

Clinical History :  
Clinical details: left symptomatic ICA stenosis/occlusion  
Specific question to be answered: please ressess the status of the stenosis

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.62"/>	m/s	<input type="text" value="NO"/>	Normal	- <input type="text" value=""/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.24"/>	m/s						
Bulb						<input type="text" value="MP"/>	Minor plaque	<input type="text" value="10-19"/>	
ICA	PSV	<input type="text" value="0.59"/>	m/s	<input type="text" value="NO"/>	Normal	- <input type="text" value=""/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.24"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	- <input type="text" value=""/>	-----	<input type="text" value="0"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				
<hr/>									
LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.55"/>	m/s	<input type="text" value="NO"/>	Normal	- <input type="text" value=""/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.16"/>	m/s						
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="90-99"/>	
ICA	PSV	<input type="text" value="3.9"/>	m/s	<input type="text" value="I"/>	Increased velocities	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="90-99"/>	
	EDV	<input type="text" value="1.7"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	- <input type="text" value=""/>	-----	<input type="text" value="0"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				

Comments:  
-----

Comments:  
Right: CCA and ECA origin patent with normal Doppler waveforms. The ICA contained mild disease; 20% stenosis; otherwise patent with normal Doppler waveforms. The ICA distally tortuous but otherwise patent and free from disease. Normal antegrade flow identified in the vertebral artery.

Left: The CCA and ECA origin patent with normal Doppler waveforms. The ICA contained heterogenous plaque with increased velocities (PSV 3.9 m/s) noted indicative of a 80-89% stenosis according to PSV ICA grading criterion; 90-99% stenosis according to PSV ICA:CCA ratio. The plaque lesion measures ~2.25 cm in length. The ICA distally patent and free from thrombus; (PSV 0.30 m/s). Normal bifurcation level. Normal antegrade flow identified in the vertebral artery.

No significant interval change from the last scan.

Clinical History :  
Clinical details: Takayasus - annual surveillance  
Specific question to be answered: disease progression? clinically patient is well

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	2.3	m/s	I	Increased velocities	-	0		
	EDV	0.39	m/s						
Bulb						-	0		
ICA	PSV	1.7	m/s	I	Increased velocities	-	0		
	EDV	0.42	m/s						
ECA				NO	Normal	-	0		
Vert				AN	Antegrade flow				

---

LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	0.33	m/s	NO	Normal	S	See comments	-	
	EDV	0.10	m/s						
Bulb						S	See comments	-	
ICA	PSV	0.39	m/s	S	See comments	S	See comments	-	
	EDV	-	m/s						
ECA				NO	Normal	S	See comments	-	
Vert				R	Retrograde flow				

Comments:  
-----

Comments:  
**Right:**  
The right carotid arteries are widely patent and with normal waveforms. Increased velocities noted throughout, likely due to contralateral disease.  
The vertebral artery is patent with normal antegrade flow noted.

**Left:**  
As previously noted, the left carotid arteries are very narrowed in keeping with Takayasu's Arteritis.  
The proximal CCA is very narrowed, nearly occluded.  
The ICA is patent with no evidence of stenosis but with bidirectional flow.  
The ECA is patent with normal waveforms.  
The vertebral artery is patent with retrograde flow.

**Conclusion:**  
No evidence of significant change since the previous scan.

Clinical History :  
Clinical details: B/L carotid stenosis  
Specific question to be answered: Left Carotid pre op window

US Doppler carotid artery Both :

Carotid duplex

RIGHT		Waveform		Plaque Morphology		% Stenosis		
CCA	PSV	0.64	m/s	NO	Normal	H	Heterogeneous	10-19
	EDV	0.24	m/s					
Bulb						H	Heterogeneous	10-19
ICA	PSV	6.0	m/s	I	Increased velocities	H	Heterogeneous	90-99
	EDV	2.8	m/s					
ECA				S	See comments	H	Heterogeneous	<50
Vert				AN	Antegrade flow			

---

LEFT		Waveform		Plaque Morphology		% Stenosis		
CCA	PSV	0.36	m/s	NO	Normal	H	Heterogeneous	80
	EDV	0.11	m/s					
Bulb						H	Heterogeneous	-
ICA	PSV	6.2	m/s	I	Increased velocities	H	Heterogeneous	90-99
	EDV	2.3	m/s					
ECA				S	See comments	H	Heterogeneous	<50
Vert				AN	Antegrade flow			

Comments:  
-----  
=====

Comments:  
Right:  
**>90% stenosis noted in the ICA, distally high velocities are preserved, 2m/sec.**  
  
CCA is patent with minor plaque at the origin.  
ECA patent with low resistance waveforms, no evidence of significant stenosis.  
Vertebral artery has antegrade flow with low velocities.  
  
