

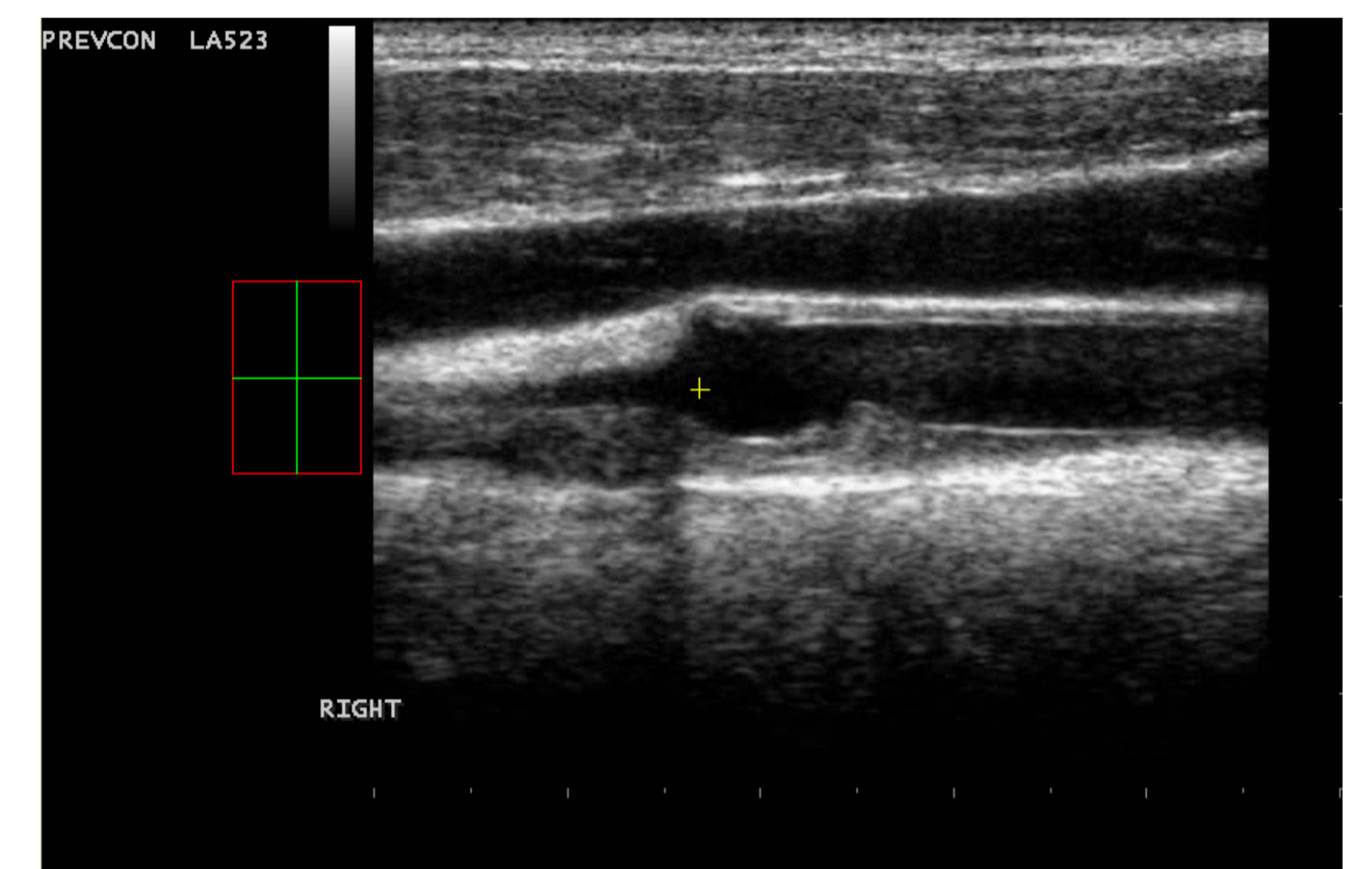
ASSESSMENT OF PLAQUE FORMATION IS A PRE-REQUISITE TO PREDICT CARDIOVASCULAR COMPLICATIONS USING CAROTID INTIMA MEDIA THICKNESS

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Role and function of the Carotid Intima Media Thickness (CIMT) and atherosclerotic Plaque (**P**) in clinical management of cardiovascular risk factors is yet unclear. Cardiovascular Risk Factor Stratification (SCORE) and CIMT with **P** typing and visualization were assessed in 269 asymptomatic individuals over 45 years (45-65 y), undergoing an annual health check. Cases **with P** (n=38) were compared to cases **without P** (n=231). The CIMT was measured using a fully automated quantitative algorithm that assesses the average, minimum and maximal thickness during several seconds, as single frames sometimes did not show either a quality CIMT or Plaque formation.



Results:

	CIMT WITH PLAQUE N=38 (AGE 59)	CIMT WITHOUT PLAQUE P VALUE N=231 (AGE 58)	
CIMT (mm)	0.78±0.12	0.74±0.09	NS
BMI (>30kg/m ²)	16%	10%	<0.01
Smoking	20%	15%	<0.01
Systolic BP >135mmHg	62%	44%	<0.05
Diastolic BP >85 mmHg	40%	21%	<0.01
LDL-c mmol/l	3.9	3.6	NS
HDL-c mmol/l	0.95	1.05	NS

These findings indicate that normal/high CIMT values were present in both populations. Individual risk factors were only significantly correlated to risk factors if **P** was present.

Conclusion:

Assessment of only a CIMT in a population group above 45 years old does not add much to the standardized SCORE risk factor stratification. If a **P** is present, the addition of a measurement of CIMT plus **P** has incremental value to manage the subclinical disease in clinical practice. These findings underscore that in subclinical disease several frames should be assessed to maximize quality. CIMT alone adds little value to a SCORE measurement procedure.

Summary:

1. Plaque assessment seems a critical component to manage disease in clinical practice to provide incremental value in addition to SCORE and CIMT alone.
2. Multiple frames should be assessed to maximize yield on image quality.

