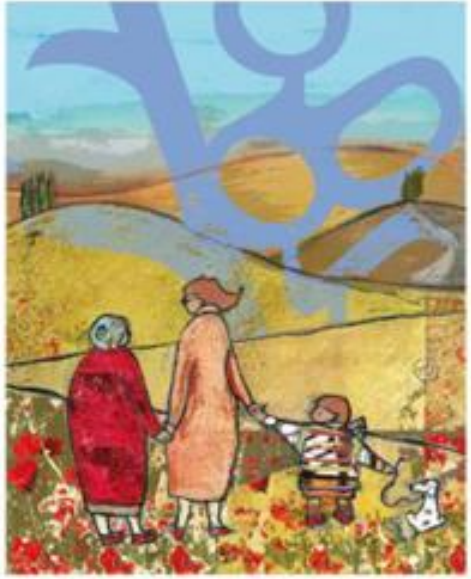
64° CONGRESSO NAZIONALE SIGG



Grasso viscerale epicardico nella patogenesi e nella progressione della cardiopatia ischemica nell'anziano

Dott.ssa LAURA PETRAGLIA

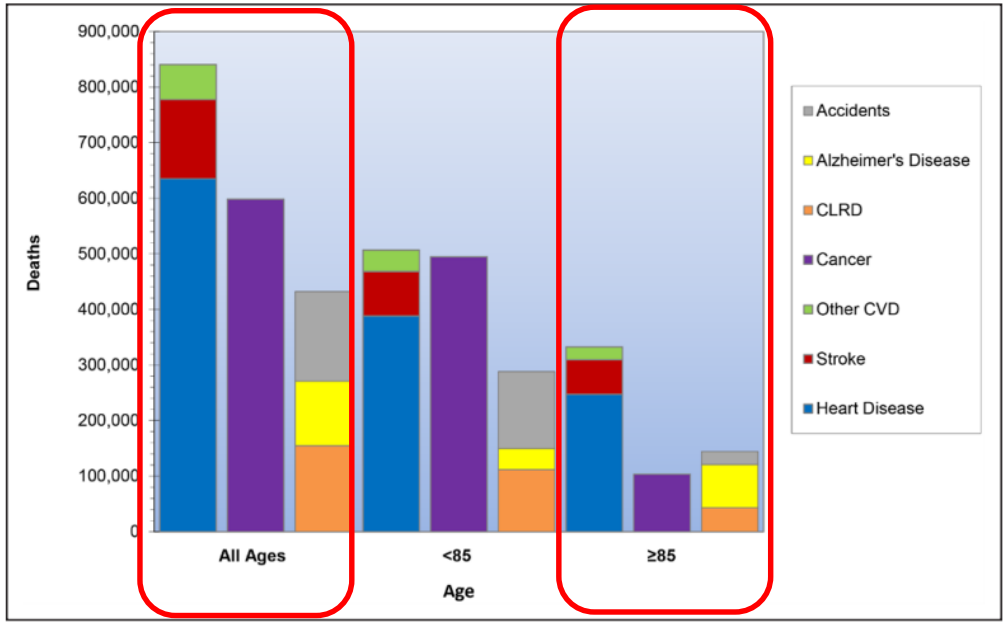
Dipartimento di Scienze Mediche Traslazionali
Università degli Studi di Napoli "Federico II"

Circulation

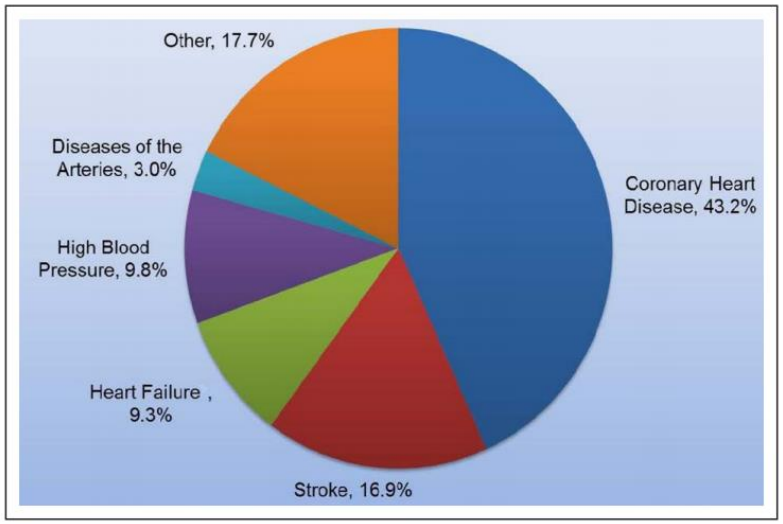
AHA STATISTICAL UPDATE

Heart Disease and Stroke Statistics—2019 Update

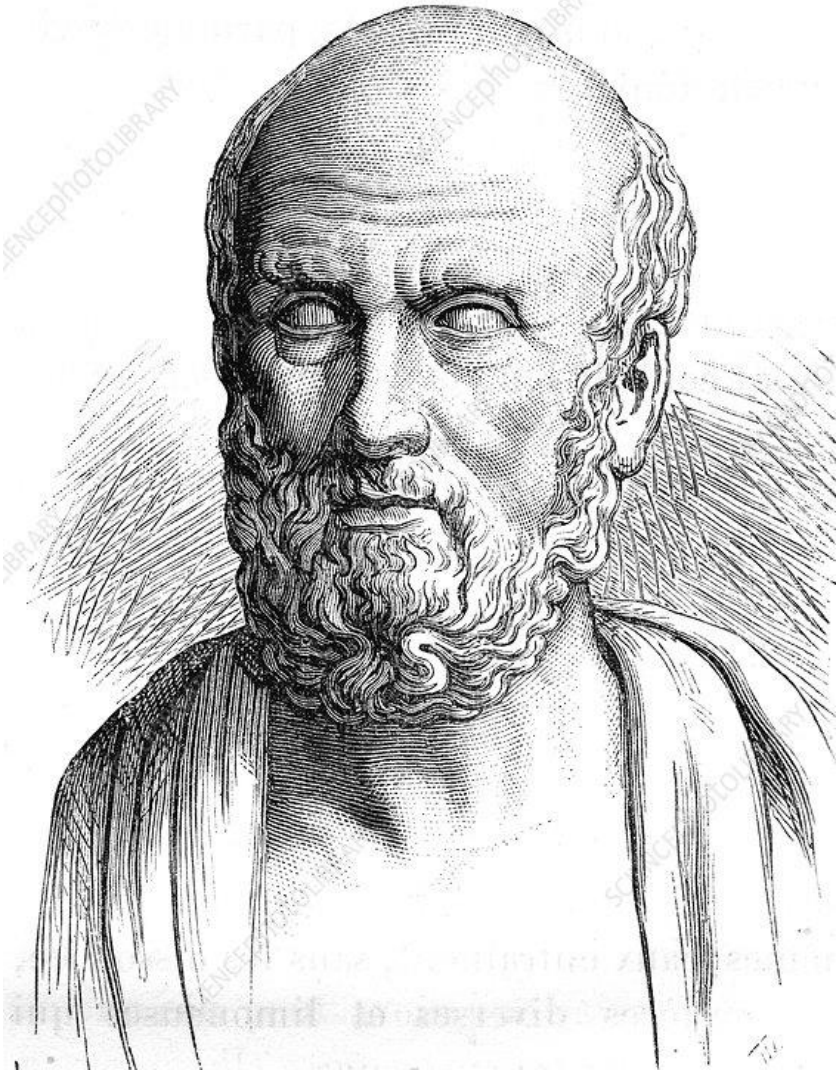
A Report From the American Heart Association



CVD and other major causes of death.