Left:  
**>90% stenosis detected in the proximal ICA, max PSV 6.2m/sec, monophasic damped flow distally, PSV 0.31m/sec.**  
  
CCA at mid level has heterogenous plaque causing ~80% narrowing (no significant velocity increase).  
ECA patent with low resistance waveforms, no evidence of significant stenosis.  
Vertebral artery has antegrade flow with higher velocities compared to the right likely due to dominance.

Clinical History :  
Clinical details: episode of dysarthria, LSW, L facial droop and dizziness. PMH: ICD inserted 1/52 ago, AF-on DOAC, CCF, TIA, HTN  
Specific question to be answered: ? stenosis

US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIED=Attended-31-Jan-2019=MARAJ/MARAJ-31-Jan-2019

Carotid duplex

RIGHT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	0.77	m/s	NO	Normal	-	-----	0
	EDV	0.23	m/s					
Bulb						H	Heterogeneous	20-29
ICA	PSV	0.42	m/s	NO	Normal	H	Heterogeneous	10-19
	EDV	0.15	m/s					
ECA				NO	Normal	H	Heterogeneous	10
Vert				AN	Antegrade flow			

---

LEFT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	0.81	m/s	NO	Normal	-	-----	0
	EDV	0.19	m/s					
Bulb						H	Heterogeneous	10-19
ICA	PSV	0.82	m/s	NO	Normal	H	Heterogeneous	10-19
	EDV	0.24	m/s					
ECA				NO	Normal	H	Heterogeneous	10
Vert				AN	Antegrade flow			

Comments:  
-----

Comments:  
Bilateral:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No significant stenosis.

Clinical History :

Clinical details: Episodes of syncope. ? Carotid artery stenosis. Echo NAD, 7 day holter nil significant  
Specific question to be answered: ? Carotid artery stenosis

US Doppler carotid artery Both :

Carotid duplex

RIGHT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	0.77	m/s	NO	Normal	-	-----	0
	EDV	0.09	m/s					
Bulb						H	Heterogeneous	30
ICA	PSV	1.5	m/s	I	Increased velocities	C	Calcified	~50
	EDV	0.15	m/s					
ECA				NO	Normal	H	Heterogeneous	<50
Vert				AN	Antegrade flow			

---

LEFT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	0.91	m/s	NO	Normal	IT	Intimal thickening	10
	EDV	0.10	m/s					
Bulb						H	Heterogeneous	20
ICA	PSV	0.75	m/s	NO	Normal	H	Heterogeneous	10
	EDV	0.12	m/s					
ECA				NO	Normal	-	-----	0
Vert				AN	Antegrade flow			

Comments:

Comments:  
Right:  
Mixed calcified and heterogenous plaque detected at the bifurcation extending into the anterior wall of the ICA origin causing ~50% stenosis; distal to this point, ICA remains patent with good flow.  
Normal colour flow, waveforms and velocities in CCA, ECA and vertebral arteries.

Left:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.

Clinical History :  
Clinical details: Previous pneumonectomy for lung cancer. Transfer for consideration of CABG after NSTEMI  
Specific question to be answered: NSTEMI, awaiting CABG. Workup prior to CABG

US Doppler carotid artery Both :

Carotid duplex

RIGHT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	<div>0.86</div>	m/s	<div>NO</div>	Normal	<div>IT</div>	Intimal thickening	<10
	EDV	<div>0.15</div>	m/s					
Bulb						<div>H</div>	Heterogeneous	<div>70-79</div>
ICA	PSV	<div>2.5</div>	m/s	<div>I</div>	Increased velocities	<div>H</div>	Heterogeneous	70-79
	EDV	<div>0.60</div>	m/s					
ECA				<div>NO</div>	Normal	<div>H</div>	Heterogeneous	<50
Vert				<div>S</div>	See comments			
LEFT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	<div>0.74</div>	m/s	<div>NO</div>	Normal	<div>IT</div>	Intimal thickening	<10
	EDV	<div>0.12</div>	m/s					
Bulb						<div>H</div>	Heterogeneous	<div>20-29</div>
ICA	PSV	<div>0.96</div>	m/s	<div>NO</div>	Normal	<div>H</div>	Heterogeneous	10-19
	EDV	<div>0.22</div>	m/s					
ECA				<div>NO</div>	Normal	<div>H</div>	Heterogeneous	>50
Vert				<div>AN</div>	Antegrade flow			

Comments:  
-----

Comments:

Right:  
70-79% stenosis seen in the bulb extending to proximal ICA.  
Normal colour flow, waveforms and velocities in common and external carotid arteries.  
Partial subclavian steal noted in the right vertebral artery.  
4.2x velocity increase detected in the proximal subclavian artery suggestive of >75% stenosis.

Left:  
Normal colour flow, waveforms and velocities in CCA, ICA and vertebral artery.  
>50% stenosis in ECA.

Clinical History :  
Clinical details: Right facial droop, arm and leg weakness, and expressive dysphasia on 30th Dec, not improving, power 4/5 on the right side  
Specific question to be answered: Right sided carotid stenosis?

