TENSIOMED
THE ARTERIOGRAPH COMPANY

Arteriograph report

Blood Pressure Measurement and Pulse Wave Analysis

Patient data

Name:	T S	Postal code:	Country code:
ID:	202511251007	City:	
Date of Birth:	1974/07/18	Address:	
Age:	51 years	Telephone:	
Gender:	Female	E-mail:	
Weight, BMI:	45 kg, 18.5 kg/m2		

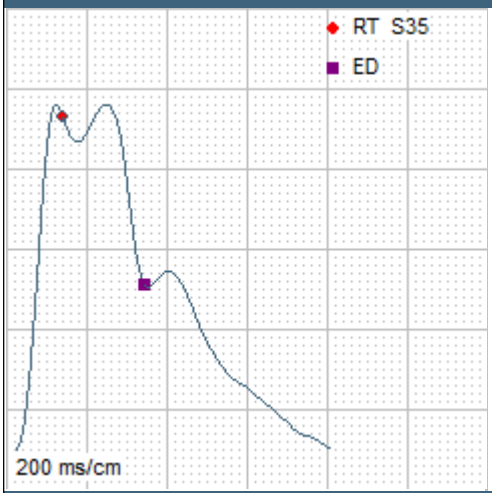
Risk profile

Medication

Measurement data

Date:	2025/11/25 10:13	Height:	156cm	Arm circ.:	23 cm Right
Operator:	Administrator			Cuff size:	S

Suprasystolic record



Brachial Blood Pressure and Pulse Wave Analysis

Sys:	111	mmHg
Dia:	74	mmHg
PP:	37	mmHg
MAP:	86	mmHg
HR:	75	/min
Aix brachial:	0.2	%

Lower limb circulation

ABI:

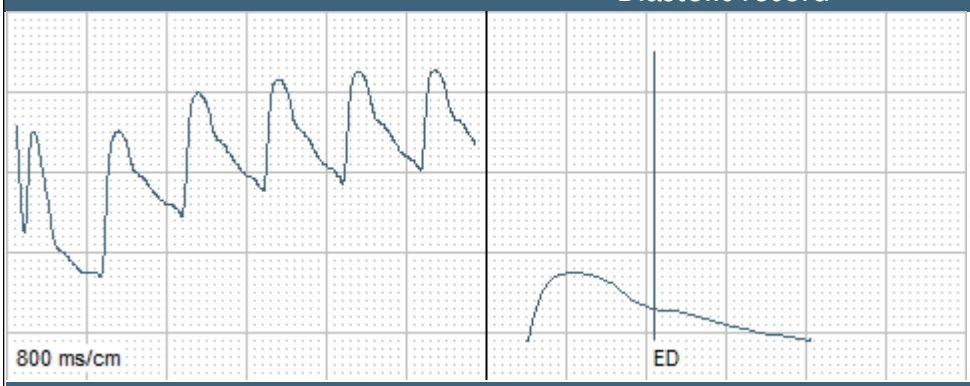
Central Hemodynamics

(1) SBPao:	113.6	mmHg	(< 111)
(2) PPao:	39.6	mmHg	(< 50)
(3) Aix aortic:	37.7	%	(< 33)

Ejection duration

(4) ED: 320 ms

Diastolic record



Volumetric Analysis

(9) DRA:	40	(>= 40)
(10) SAI:	49.4	(<= 50)
(10) DAI:	50.6	(>= 50)

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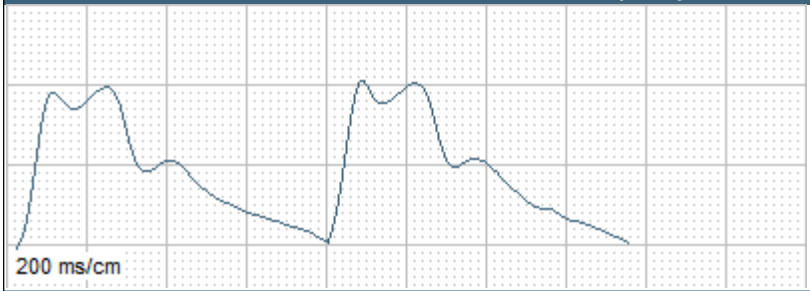
Pulse Wave Analysis and Arterial Age Assessment