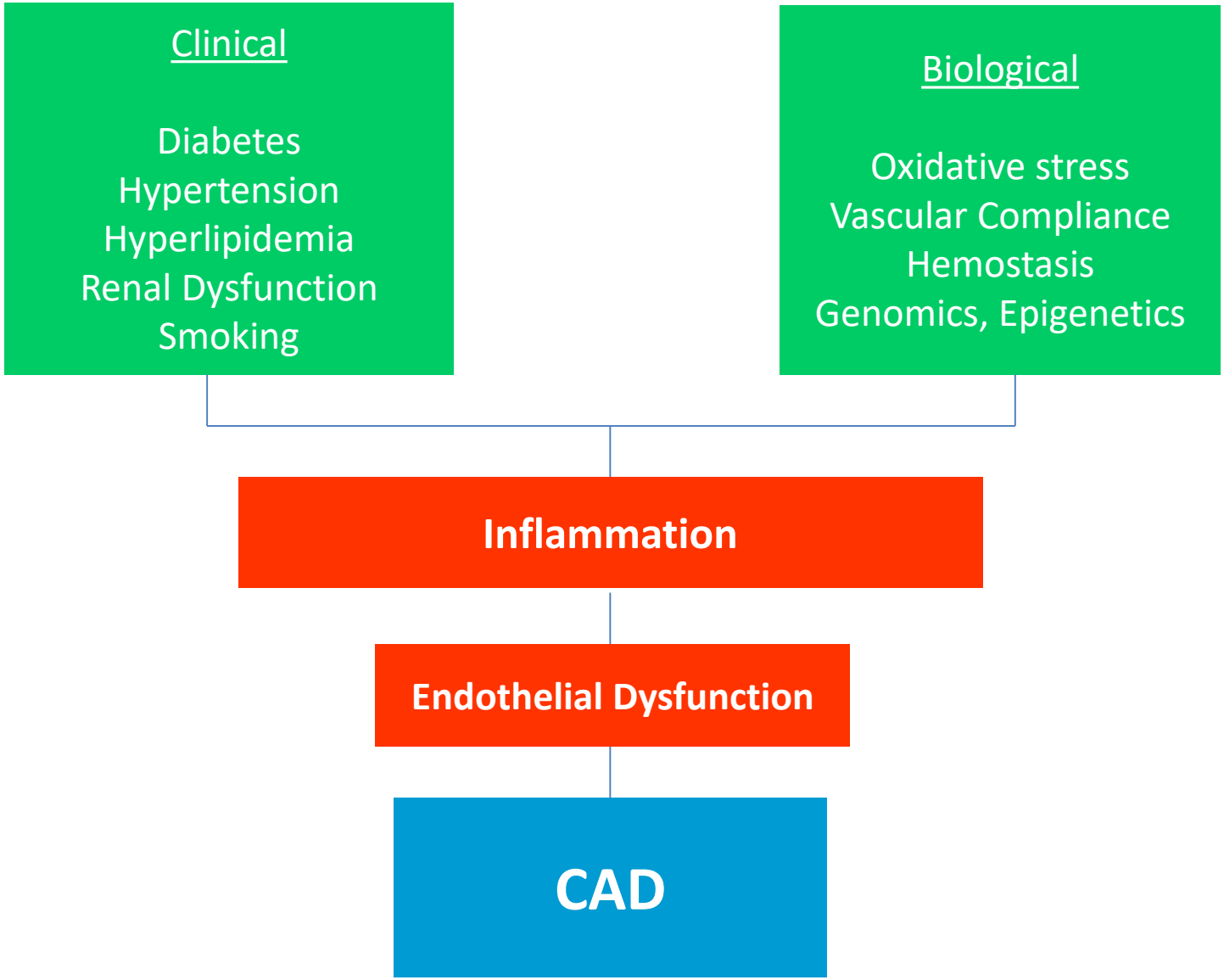


Percentage breakdown of deaths for cardiovascular disease (United States, 2016).



The Greek physician Hippocrates observed that "Sudden death is more common in those who are naturally fat than in the lean," in 400 BC. For many centuries, this astute observation went completely unexplained.

FATTORI DI RISCHIO CARDIOVASCOLARI



Significance of adventitial inflammation of the coronary artery in patients with unstable angina: results at autopsy

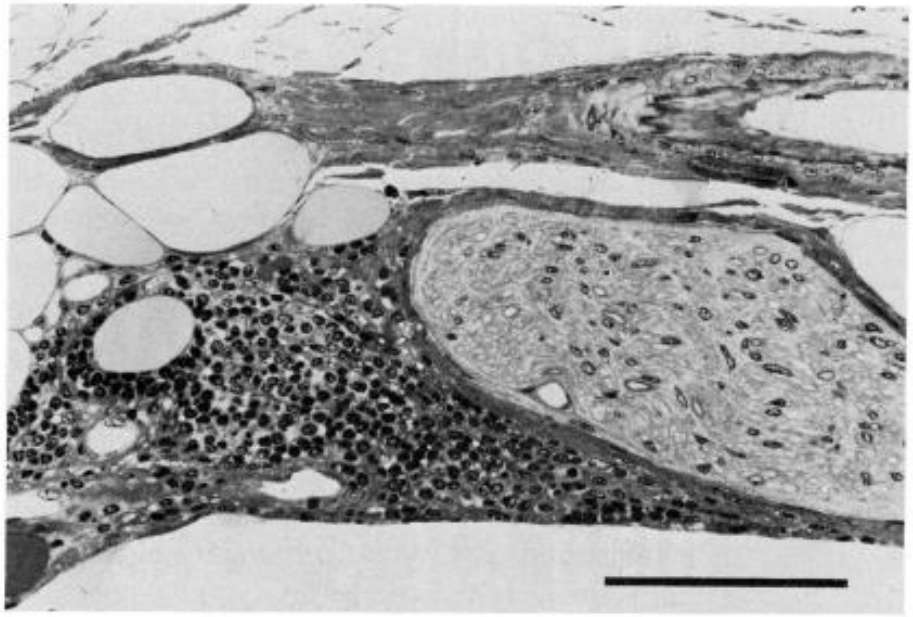
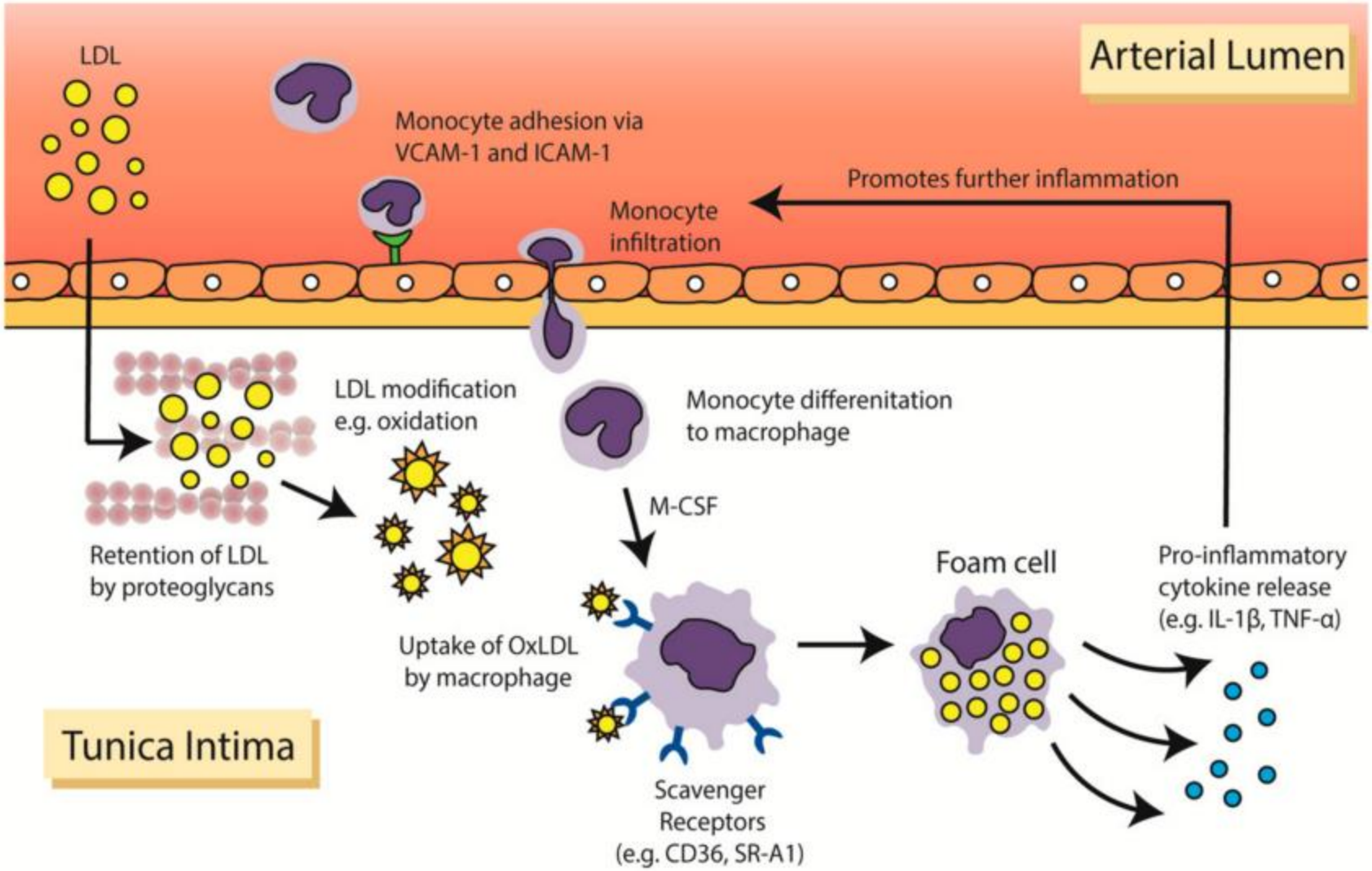


FIGURE 2. The coronary artery adventitia of a 72-year-old man from group I who died suddenly after an anginal attack shows a small clustered infiltrate of small round inflammatory cells (mild inflammatory lesion) involving an autonomic nerve fiber around the coronary artery. Light micrograph, epoxy section, and methylene blue–basic fuchsin stain. Bar = 0.1 mm.

