

**Clinical Measurement Services**  
**UNIVERSITY HOSPITALS OF DERBY & BURTON NHS FOUNDATION TRUST**  
**Vascular Ultrasound Report**

ARTERIAL STUDY - LOWER LIMB

Name:	Date of Test:	13/08/2021 04:13
Hospital Number:	Test Number:	3185910
Date of Birth:	Technician:	HEUGIL
Ordering Doctor:	Mr K Abayasekara	Dept/Ward: Derby OPD

**Symptoms and Surgical Procedures**

**Doppler Pressures**

**At Rest**

Brachial 129 mmHg  
Right DP 103 mmHg Left DP 108 mmHg  
Right PT 94 mmHg Left PT 85 mmHg

**After Exercise**

Brachial 129 mmHg  
Right DP 89 mmHg Left DP 62 mmHg  
Right PT 63 mmHg Left PT 60 mmHg

**Arterial Arm Dopplers**

Brachial Right : mmHg Left: mmHg  
Radial Right: mmHg Left: mmHg  
Ulna Right: mmHg Left: mmHg

*Report amended to include exercise ABPI.*

Clinical presentation: Diabetic (10yr). Claudication in calf and thigh bilaterally after ~100yards. Resolves after 1min rest.  
Medications: Apixaban, Isosorbide.

**Aorto-iliac segment**

Aorta: The proximal aorta is patent but calcified, but no significant arterial disease was seen, triphasic waveforms, PSV 0.69m/s. Patent graft noted within the distal aorta (consistent with previous open aneurysm repair).

The right aorto-femoral graft is seen to insert into the proximal SFA. At the origin of the right limb there are increased velocities to PSV 2.86m/s, however there is no visual appearance of atheromatous disease, rather it just appearing small in calibre. This increases in calibre at the level of the external iliac artery origin, where the velocities decrease to 0.96m/s (biphasic waveforms). The distal anastomosis is patent with no atheroma seen, biphasic waveforms, PSV 0.85m/s.

The left aorto-femoral graft is seen to anastomose with the proximal external iliac artery. At the origin of the right limb there are increased velocities to PSV 3.18m/s, however there is no visual appearance of atheromatous disease, rather it just appearing small in calibre. The distal velocities are 1.61m/s (triphasic).

**Right lower limb**

CFA: Native vessel is occluded.

PFA: Occluded.

SFA: Patent with mild diffuse calcific atheroma demonstrated throughout. Biphasic waveforms throughout, PSVs: proximal 0.69m/s, mid 0.76m/s, distal 1.03m/s. The vessel is patent throughout the adductor canal.

POPA: The proximal vessel is patent with triphasic waveforms, PSV 0.60m/s. **The mid-distal vessel appears to be recanalized throughout, this forms a 50-74% stenosis in the mid vessel with velocities increasing from PSV 0.60m/s to PSV 1.74 m/s.**

TPT: Patent but calcified with no significant arterial disease seen. Biphasic waveforms, PSV 0.92m/s.

**Right Crural arteries**

PTA: Patent with pulsatile monophasic waveforms throughout. **There is a 75-99% stenosis the distal vessel with velocities increasing from PSV 0.39m/s to PSV 3.22m/s.**

ATA: Patent with pulsatile monophasic waveforms throughout. **There is 75-99% stenosis in the mid vessel with velocities increasing from PSV 0.74m/s to PSV 3.18 m/s.** The distal vessel is patent with pulsatile monophasic waveforms, PSV 0.58 m/s.

PEROA: Patent throughout with no significant disease seen. Pulsatile monophasic waveforms throughout, distal PSV = 0.18m/s.

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### **Left lower limb**

CFA: Patent with mild calcified disease seen but no significant disease, biphasic waveforms, PSV 1.60m/s.

PFA: Patent at origin with no significant arterial disease seen proximally.

SFA: The vessel origin is slightly obscured due to acoustic shadowing, but is patent with no significant stenosis indicated (slightly turbulent biphasic waveforms, PSV 1.72m/s). Triphasic waveforms distal to this, PSVs: proximal 0.67m/s, mid 0.65m/s, distal 0.65m/s. The vessel is patent but calcified throughout the adductor canal.

POPA: The proximal vessel is patent with high resistant monophasic waveforms, PSV 0.45m/s. **There is a 50-74% stenosis in the mid vessel with velocities increasing from PSV 0.45m/s to PSV 1.02 m/s.** The distal vessel is patent with damped monophasic waveforms, PSV 0.15m/s.

TPT: Patent with no significant arterial disease seen. Damped monophasic waveforms, PSV 0.12 m/s.

### **Left Crural arteries**

PTA: Patent throughout with damped monophasic waveforms. **There is a 50-74% stenosis in the distal vessel with velocities increasing from PSV 0.48m/s to PSV 1.56 m/s.**

ATA: Patent throughout with damped monophasic waveforms. **There is a 50-74% stenosis the mid vessel with velocities increasing from PSV 0.39m/s to PSV 1.11m/s.** The distal vessel is patent with damped monophasic waveforms, PSV 0.43m/s.

PEROA: The proximal-mid vessel is patent with damped monophasic waveforms, PSV 0.43m/s. **Vessel was not identified in the distal calf ?occluded.**

### **ABPI**

Pre exercise: Left = 0.79  
Right = 0.87

Post exercise: Left = 0.48  
Right = 0.69

### **Summary:**

Significantly reduced exercise ABPIs.

Bilateral 50-74% POPA stenosis.

Significant crural artery disease bilaterally.

Reporter: Miss Heulwen Gilbert