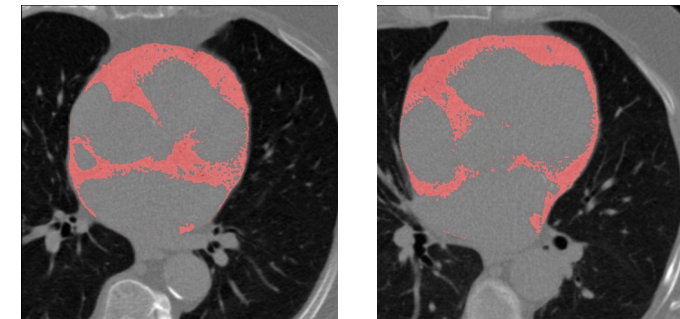

Epicardial fat

Epicardial fat plays an important role in the development of cardiovascular disease, and might thus be of clinical interest.

Epicardial fat quantification can now be performed automatically on non-enhanced CT scans.

Automatic quantification of epicardial fat volume



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Epicardial fat

Cardiovascular disease is the leading cause of death and one of the major causes of disability worldwide.

Epicardial fat, the adipose tissue between the myocardium and the visceral layer of the pericardium, plays an important role in the etiology of cardiovascular disease.¹

Automatic quantification of epicardial fat volume

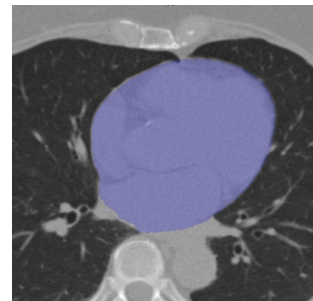
We have developed a fully automatic method that can be used to segment the pericardium and to quantify the epicardial fat volume on non-enhanced CT examinations.²

See also: <https://www.youtube.com/watch?v=hi1tPoG8GiY>

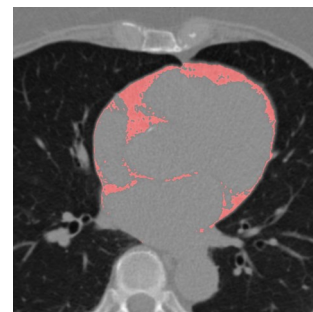
Quantification method



Subject scan



Segmented scan



Fat voxels

	A	B	C
1	Subject	Epicardial fat volume	Remarks
2	1	323.8344345	
3	2	96.32437897	
4	3	111.1454239	
5	4	14.47992897	
6	5	97.3398056	
7	6	154.8577423	
8	7	106.4687958	
9	8	92.26269531	
10	9	142.3327637	
11	10	54.67374802	
12	11	36.02566147	
13	12	91.02566528	
14	13	50.63199234	
15	14	39.61423874	
16	15	46.19740295	
17	16	86.88087463	

Fat volumes

Quantification method

- Fully automated
- Validated by an expert reviewer panel

What do we offer?

We offer the service to perform quantification of the epicardial fat volume on non-enhanced CT examinations.

References

1. Mahabadi AA, Berg MH, et al. Association of Epicardial Fat With Cardiovascular Risk Factors and Incident Myocardial Infarction in the General Population: The Heinz Nixdorf Recall Study. *J Am Coll Cardiol* 2013.
2. Shahzad R, Bos D, et al. Automatic quantification of epicardial fat volume on non-enhanced cardiac CT scans using a multi-atlas segmentation approach. *Med Phys* 2013 .