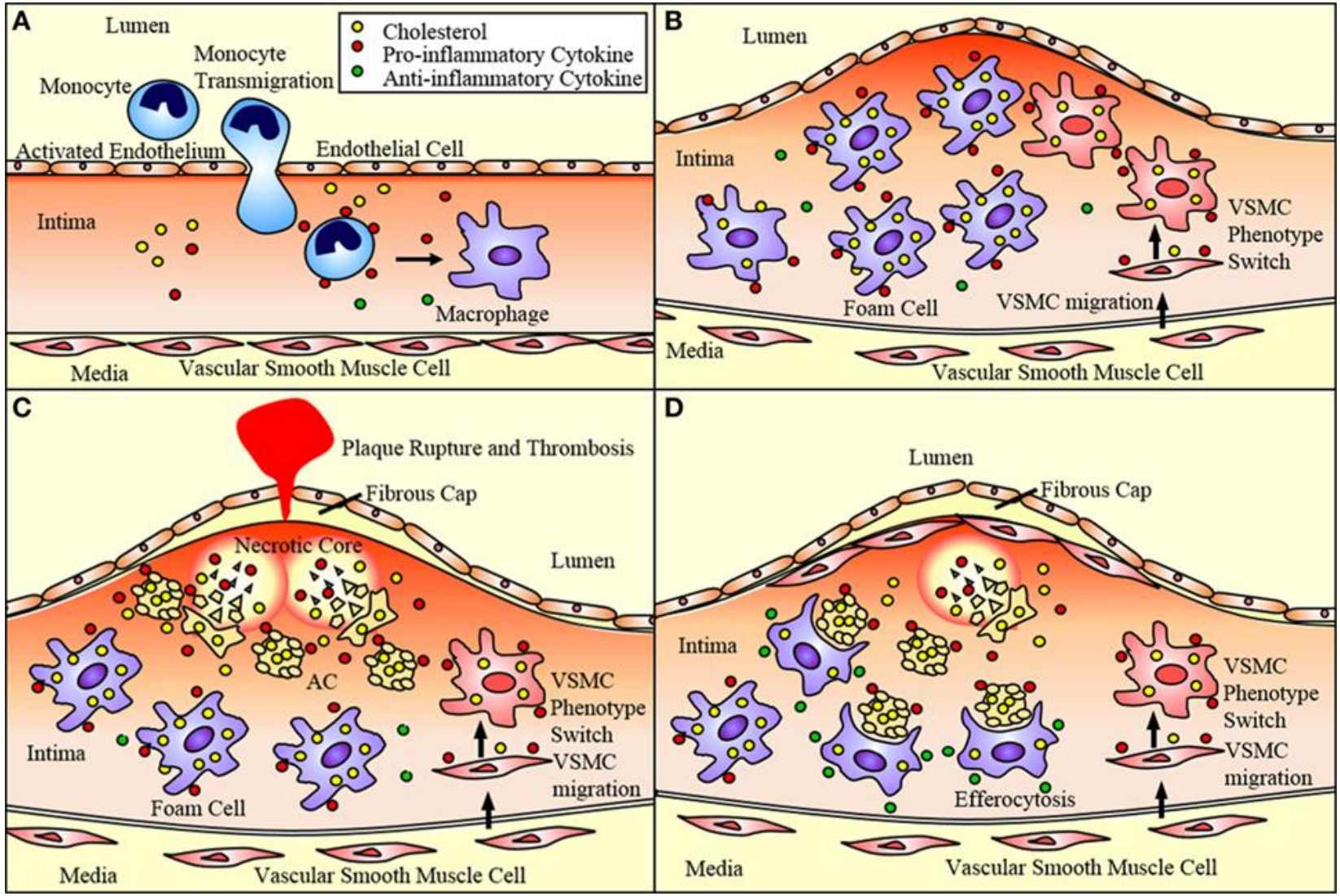
Circulation 1985

INFILTRATO INFIAMMATORIO E FORMAZIONE DELLA PLACCA ATEROSCLEROTICA



Mau T Nguyen et Al, JCM 2019

INFILTRATO INFIAMMATORIO E FORMAZIONE DELLA PLACCA ATEROSCLEROTICA



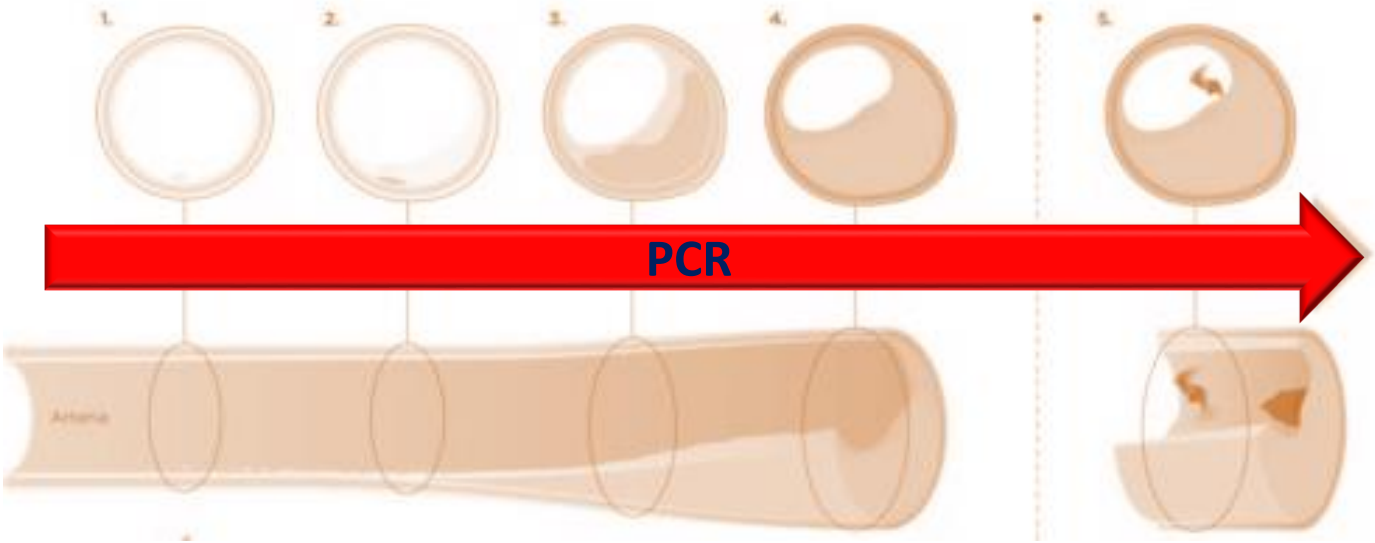
Megan L. Brophy et Al, Front. Cardiovasc. Med. 2017