Patient data

Name:	T S	ID:	202511251007
Date of Birth:	1974/07/18		
Age:	51 years	Gender:	Female

Suprasystolic record



Quality control

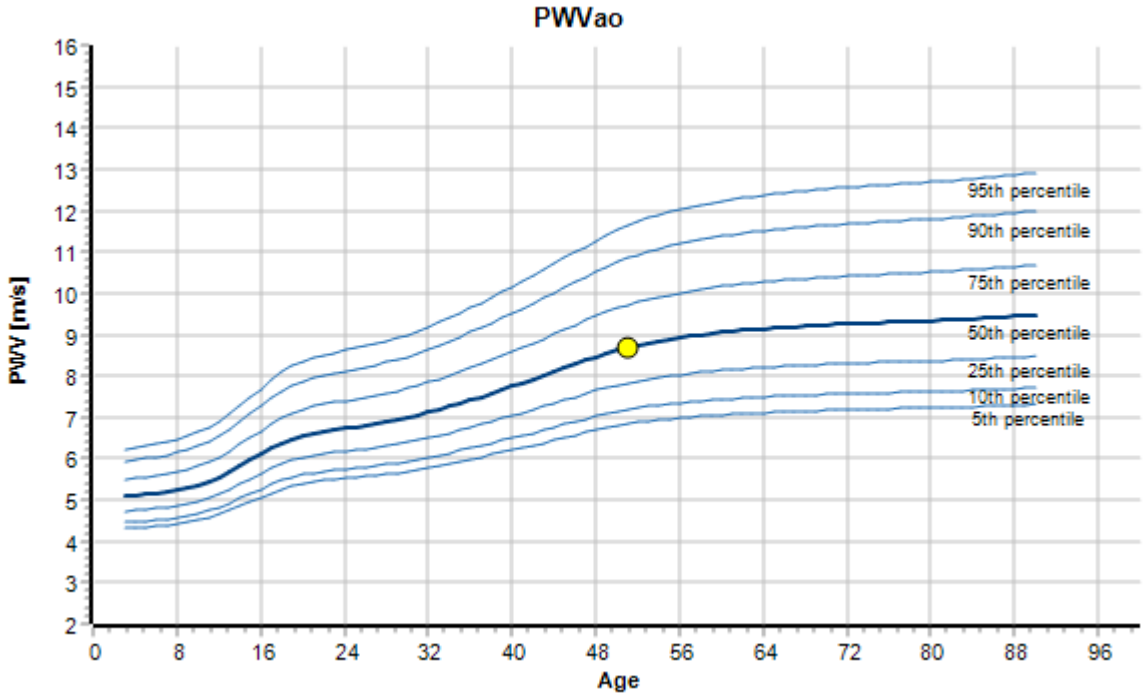
(7) SD: 0.40 m/s

Pulse Wave Velocity measurement

(6) PWVao: 8.7 m/s (<= 10)

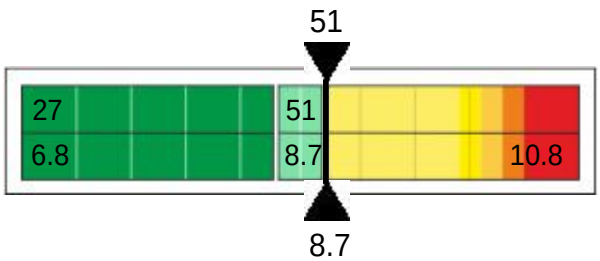
(5) RT: 115 ms (>= 124)

PWV - Arterial Age Assessment



Age (years)

PWV (m/s)



Arterial age: ~50-60 years (8)

- > 90th percentile
- > 50 & <= 90th percentile
- <= 50th percentile

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Arteriograph report

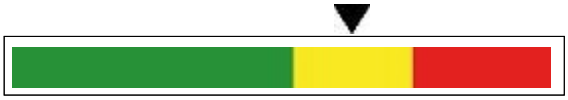
Conclusion

Central Blood Pressure

SBPao: 113.6 mmHg

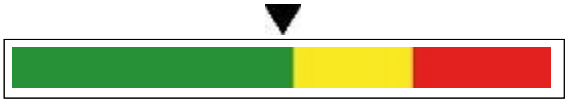
Augmentation Index

Aix aortic: 37.7 %



Pulse Wave Velocity

PWVao: 8.7 m/s



Slightly elevated parameters. It is advisable to conduct multiple assessments.