US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIEDAttended-02-Jan-2019MARAJ+DIXOH/MARAJ-02-Jan-2019

Carotid duplex

RIGHT				Waveform	Plaque Morphology	% Stenosis
CCA	PSV	0.89	m/s	NO Normal	-	0
	EDV	0.12	m/s			
Bulb					H Heterogeneous	20-29
ICA	PSV	0.52	m/s	NO Normal	H Heterogeneous	10-19
	EDV	0.16	m/s			
ECA				NO Normal	-	0
Vert				AN Antegrade flow		

---

LEFT				Waveform	Plaque Morphology	% Stenosis
CCA	PSV	0.76	m/s	S See comments	-	0
	EDV	0.06	m/s			
Bulb					H Heterogeneous	10-19
ICA	PSV	0.17	m/s	S See comments	H Heterogeneous	10-19
	EDV	0	m/s			
ECA				NO Normal	-	0
Vert				AN Antegrade flow		

Comments:  
-----

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of stenosis.

Left:  
High resistive waveforms in common and internal carotid arteries suggestive of more distal ICA ?significant stenosis or occlusion, please suggest other imaging modality to confirm this findings.  
Normal antegrade flow in the vertebral artery.

Clinical History :  
Clinical details: Uveitis, Shortness of breath, cough, elevated CRP and ACE. Intermittent blurred vision and left brow ache. sometimes hemifield  
Specific question to be answered: Rule our carotid cause for intermittent episodes of disturbed vision

US Doppler carotid artery Both :

RIGHT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	<input type="text" value="0.79"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.25"/>	m/s						
Bulb						<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
ICA	PSV	<input type="text" value="0.59"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.20"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				

---

LEFT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	<input type="text" value="0.85"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="HO"/>	Homogeneous	<input type="text" value="30-39"/>	
	EDV	<input type="text" value="0.34"/>	m/s						
Bulb						<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
ICA	PSV	<input type="text" value="0.57"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.21"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				

Comments:  
-----

Comments:  
Left:  
Smooth homogenous plaque in the CCA causing 30-39% stenosis.  
ICA and ECA are patent with no evidence of significant stenosis.  
Normal antegrade flow in the vertebral artery.  
No evidence of haemodynamically significant stenosis.

Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.  
Smooth intimal lining.



Clinical History :  
History of fall.

US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIEDAttended-21-Nov-2018MARAJ+FREEB/MARAJ-21-Nov-2018

Carotid duplex

RIGHT				Waveform		Plaque Morphology	% Stenosis
CCA	PSV	1.1	m/s	NO	Normal	-	0
	EDV	0.32	m/s				
Bulb						H	Heterogeneous 20-29
ICA	PSV	1.1	m/s	NO	Normal	H	Heterogeneous 20-29
	EDV	0.37	m/s				
ECA				NO	Normal	H	Heterogeneous <50
Vert				AN	Antegrade flow		

---

LEFT				Waveform		Plaque Morphology	% Stenosis
CCA	PSV	1.0	m/s	NO	Normal	-	0
	EDV	0.31	m/s				
Bulb						H	Heterogeneous 20-29
ICA	PSV	1.2	m/s	NO	Normal	H	Heterogeneous 10-19
	EDV	0.50	m/s				
ECA				I	Increased velocities	H	Heterogeneous >50
Vert				AN	Antegrade flow		

Comments:  
-----

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.

Left:  
Normal colour flow, waveforms and velocities in CCA, ICA and vertebral arteries.  
Significant stenosis detected in the ECA, max PSV 2.2m/sec.

Clinical History :  
Clinical details: Right CEA in November 2017. Follow up carotid scan needed please. Also has reports of short distance claudication. Has no popliteal or diatal pulses. Will also require ABPI and waveforms please  
Specific question to be answered: see above. please arrnage before DV OPD. Thanks a lot

US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIEDAttended-19-Nov-2018MARAJ/MARAJ-19-Nov-2018

Carotid duplex

RIGHT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	1.5	m/s	NO	Normal	H	Heterogeneous	30-39	
	EDV	0.27	m/s						
Bulb						-		0	
ICA	PSV	0.33	m/s	NO	Normal	MP	Minor plaque	10-19	
	EDV	0.10	m/s						
ECA				NO	Normal	-		0	
Vert				AN	Antegrade flow				

---

LEFT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	1.3	m/s	NO	Normal	H	Heterogeneous	30-39	
	EDV	0.27	m/s						
Bulb						H	Heterogeneous	30-39	
ICA	PSV	1.2	m/s	NO	Normal	H	Heterogeneous	30-39	
	EDV	0.24	m/s						
ECA				NO	Normal	H	Heterogeneous	10-19	
Vert				AN	Antegrade flow				

Comments:  
-----

Comments:

Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of significant neo intimal hyperplasia detected in the bulb and ICA.  
No evidence of haemodynamically significant stenosis.