INFIAMMAZIONE SISTEMICA E CAD

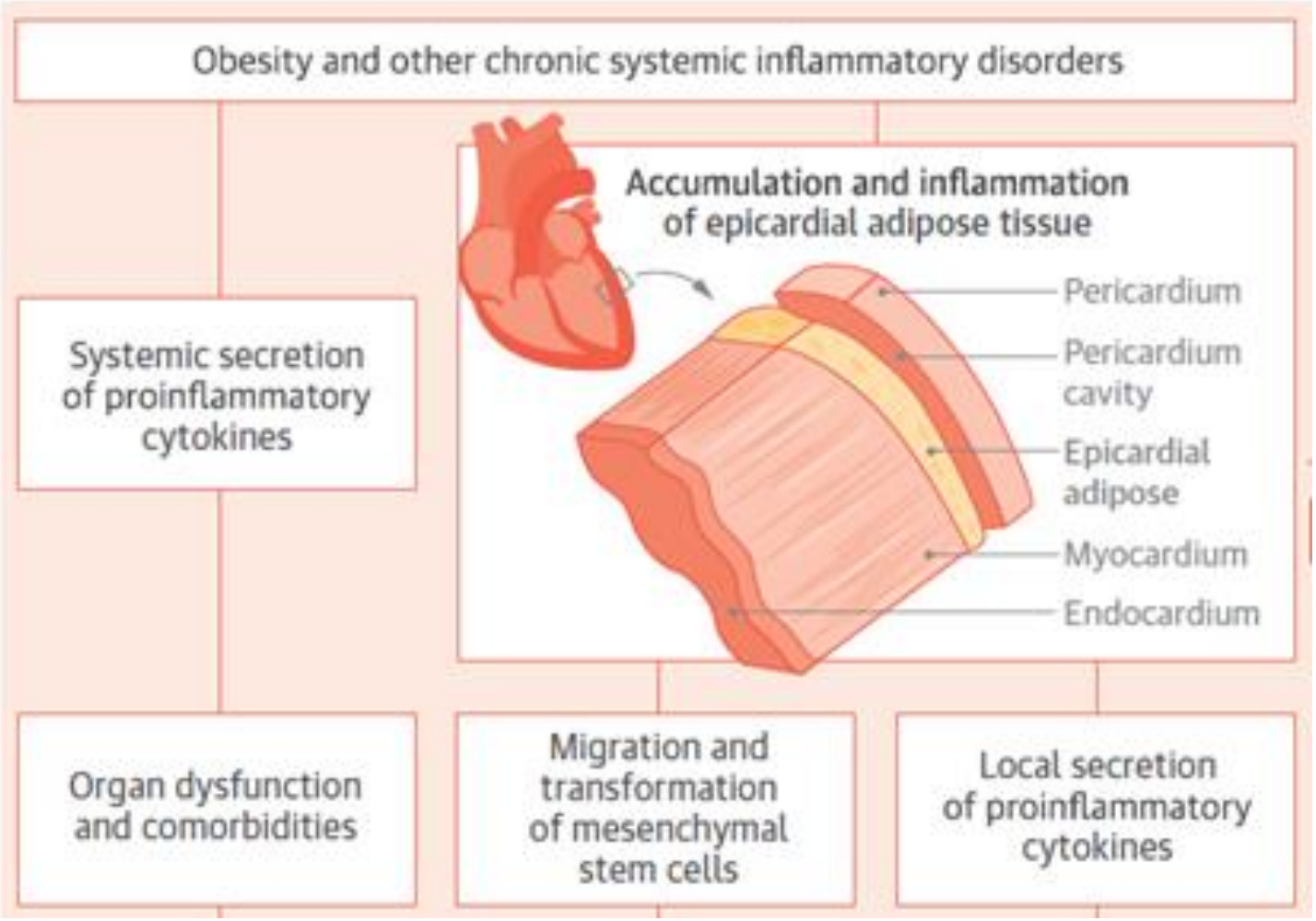
- Il ruolo patogenetico dell'infiammazione è confermato dagli elevati livelli sistemici di PCR ed IL-6

- Elevati livelli di PCR, IL-6 e TNF-α rappresentano un fattore prognostico negativo sia nella popolazione con CAD nota sia nei soggetti sani

- Vi è correlazione diretta tra i livelli di PCR e la severità dell'aterosclerosi in soggetti con CAD stabile

