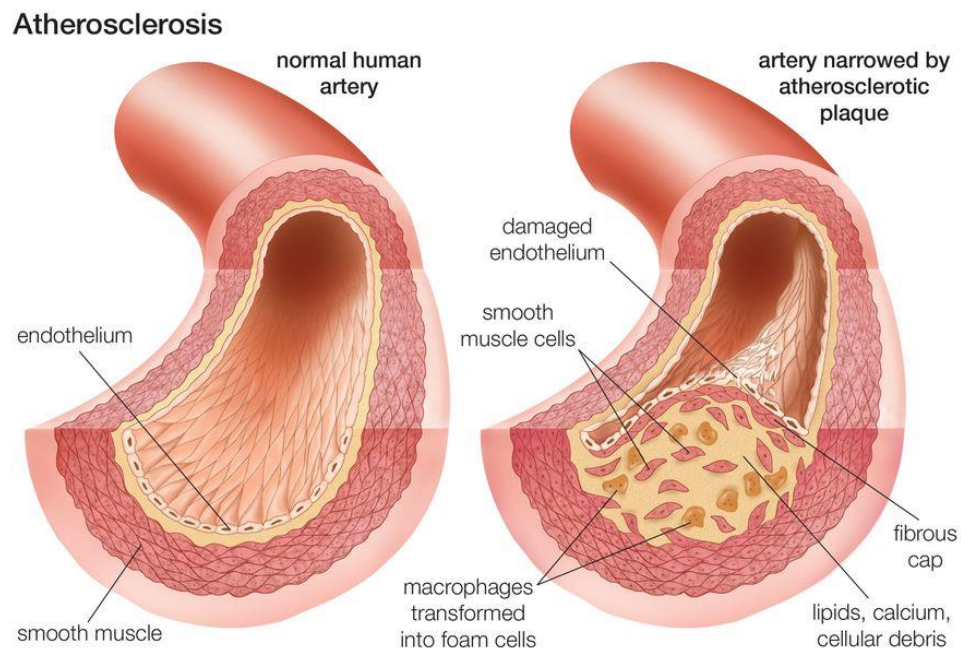
Team: Who are we?



Vascular Disease Diagnoses

Vascular disease

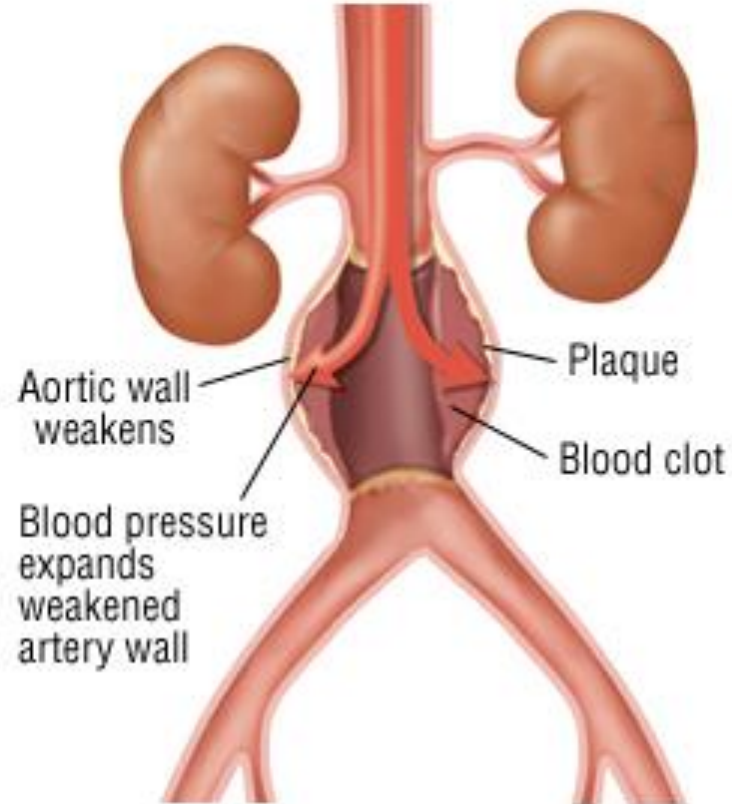
- Atherosclerosis and Peripheral artery disease
- Carotid artery disease