Left:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
Heterogenous plaques in the lateral wall of the CCA, however this is not causing significant stenosis.  
No evidence of haemodynamically significant stenosis.

Clinical History :  
Clinical details: 4/7 headache, flashes in right eye & misty vision - right homonymous hemianopia.  
Specific question to be answered: ? stenosis

US Doppler carotid artery Both :

Carotid duplex

RIGHT		Waveform		Plaque Morphology		% Stenosis		
CCA	PSV	<div>0.62</div>	m/s	<div>NO</div>	Normal	<div>IT</div>	Intimal thickening	<div>10</div>
	EDV	<div>0.16</div>	m/s					
Bulb						<div>H</div>	Heterogeneous	<div>40-49</div>
ICA	PSV	<div>5.6</div>	m/s	<div>I</div>	Increased velocities	<div>H</div>	Heterogeneous	<div>90-99</div>
	EDV	<div>2.3</div>	m/s					
ECA				<div>NO</div>	Normal	<div>-</div>	-----	<div>0</div>
Vert				<div>AN</div>	Antegrade flow			
<hr/>								
LEFT		Waveform		Plaque Morphology		% Stenosis		
CCA	PSV	<div>0.90</div>	m/s	<div>NO</div>	Normal	<div>H</div>	Heterogeneous	<div>10-19</div>
	EDV	<div>0.31</div>	m/s					
Bulb						<div>H</div>	Heterogeneous	<div>10-19</div>
ICA	PSV	<div>0.93</div>	m/s	<div>NO</div>	Normal	<div>H</div>	Heterogeneous	<div>10-19</div>
	EDV	<div>0.34</div>	m/s					
ECA				<div>NO</div>	Normal	<div>H</div>	Heterogeneous	<div>&lt;50</div>
Vert				<div>AN</div>	Antegrade flow			

Comments:  
-----

Comments:  
Right:  
There is homogenous low echogenic plaque noted in the bulb extending into the proximal ICA ~1.6cm in length, causing 90-99% stenosis.  
ECA is patent with no evidence of significant stenosis.  
Normal antegrade vertebral artery flow, however there is increased velocities in the vertebral artery origin likely >50% stenosis.

length of plaque: 1.6cm  
stenosis to jaw line: 3cm  
stenosis to bifurcation: 1cm  
distal ICA calibre: 0.5cm

Left:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
There is increased velocities in the vertebral artery origin likely >50% stenosis  
No evidence of haemodynamically significant stenosis.

Clinical History :  
Clinical details: Work up for urgent CABG on thursday. ?carotid stenosis. Previous left carotid edarterectomy  
Specific question to be answered: Work up for urgent CABG on thursday. ?carotid stenosis. Previous left carotid edarterectomy

US Doppler carotid artery Both :

Carotid duplex

RIGHT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	1.1	m/s	NO	Normal	IT	Intimal thickening	<10
	EDV	0.19	m/s					
Bulb						MP	Minor plaque	10-19
ICA	PSV	0.78	m/s	NO	Normal	MP	Minor plaque	10-19
	EDV	0.24	m/s					
ECA				NO	Normal	-	-----	0
Vert				AN	Antegrade flow			

---

LEFT				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	0.76	m/s	NO	Normal	IT	Intimal thickening	<10
	EDV	0.18	m/s					
Bulb						H	Heterogeneous	10-19
ICA	PSV	0.81	m/s	NO	Normal	H	Heterogeneous	10-19
	EDV	0.22	m/s					
ECA				NO	Normal	-	-----	0
Vert				AN	Antegrade flow			

Comments:

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.  
  
Left  
Minor neo-intimal hyperplasia noted causing 10-19% stenosis.  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.

Clinical History :  
Clinical details: Left ICA thrombosis with 50% stenosis  
Specific question to be answered: Any change in thrombus

US Doppler carotid artery Both :

Carotid duplex

RIGHT							
		Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	<input type="text" value="0.97"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	<input type="text" value="0"/>
	EDV	<input type="text" value="0.31"/>	m/s				
Bulb						<input type="text" value="-"/>	<input type="text" value="0"/>
ICA	PSV	<input type="text" value="0.40"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	<input type="text" value="0"/>
	EDV	<input type="text" value="0.20"/>	m/s				
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	<input type="text" value="0"/>
Vert				<input type="text" value="AN"/>	Antegrade flow		
<hr/>							
LEFT							
		Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	<input type="text" value="0.94"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	<input type="text" value="0"/>
	EDV	<input type="text" value="0.30"/>	m/s				
Bulb						<input type="text" value="-"/>	<input type="text" value="0"/>
ICA	PSV	<input type="text" value="0.62"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="S"/>	See comments
	EDV	<input type="text" value="0.34"/>	m/s				<input type="text" value="≤50"/>
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	<input type="text" value="0"/>
Vert				<input type="text" value="AN"/>	Antegrade flow		

Comments:

Comments:  
On the left side there is focal dilatation of the ICA just distal to the bulb with max diameter 10mm. This is not increased in terms of size compared to previous scan.  
  