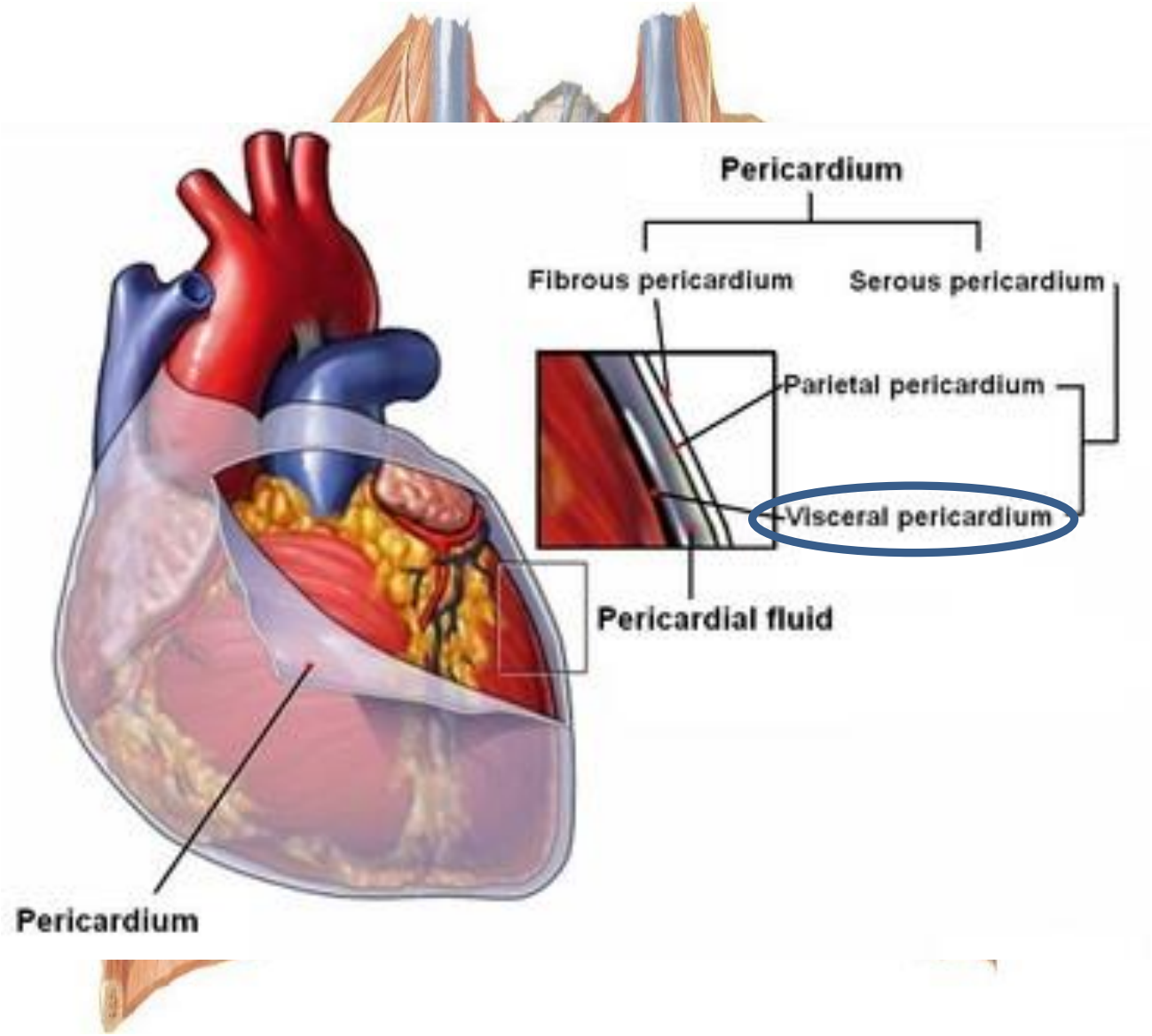


INFIAMMAZIONE SISTEMICA E CAD

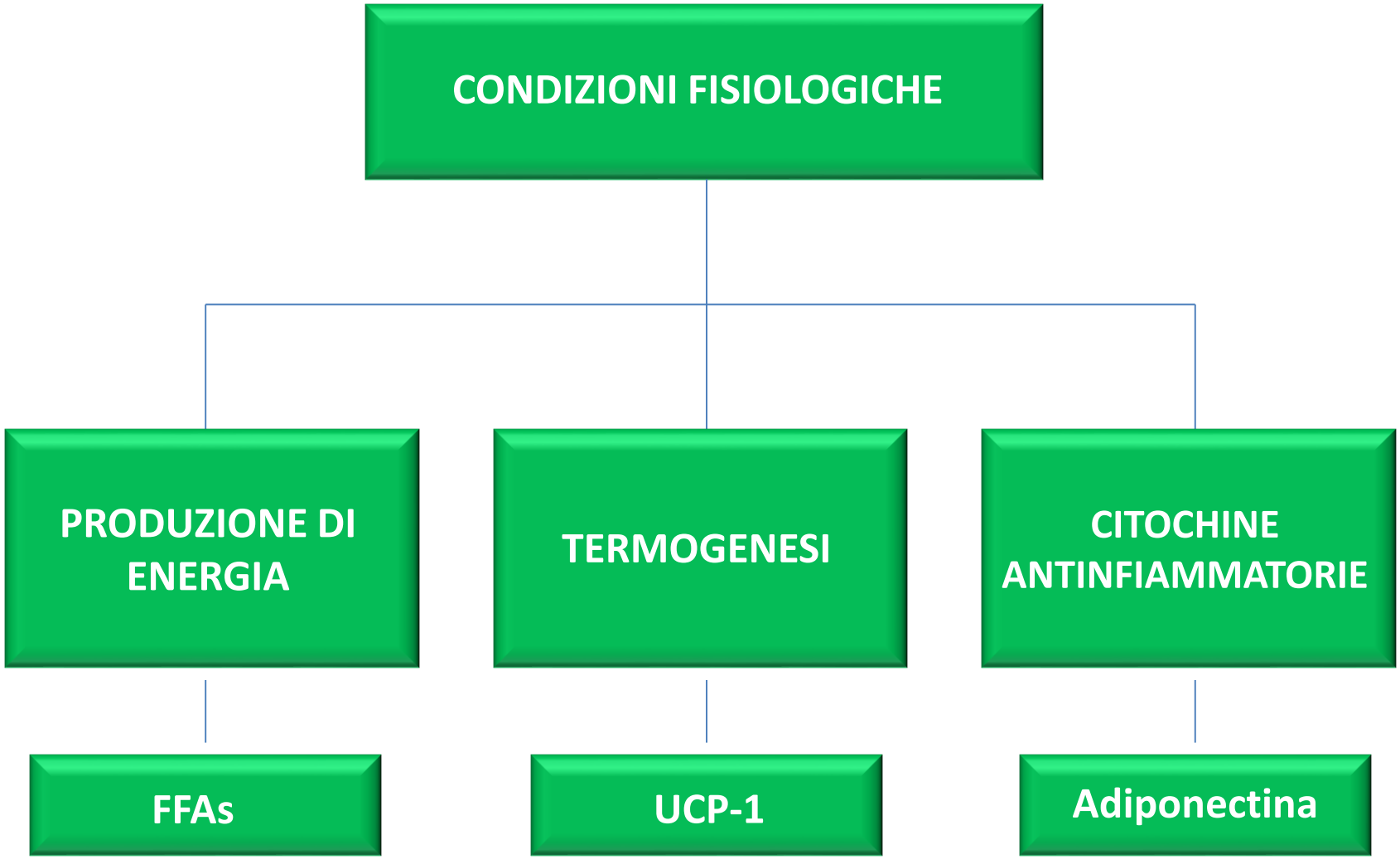


Packer, M. J Am Coll Cardiol. 2018

TESSUTO ADIPOSO EPICARDICO

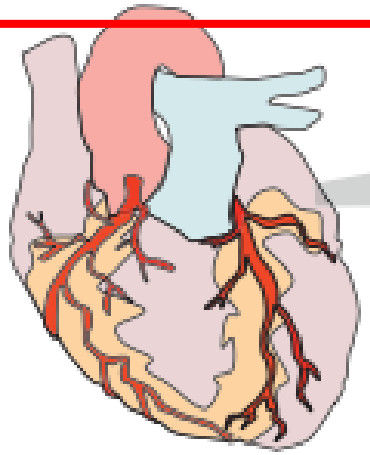


TESSUTO ADIPOSO EPICARDICO: UN ORGANO METABOLICAMENTE ATTIVO

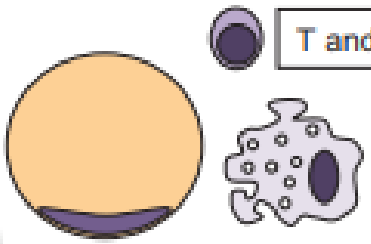


IN CONDIZIONI PATOLOGICHE

Dysfunctional epicardial adipose tissue:
↑ thickness
↑ volume



Hyperthrophic adipocyte

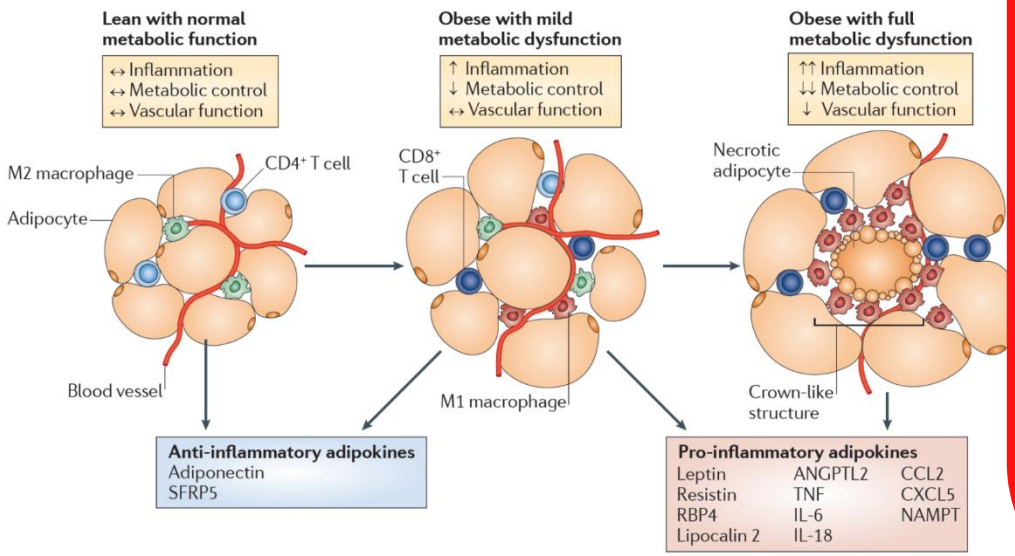


↑ JNK
↑ NF-κB
↑ inflammasome activity

↑ IL-1β, -6, -8
↑ TNFα
↑ CCL-2, -5, -13
↑ CXCL-1
↑ TLR-2 and -4
↑ sPLA2-IIA
↑ Leptin
↑ Resistin
↑ Visfatin
↑ FABP4
↑ RBP4
↑ miRNA

↓ Adiponectin
↓ Omentin
↓ Adrenomedullin
↓ Ang 1-7
↓ GLUT-4
↓ miRNA

Ansaldo et al. Int J Card 2018



Iacobellis et al. Trends in Endocrinology and Metabolism 2011

Continued as Proceedings of the Royal Society of Medicine • 1908 – 1977

Medico-Chirurgical Transactions

Now published as Journal of the Royal Society of Medicine • 1978 – current

FATTY DISEASES OF THE HEART.

BY

RICHARD QUAIN, M.D.

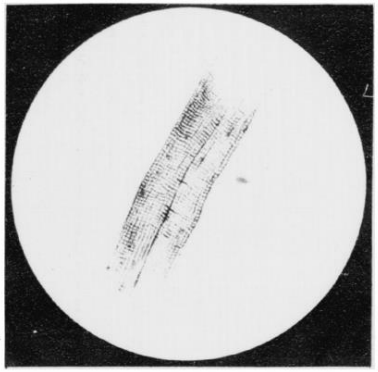
ASSISTANT PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

COMMUNICATED BY

C. J. B. WILLIAMS, M.D. F.R.S.

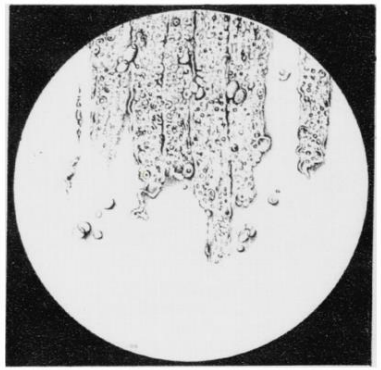
Received January 22d.—Read March 12th, 1850.