Vascular Disease Diagnoses

Vascular disease

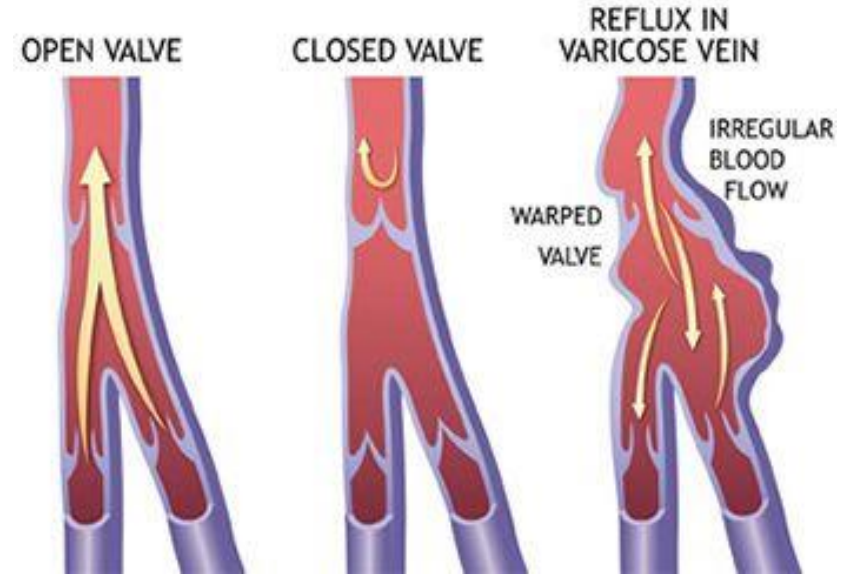
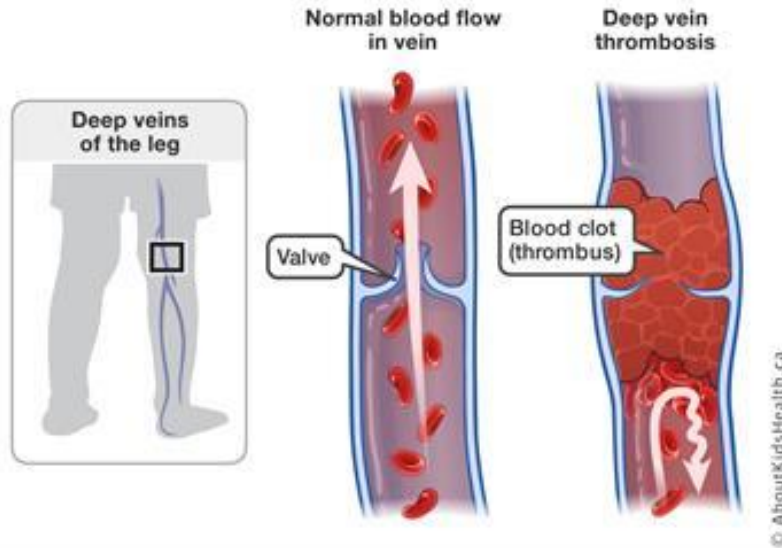
- Aneurysms



Vascular Disease Diagnoses

Vascular disease

- Varicose veins and venous insufficiency
- Deep Vein thrombosis



Vascular Disease Diagnoses

Vascular disease

Aortic Dissection

Aortoiliac Occlusive Disease

Arm Artery Disease

Connective Tissue Disorder (CTD)

Endoleaks (Type I-V)