In the area of dilatation, there is 66% area reduction which is equals to <50% diameter reduction or stenosis.  
  
The ICA lumen is not narrowed and normal flow to distal ICA is preserved.  
  
Normal carotid scan on right side.  
  
Compared to previous study, no significant interval change.

Clinical History :  
Clinical details: Clinical stroke ?cause, discharge dependent  
Specific question to be answered: stenosis signifcant to cause stroke/TIA

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	1.1	m/s	I	Increased velocities	C	Calcified	20-29	
	EDV	0.24	m/s						
Bulb						C	Calcified	40-49	
ICA	PSV	2.1	m/s	I	Increased velocities	C	Calcified	60-69	
	EDV	0.33	m/s						
ECA				I	Increased velocities	C	Calcified	>70	
Vert				AN	Antegrade flow				

---

LEFT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	1.1	m/s	NO	Normal	H	Heterogeneous	10	
	EDV	0.24	m/s						
Bulb						C	Calcified	10-19	
ICA	PSV	1.1	m/s	NO	Normal	H	Heterogeneous	20-29	
	EDV	0.28	m/s						
ECA				NO	Normal	H	Heterogeneous	10	
Vert				AN	Antegrade flow				

Comments:  
-----

Comments:  
Right:  
Heavily calcified carotid artery with acoustic shadowing, technically difficult to assess.  
60-69% significant stenosis detected in the proximal ICA.  
>70% significant stenosis detected in the proximal ECA.  
Normal antegrade flow vertebral artery.

Left:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
Mixed calcified and heterogenous plaque noted in the bulb extending to proximal ICA, no evidence of haemodynamically significant stenosis.

Clinical History :  
Clinical details: bilatera CEA one occluded  
Specific question to be answered: f-up

US Doppler carotid artery Both :

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0"/>	m/s	<input type="text" value="S"/>	See comments	<input type="text" value="H"/>	Heterogeneous	SEE COMMENTS	
	EDV	<input type="text" value="0"/>	m/s						
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="100"/>	
ICA	PSV	<input type="text" value="0"/>	m/s	<input type="text" value="A"/>	Absent/not detected	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="100"/>	
	EDV	<input type="text" value="0"/>	m/s						
ECA				<input type="text" value="A"/>	Absent/not detected	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="100"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				
<hr/>									
LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.66"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10"/>	
	EDV	<input type="text" value="0.21"/>	m/s						
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10"/>	
ICA	PSV	<input type="text" value="0.34"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10"/>	
	EDV	<input type="text" value="0.12"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				

Comments:  
-----  
=====

Comments:  
Right:  
The CCA is patent very proximally.  
The proximal to mid CCA is virtually occluded, however there is some recanalisation noted with high resistive waveforms still suggestive of more distal occlusion.  
No flow seen in the ECA, or ICA/bypass; ECA branch is seen patent with retrograde flow.  
The vertebral artery is patent with antegrade flow.

Left:  
The carotid arteries are widely patent with minor disease noted.  
The vertebral artery is patent with normal flow.

Clinical History :  
Clinical details: Post R CEA 12/2017  
Specific question to be answered: surveillance

US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIED

Attended-14-Dec-2018

MARAJ+FREEB/MARAJ-14-Dec-2018

Carotid duplex

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	0.74	m/s	NO	Normal	-	-----	0	
	EDV	0.28	m/s						
Bulb						H	Heterogeneous	~50	
ICA	PSV	0.70	m/s	NO	Normal	H	Heterogeneous	0	
	EDV	0.16	m/s						
ECA				NO	Normal	H	Heterogeneous	>50	
Vert				AN	Antegrade flow				

---

LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	1.1	m/s	NO	Normal	-	-----	0	
	EDV	0.35	m/s						
Bulb						MP	Minor plaque	10-19	
ICA	PSV	0.58	m/s	NO	Normal	-	-----	0	
	EDV	0.23	m/s						
ECA				NO	Normal	-	-----	0	
Vert				AN	Antegrade flow				

Comments:  
-----  
-----

Comments:  
Right:  
CEA noted. CCA widely patent with normal flow and no stenosis.

The proximal segment of the CEA site is widely patent. however, more distally at carotid bulb/proximal ICA level, there appears to be residual on-chronic ?homogenous plaque causing a lumen diameter reduction of ~50% (area reduction of ~70%), not causing haemodynamic significance.  
B-mode aspect is heterogeneous, predominantly hypoechoic and regular surface, with no evidence of flap, ulceration or mobility noted. There is no significant stenosis according to NASCET criteria.

Significant ECA stenosis.

The vertebral artery is patent with normal antegrade waveforms and velocities.

Compared to previous study, no significant interval changes.

Left:  
The carotid and vertebral arteries are patent with normal waveforms, flow direction and velocities.  
Minor heterogeneous plaque in the proximal ICA with no haemodynamic significance.