Fig 1



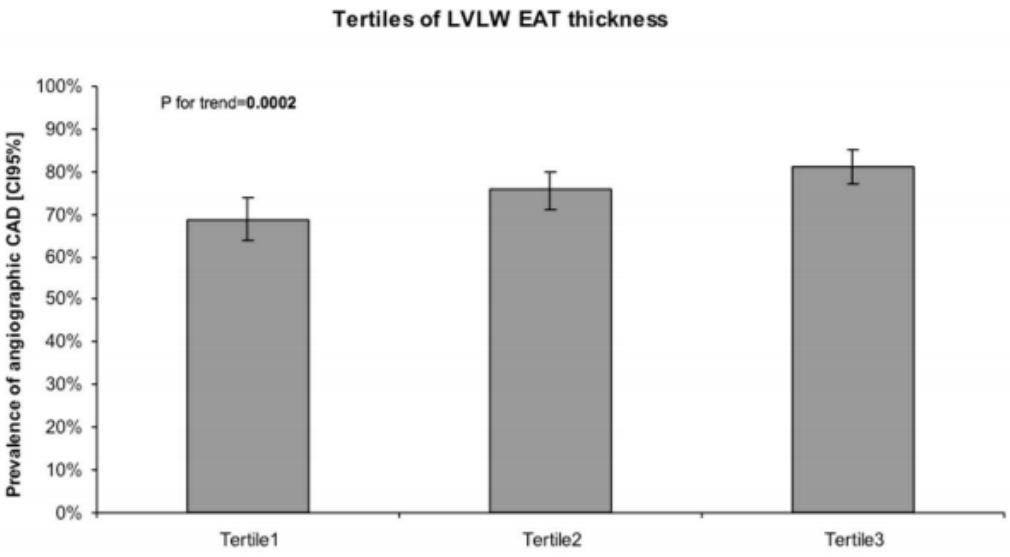
Muscular fibre of the healthy human heart (400)

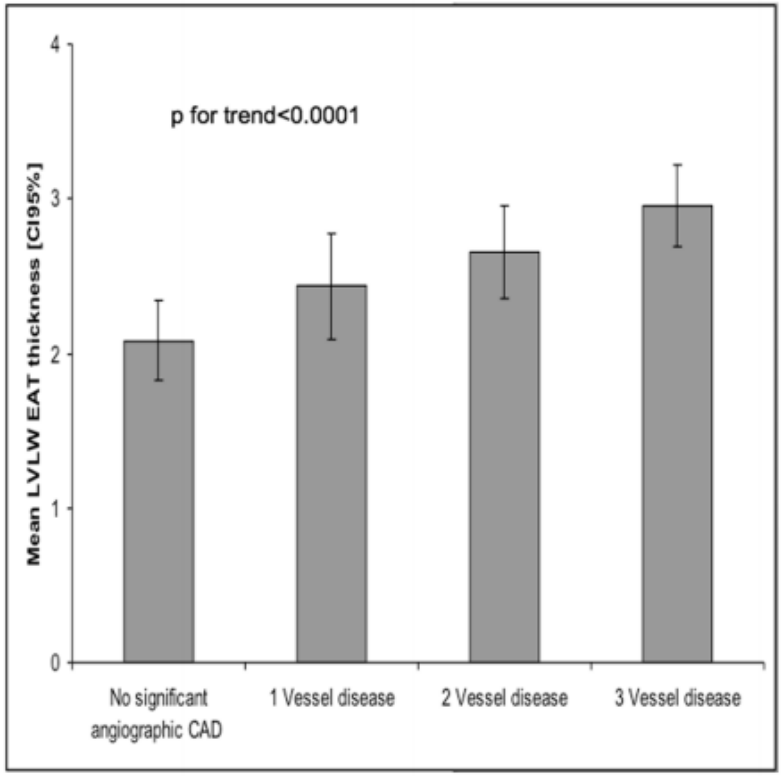
Fig 2



Fatty Degeneration of the fibres of the human heart (400)