Fibromuscular Disease

Giant Cell Arteritis

Lymphedema

Mesenteric Ischemia

Peripheral Aneurysm

Portal Hypertension

Pulmonary Embolism

Renovascular Conditions

Stroke

Thoracic Aortic Aneurysm

Thoracic Outlet Syndrome

Vascular Infections

Vascular Trauma

Vasculitis

Visceral Artery Aneurysm

Diagnostic Investigations

Toe Brachial Pressure Index



Tissue Perfusion



Ultrasound



Exercise Testing



Ankle Brachial Pressure Index

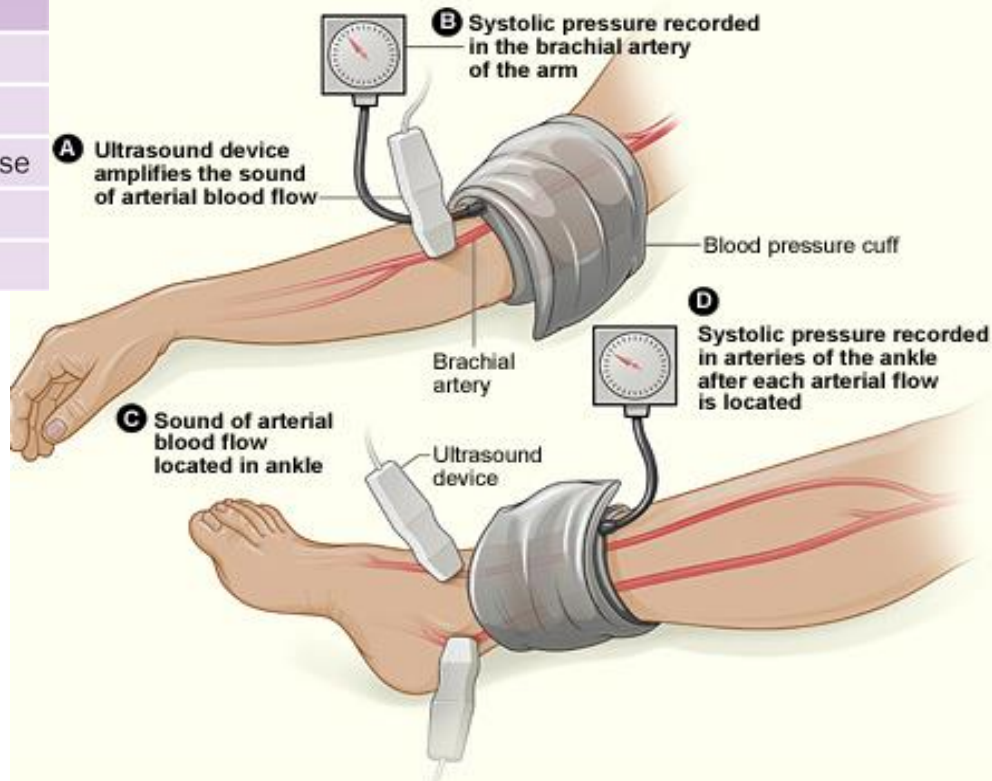
Diagnostic Investigations

Interpretation of ABPI

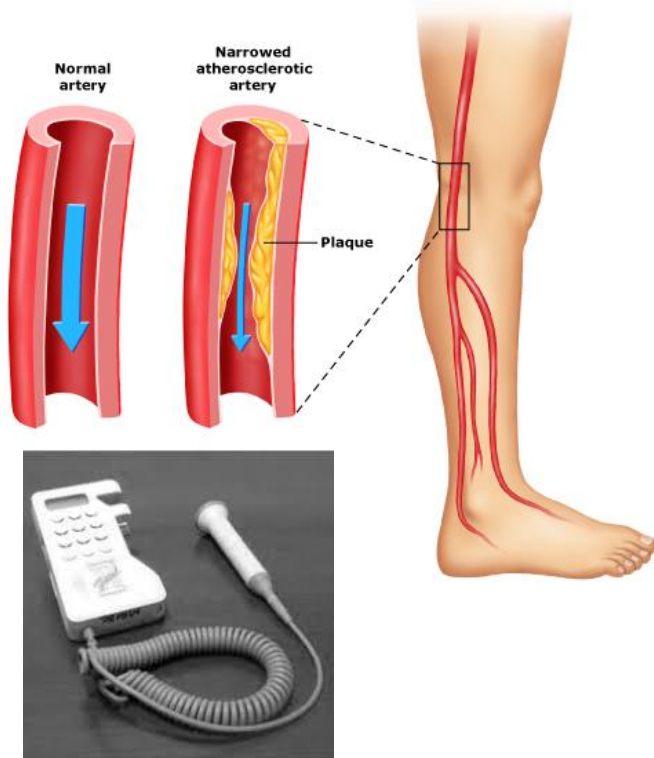
ABPI value	Disease severity
>1.3	Arterial calcification may be present
>1.0–1.3	Probably no peripheral arterial disease
0.81–1.0	No significant or mild peripheral occlusive disease
<0.51–0.8	Moderate peripheral arterial occlusive disease
<0.5	Severe peripheral arterial disease