Clinical History :  
Clinical details: episode of R arm weakness lasting 15mins. PMH: HTN, DM, heart failure, CKD3, coronary artery disease, stroke x2, TIA, retinal artery occlusion  
Specific question to be answered: ? stenosis

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	0.66	m/s	NO	Normal	-	-----	0	
	EDV	0.15	m/s						
Bulb						H	Heterogeneous	10-19	
ICA	PSV	0.51	m/s	NO	Normal	H	Heterogeneous	10-19	
	EDV	0.09	m/s						
ECA				NO	Normal	-	-----	0	
Vert				AN	Antegrade flow				

---

LEFT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	0.61	m/s	NO	Normal	IT	Intimal thickening	<10	
	EDV	0.21	m/s						
Bulb						H	Heterogeneous	30-39	
ICA	PSV	2.0	m/s	I	Increased velocities	H	Heterogeneous	60-69	
	EDV	0.59	m/s						
ECA				NO	Normal	-	-----	0	
Vert				AN	Antegrade flow				

Comments:  
-----

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.  
  
Left:  
**Heterogenous plaque detected in the posterior wall of the bulb extending to ICA origin causing 60-69% stenosis.**  
CCA, ECA and Vertebral arteries are patent with no evidence of significant stenosis with normal colour flow, waveforms and velocities.

Clinical History :  
Clinical details: R ACA infarct on background of multiple PCA and MCA infarcts ?cause  
Specific question to be answered: stenosis to account for deficits

US Doppler carotid artery Both :

Carotid duplex

RIGHT

				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	<input type="text" value="0.66"/>	m/s	<input type="text" value="S"/>	See comments	<input type="text" value="IT"/>	Intimal thickening	<input type="text" value="10"/>
	EDV	<input type="text" value="0.09"/>	m/s					
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="SEE COMMENTS"/>
ICA	PSV	<input type="text" value="0"/>	m/s	<input type="text" value="A"/>	Absent/not detected	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="100"/>
	EDV	<input type="text" value="0"/>	m/s					
ECA				<input type="text" value="S"/>	See comments	<input type="text" value="IR"/>	Irregular	<input type="text" value="≤10"/>
Vert				<input type="text" value="AN"/>	Antegrade flow			

---

LEFT

				Waveform		Plaque Morphology		% Stenosis
CCA	PSV	<input type="text" value="1.1"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="IT"/>	Intimal thickening	<input type="text" value="≤10"/>
	EDV	<input type="text" value="0.30"/>	m/s					
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10-19"/>
ICA	PSV	<input type="text" value="1.1"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10-19"/>
	EDV	<input type="text" value="0.31"/>	m/s					
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="≤10"/>
Vert				<input type="text" value="AN"/>	Antegrade flow			

Comments:  
-----

Comments:  
Right:  
CCA is patent with no evidence of significant stenosis.  
The ICA occludes ~8mm from its origin.  
? Acute occlusion on previously known narrowing.  
ECA is patent with no evidence of significant stenosis.  
Vertebral artery measures 3.9mm in diameter, likely compensatory due to contralateral small calibre vertebral artery or ipsilateral ICA occlusion.  
Damped flows detected in the MCA and reversed flow detected in the ACA.

Left:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.  
Vertebral artery measures 1.9mm in diameter.  
Normal flows and waveforms in MCA and ACA.

Clinical History :  
Clinical details: Pre-CABG investigation as part of a screening test  
Specific question to be answered: ? carotid artery stenosis

US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIED - Attended-05-Nov-2018 - MARAJ+FREEB/MARAJ-05-Nov-2018

Carotid duplex

RIGHT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	0.65	m/s	NO	Normal	C	Calcified	10	
	EDV	0.13	m/s						
Bulb						H	Heterogeneous	20	
ICA	PSV	0.71	m/s	NO	Normal	H	Heterogeneous	20	
	EDV	0.17	m/s						
ECA				NO	Normal	C	Calcified	>50	
Vert				AN	Antegrade flow				

---

LEFT									
				Waveform		Plaque Morphology		% Stenosis	
CCA	PSV	0.69	m/s	NO	Normal	H	Heterogeneous	10	
	EDV	0.14	m/s						
Bulb						C	Calcified	20	
ICA	PSV	0.89	m/s	NO	Normal	C	Calcified	20	
	EDV	0.35	m/s						
ECA				NO	Normal	C	Calcified	<50	
Vert				I	Increased velocities				

Comments:

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid arteries with mixed heterogenous and calcified plaques in the bulb extending to proximal ICA.  
Significant stenosis seen in the ECA.  
Damped monophasic flow detected in the mid vertebral artery, suggestive of more proximal obstruction.

Left:  
Normal colour flow, waveforms and velocities in carotid arteries with mixed heterogenous and calcified plaques in the bulb extending to proximal ICA.  
ECA is patent with no evidence of significant stenosis.  
3x velocity increase detected in the mid vertebral artery suggestive of >50% stenosis.