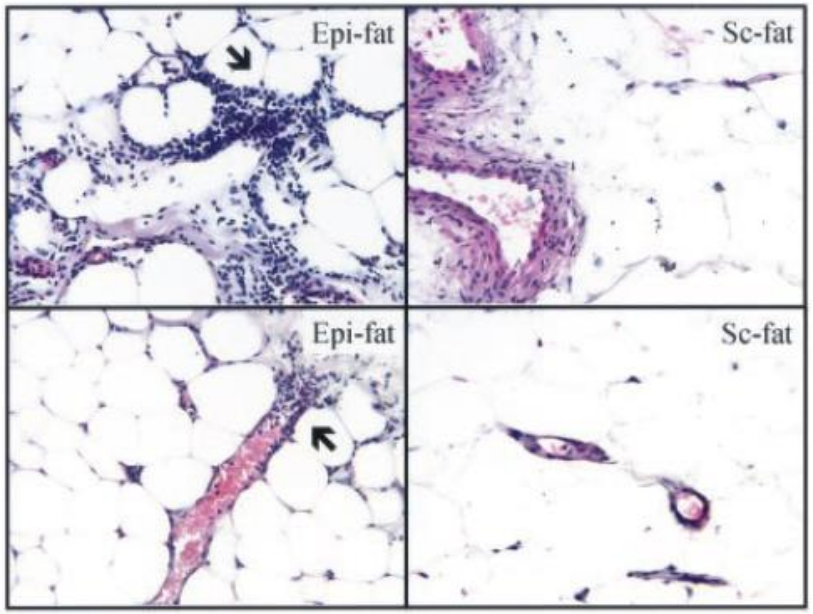
SPESSORE DEL TESSUTO ADIPOSO EPICARDICO E CAD

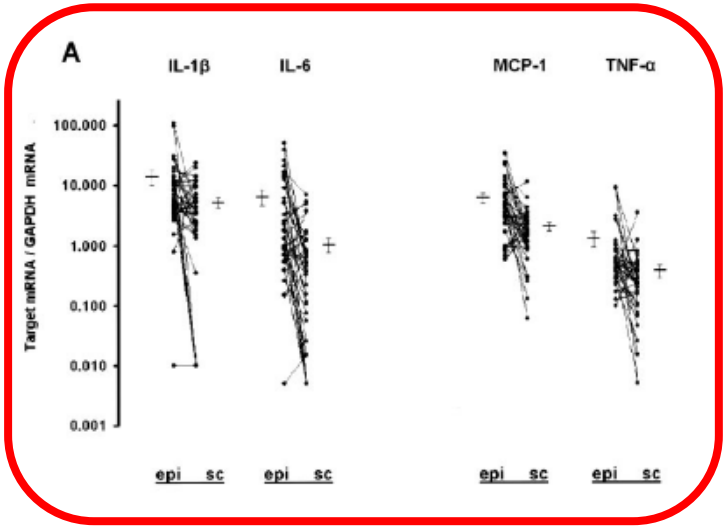


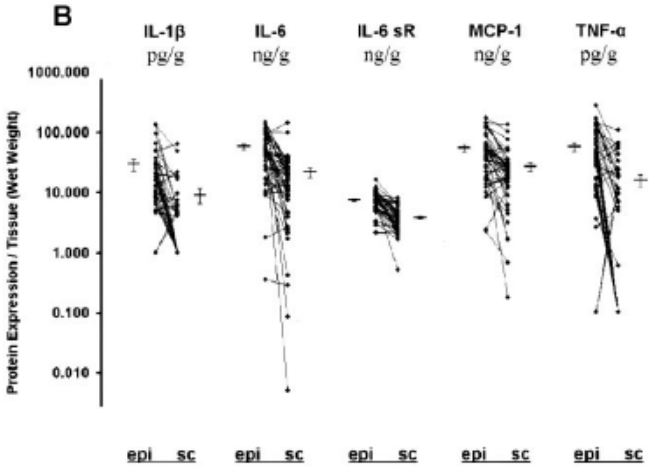


Picard et Al, Plos One 2014

INFILTRATO INFIAMMATORIO DEL TESSUTO ADIPOSO EPICARDICO E CAD

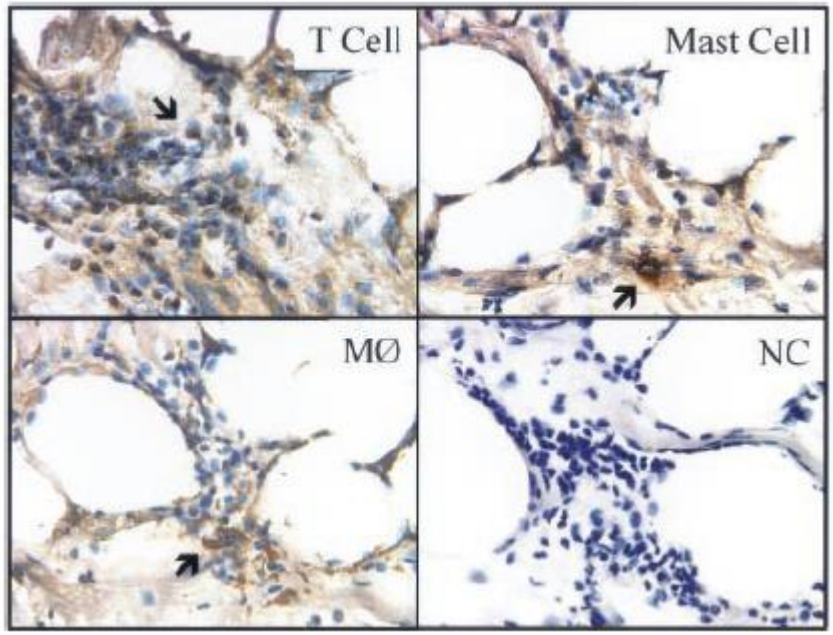




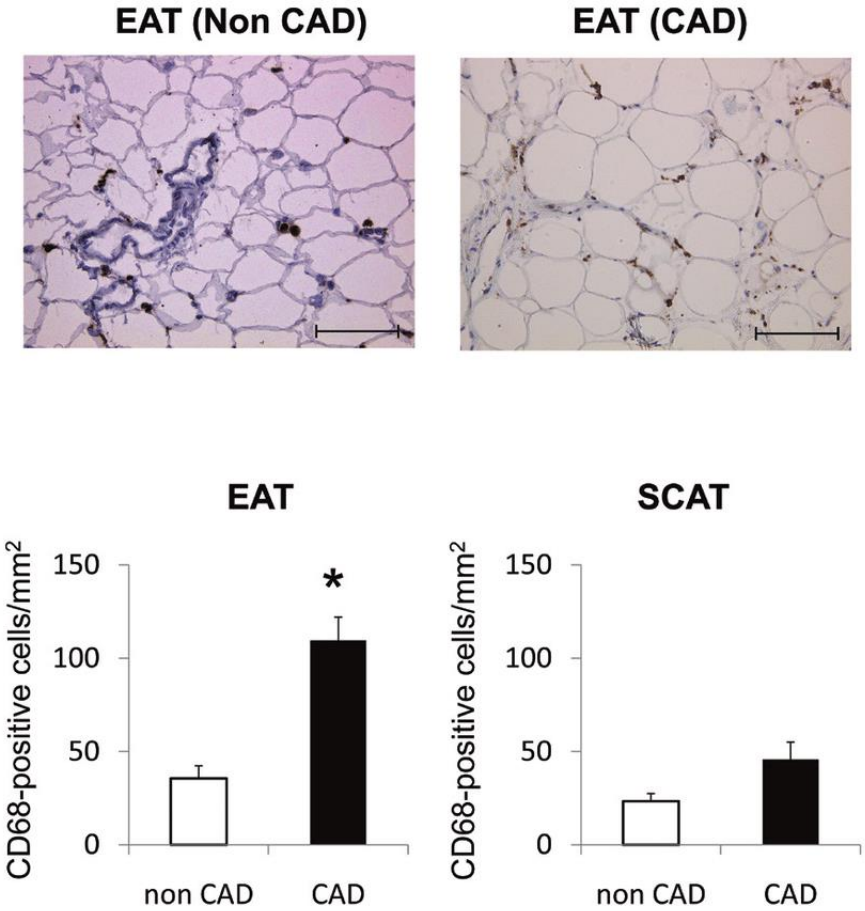


Mazurek et Al, Circulation 2003

INFILTRATO INFIAMMATORIO NEL TESSUTO ADIPOSO EPICARDICO