This examination cannot replace a medical consultation or provide a diagnosis. Elevated blood pressure and other variables can affect the parameter values.

Diagnosis

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Explanation of the parameters

(1) SBPao: SBPao = aortic (central) systolic blood pressure. SBPao physiologically lower than the peripheral (brachial) SBP. SBPao is normal under 140 mmHg.

(2) PPao: PPao = aortic (central) pulse pressure. PPao is the difference between the central systolic and diastolic pressure. PPao is normal under 50 mmHg.

(3) Aix aortic: Aix aortic = aortic (central) augmentation index. Aix aortic is mainly determined by the peripheral arterial tone (resistance) of the small arteries and arterioles, which is influenced by endothelial NO synthesis. Aix aortic is normal under 33%.

(4) ED: ED = Ejection (systole) duration of the left ventricle of the heart. ED is influenced by the heart rate. This parameter is not taken account in the evaluation of Arteriograph report. Normal values are described by Weissler AM, Harris LC, White GD: „Left ventricular ejection time index in man" J Appl Physiol 18 (5) 919-923; 1963.

(5) RT: RT = return time of the aortic pulse wave. RT reflects to the characteristics of the aortic wall. The stiffer the aortic wall, the lower the RT is. RT is normal above 124 msec.

(6) PWVao: PWVao = Pulse Wave Velocity of the aorta. PWVao is determined by the characteristics of the aortic wall (see RT). The stiffer the aortic wall, the faster the PWVao is. PWVao is normal under 10.0 m/s. Increased PWVao values are related to increased CV risk and atherosclerotic organ damage. Vascular age assessment is based on the PWVao values. Higher SBP and/or HR can increase PWVao causing enhanced lateral tension (i.e. stiffness) on the aortic wall and can lead false arterial age assessment.

(7) SD: SD = Standard deviation of the beat to beat measured aortic pulse wave velocity values. The lower the SD the better the quality of the recording is. SD should be in the green range (0.0-0.7 m/s). Yellow (>0.7 <1.0 m/s) is still acceptable but with caution. Red range (>=1.0 m/s) cannot be accepted and the examination has to be repeated.

(8) : on the basis of approximately 60000 measurements based on internal database of the company

(9) DRA: DRA = diastolic reflection area. The left coronary artery provides blood and oxygen supply to the left ventricle of the heart; however this artery is perfused mainly during diastole. Thus the diastolic perfusion pressure and the duration of diastole are playing determinant role in the blood supply of the left ventricle of the heart. DRA is a complex dimensionless parameter, describes the diastolic wave reflection intensity and the duration of diastole. The higher the DRA is the better the left coronary perfusion. The DRA is normal above 40.

(10) SAI, DAI: SAI = systolic area index, DAI = diastolic area index. Pressurizing the cuff to the diastolic blood pressure volumetric signals can be obtained. The area under the curve is taken as 100%, and then it is divided into systolic (SAI) and diastolic (DAI) area and expressed as the percentage of the total (100%). In normal, resting situation with normal heart rate the SAI used to be less than 50% and the DAI more than 50%. The lower third of the DAI is under 46%, which could be considered abnormally low.

(1) - (7) : Threshold values are obtained from hard end-point follow-up study using Arteriograph. (Kahan, T. et al.: Aortic stiffness measured by a novel oscillometric method independently predicts cardiovascular morbidity and mortality: a study of 4146 subjects. ESH Congress 2013 Milan. Oral presentation, Large Arteries Session. Monday 17 June).