Clinical History :  
Clinical details: left subclavian stenosis  
Specific question to be answered: f-up

US Doppler carotid artery Both :

Carotid duplex

RIGHT				Waveform		Plaque Morphology	% Stenosis
CCA	PSV	0.84	m/s	NO	Normal	H	Heterogeneous 20
	EDV	0.16	m/s				
Bulb						C	Calcified 30
ICA	PSV	0.98	m/s	NO	Normal	H	Heterogeneous 30
	EDV	0.25	m/s				
ECA				NO	Normal	H	Heterogeneous 30
Vert				AN	Antegrade flow		
LEFT				Waveform		Plaque Morphology	% Stenosis
CCA	PSV	0.97	m/s	NO	Normal	H	Heterogeneous 20
	EDV	0.17	m/s				
Bulb						H	Heterogeneous 30
ICA	PSV	1.1	m/s	NO	Normal	C	Calcified 30-39
	EDV	0.33	m/s				
ECA				NO	Normal	H	Heterogeneous 20
Vert				R	Retrograde flow		

Comments:

Comments:  
Right:  
Moderate diffused calcified and heterogenous plaques detected in the bulb extending to proximal ICA and ECA with no evidence of haemodynamically significant stenosis in the carotid arteries.  
Vertebral artery origin has >50% significant stenosis, PSV 2m/sec; vertebral arteries remains with normal antegrade flow.

Left:  
Moderate diffused calcified and heterogenous plaques detected in the bulb extending to proximal ICA and ECA with no evidence of haemodynamically significant stenosis in the carotid arteries.  
Retrograde flow detected in the vertebral artery.  
Significant stenosis in the origin of the subclavian artery, PSV 3.2m/sec.

Clinical History :

Clinical details: Carotid artery dissection on CT. to assess further.\.br\Due CABG tomorrow. to be done today please  
Specific question to be answered: Carotid artery dissection on CT. to assess further.\.br\Due CABG tomorrow. to be done today please

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="1.0"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
	EDV	<input type="text" value="0.29"/>	m/s						
Bulb						<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
ICA	PSV	<input type="text" value="1.2"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="MP"/>	Minor plaque	<input type="text" value="10"/>	
	EDV	<input type="text" value="0.26"/>	m/s						
ECA		<input type="text" value="NO"/>			Normal	<input type="text" value="-"/>	-----	<input type="text" value="0"/>	
Vert		<input type="text" value="AN"/>				Antegrade flow			
<hr/>									
LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="1.1"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="-"/>		<input type="text" value="0"/>	

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynamically significant stenosis.

Left:  
There is a heterogeneous plaque noted in the bulb/ICA origin. There is a dissection flap noted adjacent to the mentioned plaque and extending ~2.0cm (possible to see) into the proximal ICA from the bifurcation, causing increased velocities suggestive of 60-69% stenosis.

Normal antegrade flow detected in the vertebral artery.

Clinical History :  
Clinical details: right carotid artery aneurysm (1.5cm in diameter)  
Specific question to be answered: size of right carotid aneurysm

US Doppler carotid artery Both :

Carotid duplex

RIGHT				Waveform		Plaque Morphology	% Stenosis
CCA	PSV	1.6	m/s	NO	Normal	-	0
	EDV	0.28	m/s				
Bulb						-	0
ICA	PSV	0.69	m/s	NO	Normal	-	0
	EDV	0.21	m/s				
ECA				NO	Normal	-	0
Vert				AN	Antegrade flow		

---

LEFT				Waveform		Plaque Morphology	% Stenosis
CCA	PSV	1.5	m/s	NO	Normal	-	0
	EDV	0.23	m/s				
Bulb						-	0
ICA	PSV	0.89	m/s	NO	Normal	-	0
	EDV	0.22	m/s				
ECA				NO	Normal	-	0
Vert				AN	Antegrade flow		

Comments:

Comments:  
Right:  
Normal colour flow, waveforms and velocities in CCA, ECA, proximal to mid ICA and vertebral artery.  
Distal ICA is aneurysmal, accurate measurement is difficult to obtain due to vessel tortousity however it doesn't appear to significantly progress in size, maximum diameter obtained is 1.3cm.  
No significant stenosis.

Left:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No evidence of haemodynammically significant stenosis.