Ankle Brachial Pressure Index



Diagnostic Investigations



Ankle Brachial Pressure Index



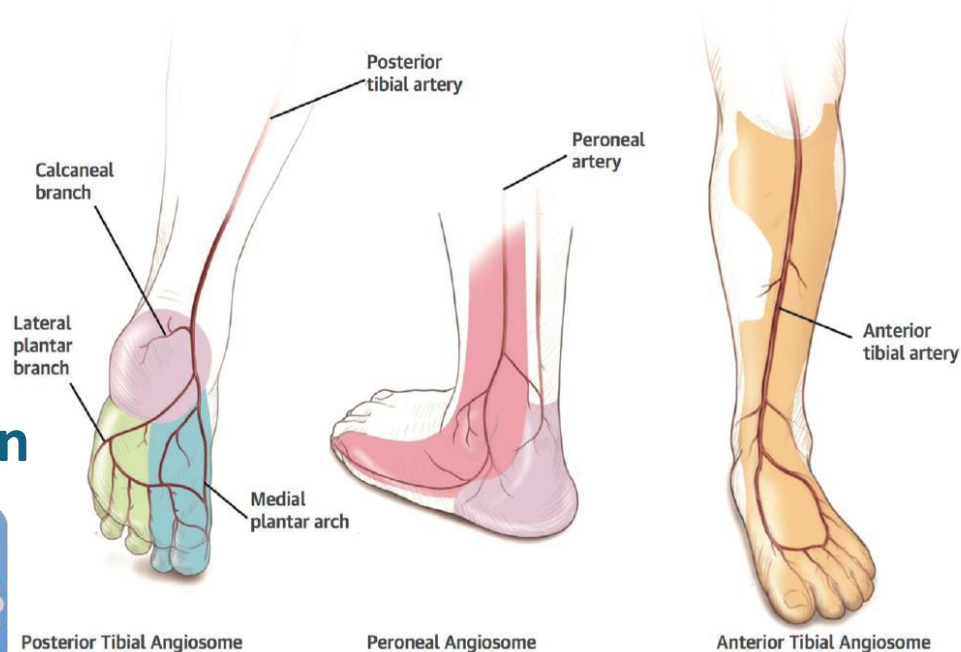
Exercise Testing



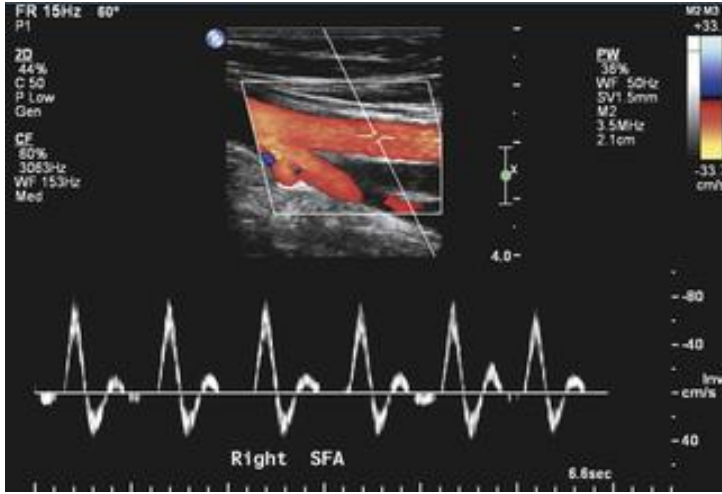
Toe Brachial Pressure Index



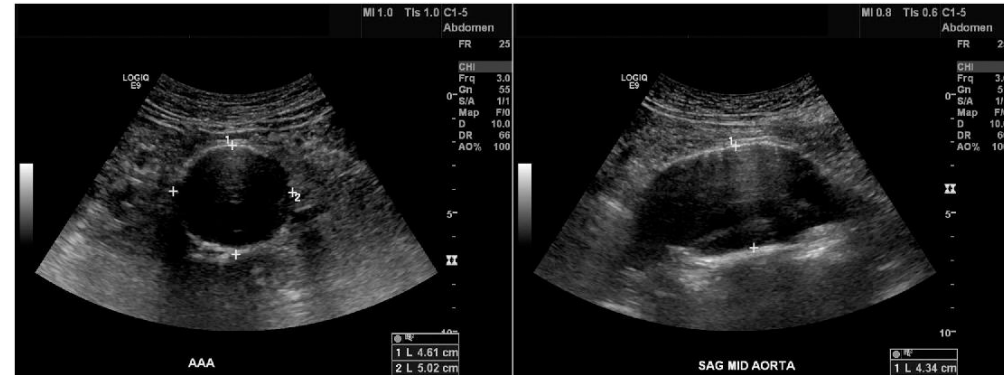
Tissue Perfusion



Diagnostic Investigations



Ultrasound

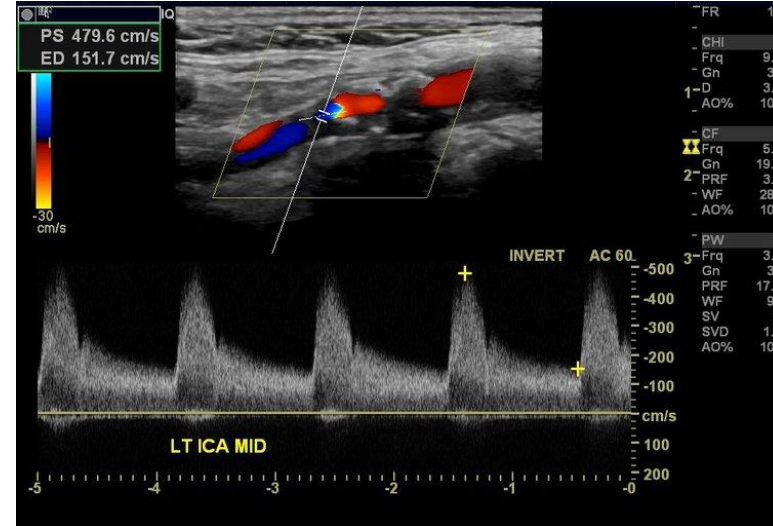
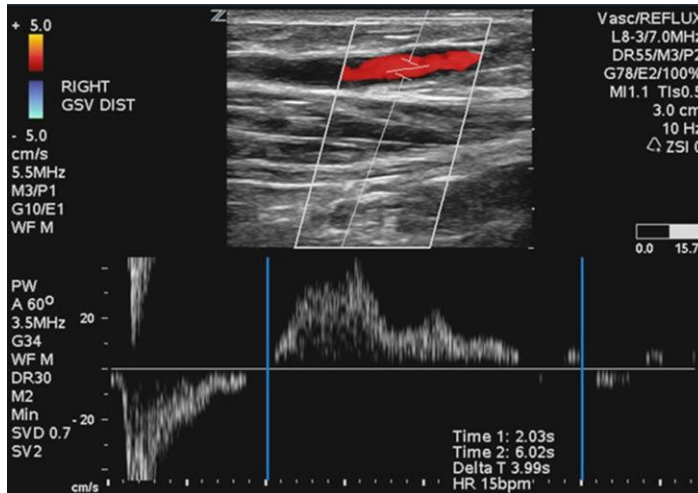


Defining Diagnosis

Can determine the;

- presence
- location
- severity

of arterial and venous vascular disease



Defining Diagnosis

Vast improvements in the accuracy of non invasive testing over past 5-10yrs

Mandate to reduce the risks and costs of health care

prompted many vascular surgeons to consider performing vascular surgical procedures and other interventions based on the results of non invasive test alone.

e.g. carotid duplex scanning prior to carotid endarterectomy has become standard practice

e.g. lower limb duplex prior to angioplasty/stent

- Can be initiated after a positive screening test to obtain disease progression
- Following an intervention to detect recurrent disease
- Requires serial studies over time
 - workload issues
- Examples include
 - AAA
 - infrainguinal vein grafts and stents
- Less common
 - carotid endarterectomy
 - isolated calf vein thrombosis

Screening

Abdominal Aortic Aneurysms

D.V.T

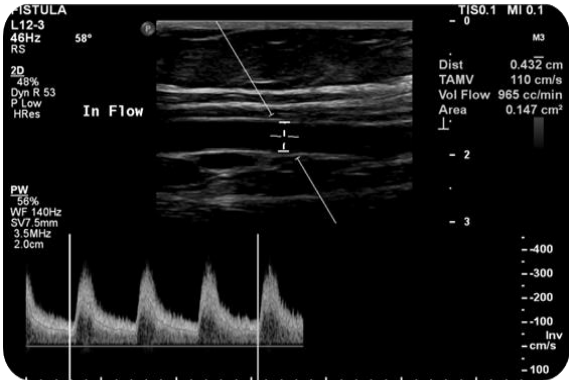
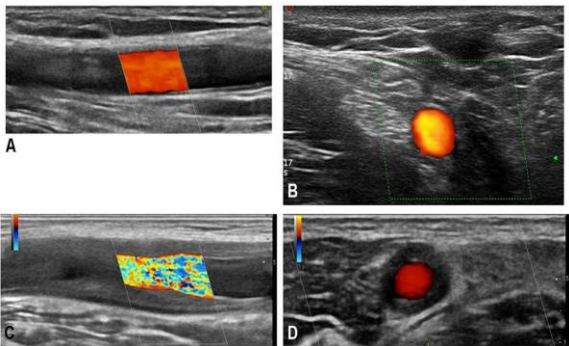
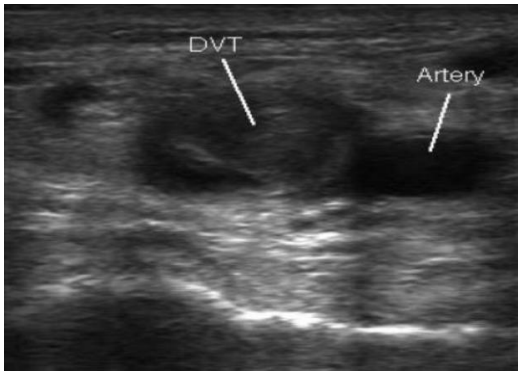
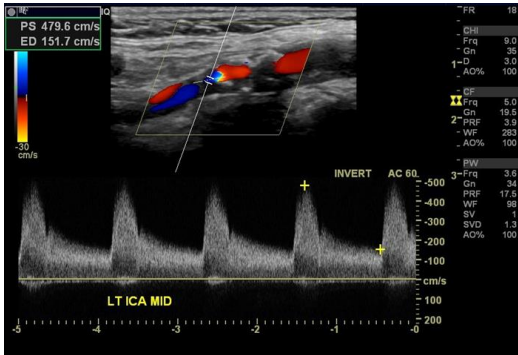
Carotid artery disease

Benefits of Ultrasound

- Painless
- non invasive procedure
- Accurate
- can document the presence and location of vascular disease
- Cost effective

important consideration in today's healthcare environment

Stroke Services



Rheumatology

Renal Medicine

Emergency Medicine

Where do we fit in to the diagnostic Pathway?