## Clinical History :

Clinical details: for CABG

Specific question to be answered: ? stenosis

## US Doppler carotid artery Both :

US Doppler carotid artery Both

VERIFIED Attended-09-Feb-2018--MARAJ+DIXOH/MARAJ-09-Feb-2018

Carotid duplex

## RIGHT

Waveform					Plaque Morphology		% Stenosis	
CCA	PSV	0.93	m/s	NO	Normal	IT	Intimal thickening	1-9
	EDV	0.23	m/s					
Bulb						C	Calcified	30-39
ICA	PSV	0.97	m/s	NO	Normal	H	Heterogeneous	30-39
	EDV	0.27	m/s					
ECA				NO	Normal	H	Heterogeneous	1-9
Vert				R	Retrograde flow			

## LEFT

LEFT		Waveform		Plaque Morphology		% Stenosis		
CCA	PSV	0.84	m/s	NO	Normal	-	0	
	EDV	0.24	m/s					
Bulb					C	Calcified	30-39	
ICA	PSV	0.58	m/s	NO	Normal	H	Heterogeneous	30-39
	EDV	0.19	m/s					
ECA				NO	Normal	-	0	
Vert				I	Increased velocities			

Comments:

Normal antegrade vertebral flow

## Comments:

## Right:

Normal colour flow, waveforms, and velocities in the right carotid arteries.

Mixed calcified and heterogenous plaque detected in the bulb extending to ICA, with no evidence of significant ICA stenosis.

Complete flow reversal (retrograde flow) detected in the right vertebral artery indicative of occlusion/significant stenosis in the right subclavian artery (subclavian steal syndrome).

**>75% stenosis detected in the right subclavian artery origin, PSV >5m/sec, monophasic flow detected at distally and at the axillary artery.**

## Left:

Normal colour flow, waveforms and velocities in the left carotid arteries.

Mixed calcified and heterogenous plaque detected in the bulb extending to ICA, with no evidence of significant ICA stenosis.

Diameter increase in the left vertebral artery with accompanying velocity increase probably compensatory mechanism, due to contralateral findings.

Clinical History :  
Clinical details: CABG workup  
Specific question to be answered: CABG workup

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.55"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="IT"/>	Intimal thickening	<input type="text" value="≤10"/>	
	EDV	<input type="text" value="0.10"/>	m/s						
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="20-29"/>	
ICA	PSV	<input type="text" value="0.44"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10-19"/>	
	EDV	<input type="text" value="0.15"/>	m/s						
ECA					<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10-19"/>
Vert					<input type="text" value="AN"/>	Antegrade flow			
<hr/>									
LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.58"/>	m/s	<input type="text" value="L"/>	Low diastolic flow	<input type="text" value="IT"/>	Intimal thickening	<input type="text" value="≤10"/>	
	EDV	<input type="text" value="0.05"/>	m/s						
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="60-69"/>	
ICA	PSV	<input type="text" value="1.9"/>	m/s	<input type="text" value="I"/>	Increased velocities	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="60-69"/>	
	EDV	<input type="text" value="0.35"/>	m/s						
ECA					<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="10"/>
Vert					<input type="text" value="A"/>	Absent/not detected			

Comments:  
-----

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
No significant stenosis.

Left:  
High resistant waveforms detected in the CCA suggestive of significant ICA stenosis.  
Heterogenous predominantly hypoechoic plaque detected in the bulb extending to proximal ICA causing 60-69% stenosis.  
ECA is patent with no evidence of significant stenosis.  
Occluded extracranial vertebral artery.



Clinical History :  
Clinical details: new stroke  
Specific question to be answered: stenosis?

US Doppler carotid artery Both :

Carotid duplex

RIGHT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.34"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="IT"/>	Intimal thickening	<10	
	EDV	<input type="text" value="0.11"/>	m/s						
Bulb						<input type="text" value="IR"/>	Irregular plaque	<input type="text" value="40-49"/>	
ICA	PSV	<input type="text" value="1.06"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	10-19	
	EDV	<input type="text" value="0.30"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="&gt;50"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				
<hr/>									
LEFT									
		Waveform			Plaque Morphology		% Stenosis		
CCA	PSV	<input type="text" value="0.35"/>	m/s	<input type="text" value="NO"/>	Normal	<input type="text" value="IT"/>	Intimal thickening	<10	
	EDV	<input type="text" value="0.08"/>	m/s						
Bulb						<input type="text" value="H"/>	Heterogeneous	<input type="text" value="30-39"/>	
ICA	PSV	<input type="text" value="5.5"/>	m/s	<input type="text" value="I"/>	Increased velocities	<input type="text" value="H"/>	Heterogeneous	90-99	
	EDV	<input type="text" value="3.1"/>	m/s						
ECA				<input type="text" value="NO"/>	Normal	<input type="text" value="H"/>	Heterogeneous	<input type="text" value="&lt;50"/>	
Vert				<input type="text" value="AN"/>	Antegrade flow				

Comments:  
-----

Comments:  
Right:  
Normal colour flow, waveforms and velocities in carotid and vertebral arteries.  
Irregular plaque detected in the bifurcation causing 40-49% stenosis extending to ECA.  
ECA has >50% stenosis.

Left:  
CCA, ECA and VertA are patent with normal colour flow, waveforms and velocities.  
90-99% stenosis detected in the proximal ICA, tortuous mid to distal ICA.

Please see separate report for Pre CEA assessment.