- Pre-Treatment
- Intraoperatively
- Post treatment



Anatomy

Physiology

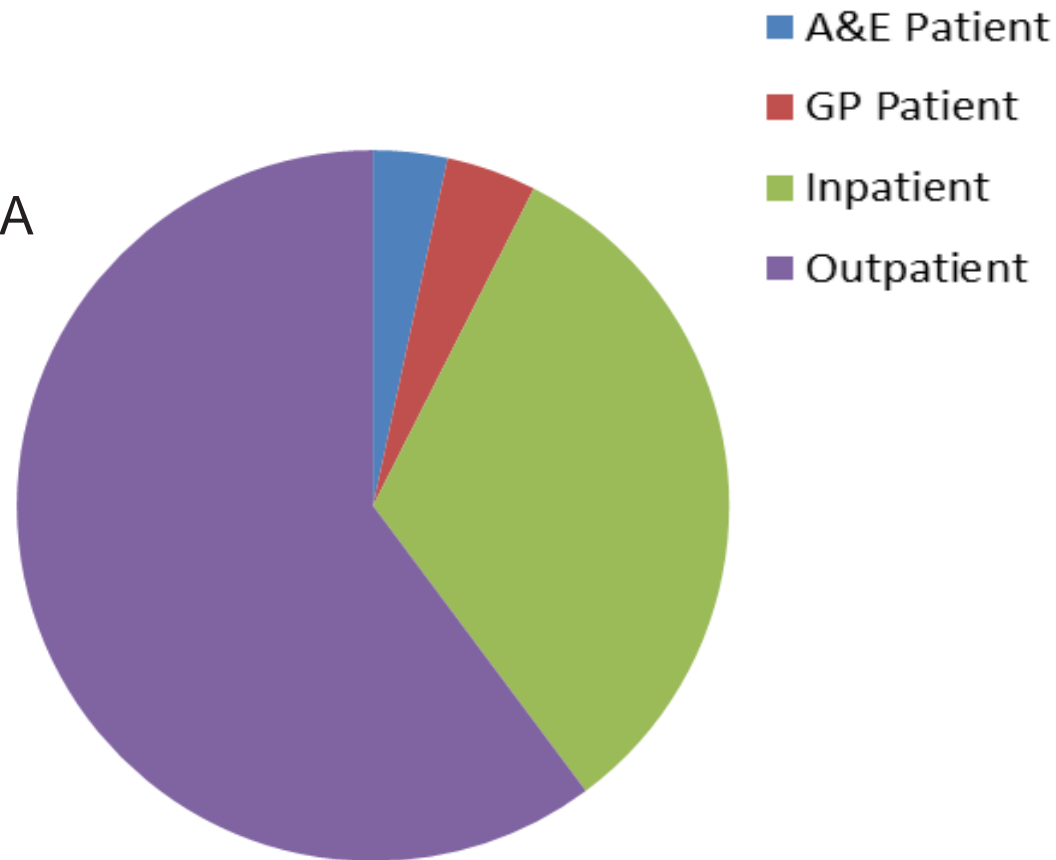
Medical Ethics

Disease pathology

Biophysical principles

Patient care

- Outpatient Clinics
 - One-Stop: Vascular, Renal, TIA
 - Outpatient direct access lists
- Emergency Vascular Hot Clinic
- Emergency Department
- Inpatient bedside scanning
- Specialist Clinics



Clinical

- Multidisciplinary clinics
- Multidisciplinary Team Meetings: Vascular and Renal
- AAA Screening Programme

Non-Clinical

- Teaching and Study days
 - Fistula study day
 - Diabetic foot study day



- **Support placements:** MSc Medical Ultrasound, MSc Clinical Science
- **In-house development:** Level 2 & 3 Clinical Healthcare Support, Higher National Diploma in Healthcare Science, Abdominal Aortic Aneurysm Screening Diploma
- **External Training:** Radiographers, radiologists, registrars
- **Research:** Department audits, Student dissertations and projects, National programmes

- **Society of Vascular Technology**
 - Accreditation
 - Continued Professional Development
- **Health and Care Professions Council**, Statutory Registration
- Register of Sonographers, Voluntary

- Institute of Physics and Engineering in Medicine:
- Society of Radiographers: Indemnity insurance
- Working with other units in the region to develop Standard Operating Procedures
- Improving Quality in Physiological Services (IQIPS)

Role of the Vascular Testing Unit

- To work in a large **multidisciplinary** team to deliver services to **best serve the vascular patient** at each step of the patient pathway from **diagnosis** to post intervention **surveillance**.
- To contribute to **teaching** and **research**
- To maintain a high level of **professionalism**

Role of the Vascular Scientist

- High level of operator skill required
- Provides preliminary interpretation of the test results
- Requires good report with surgeons, radiologists and physicians

Thank you for listening

Joanne Widdup
North Bristol NHS Trust