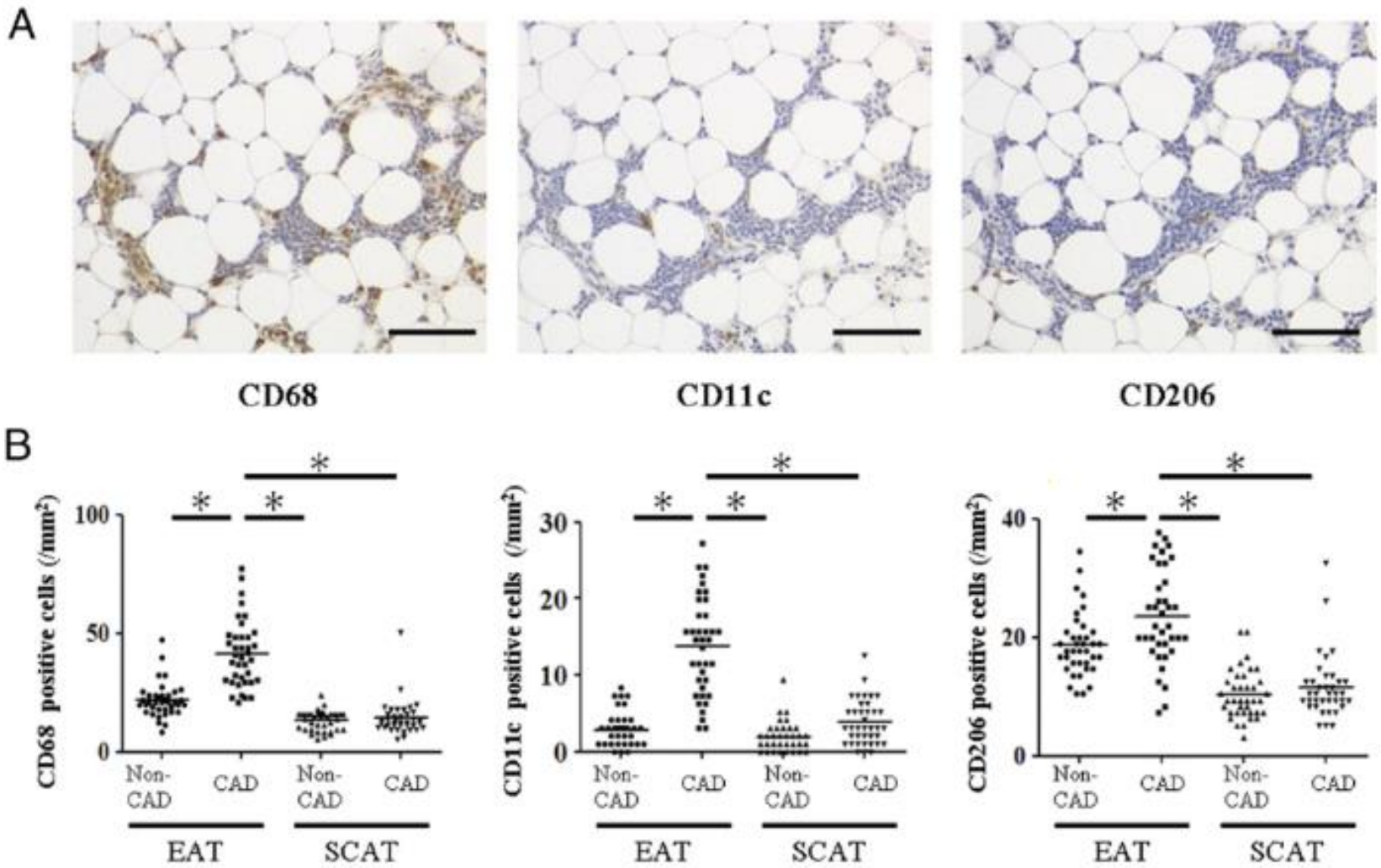


Mazurek et Al Circulation 2003



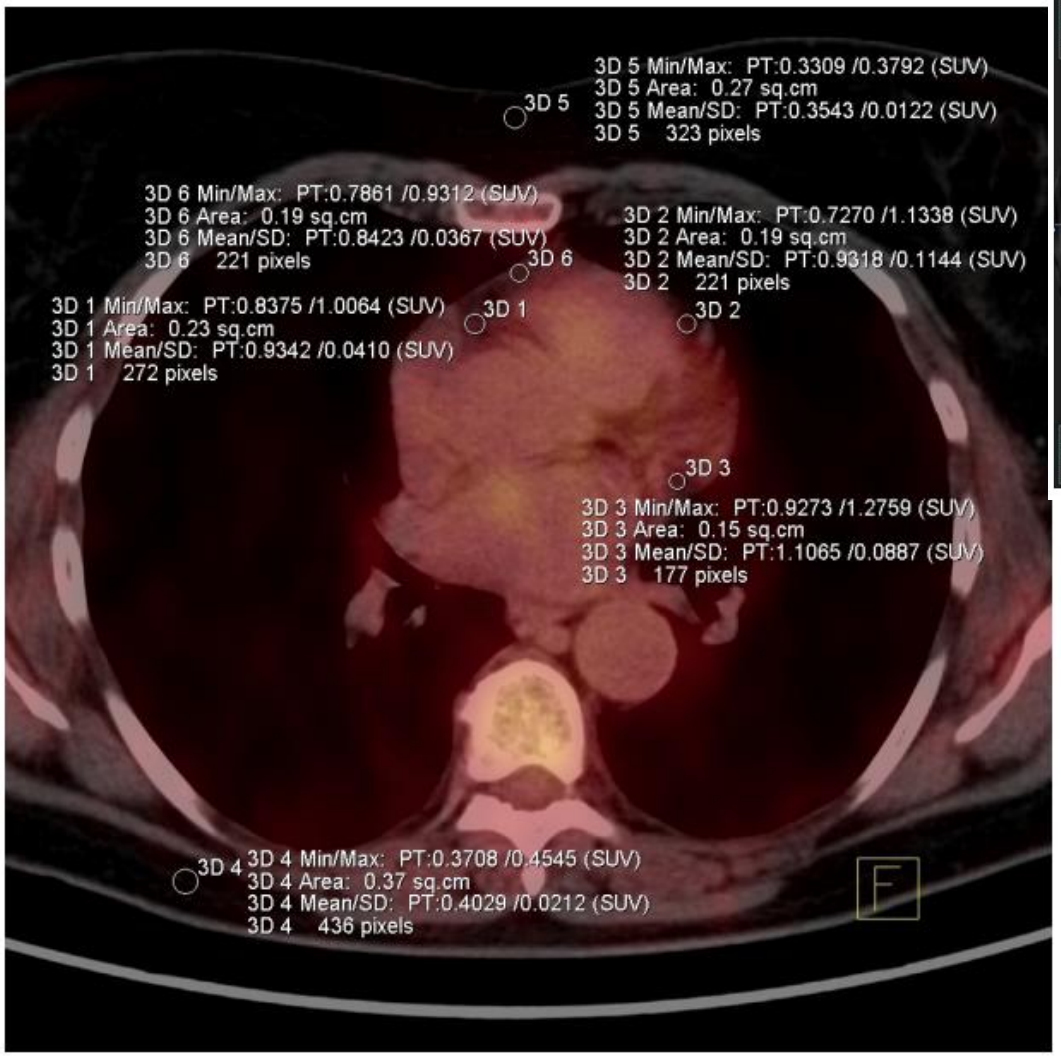
Hirata et Al JACC 2011

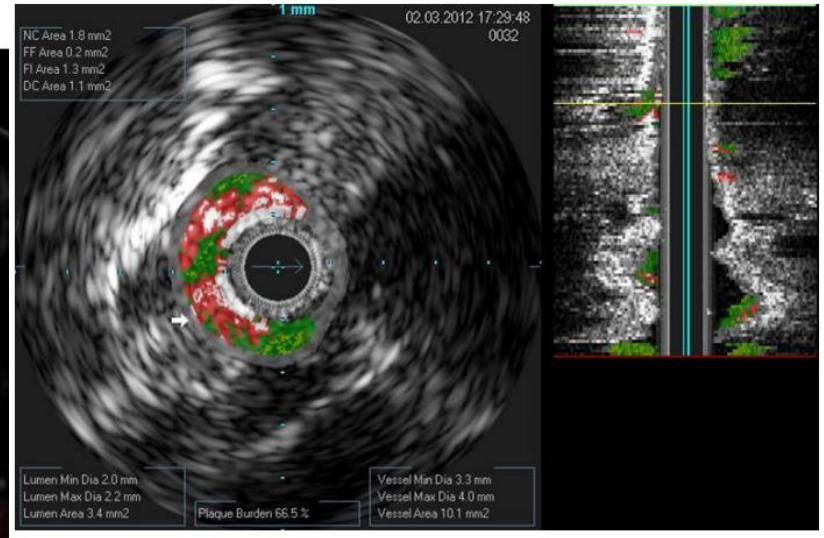
POLARIZZAZIONE DEI MACROFAGI IN SENSO PRO-INFIAMMATORIO E CAD

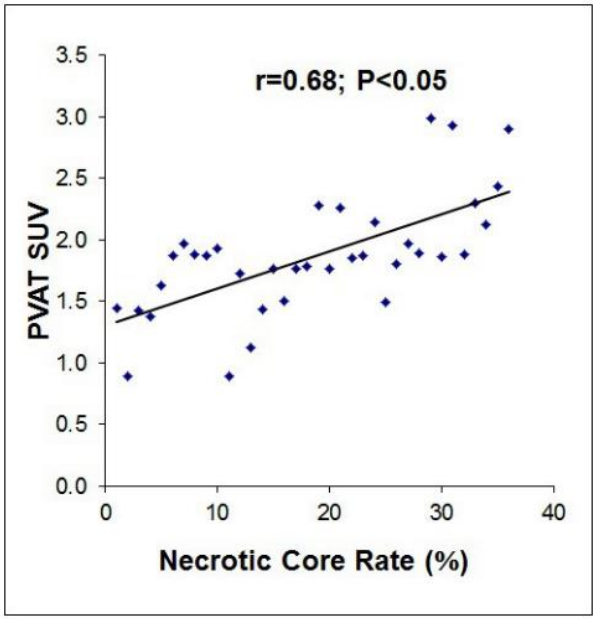


Hirata et Al, JACC 2011

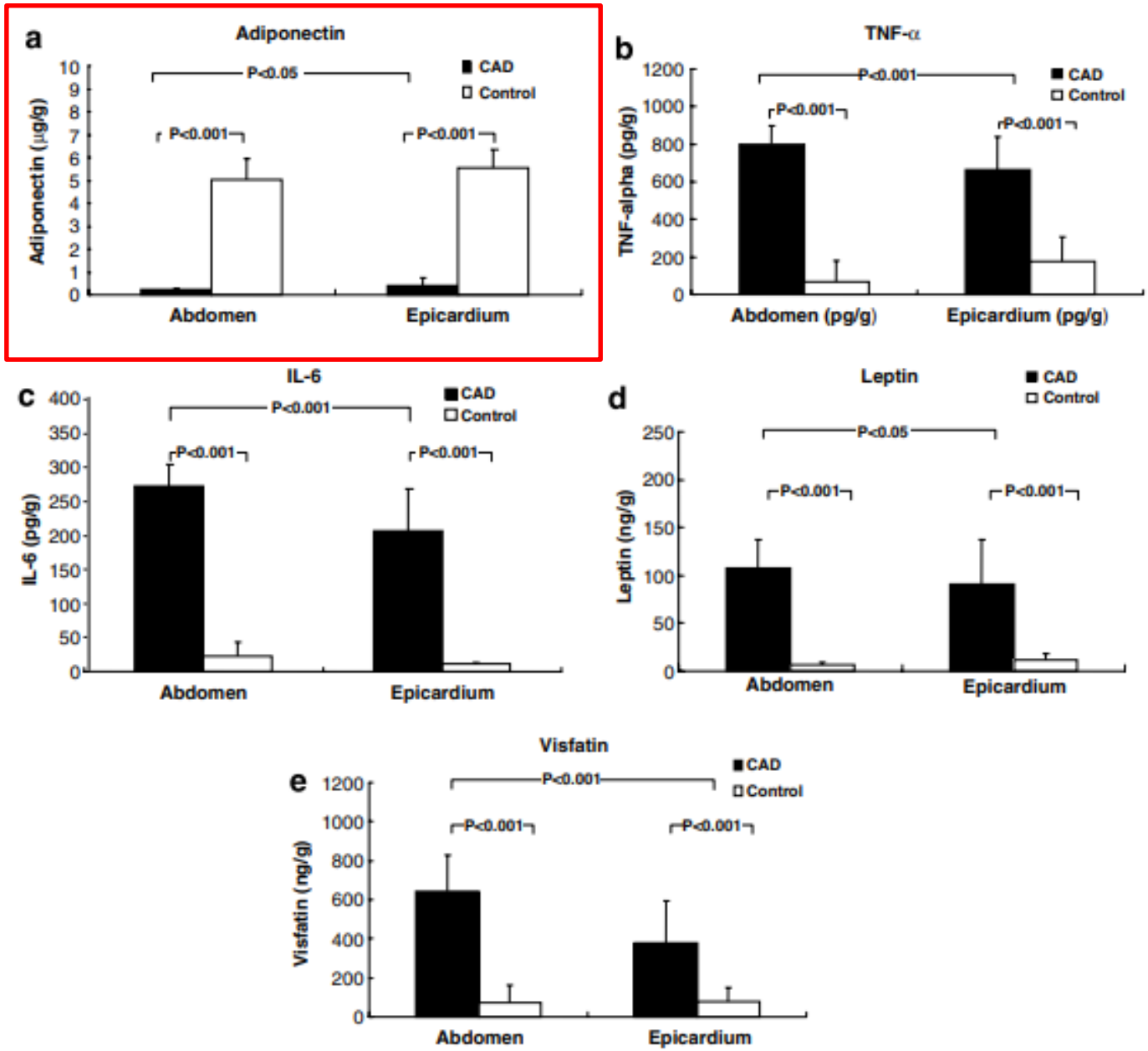
PET-TC DEL TESSUTO ADIPOSO EPICARDICO IN PAZIENTI CON N-STEMI



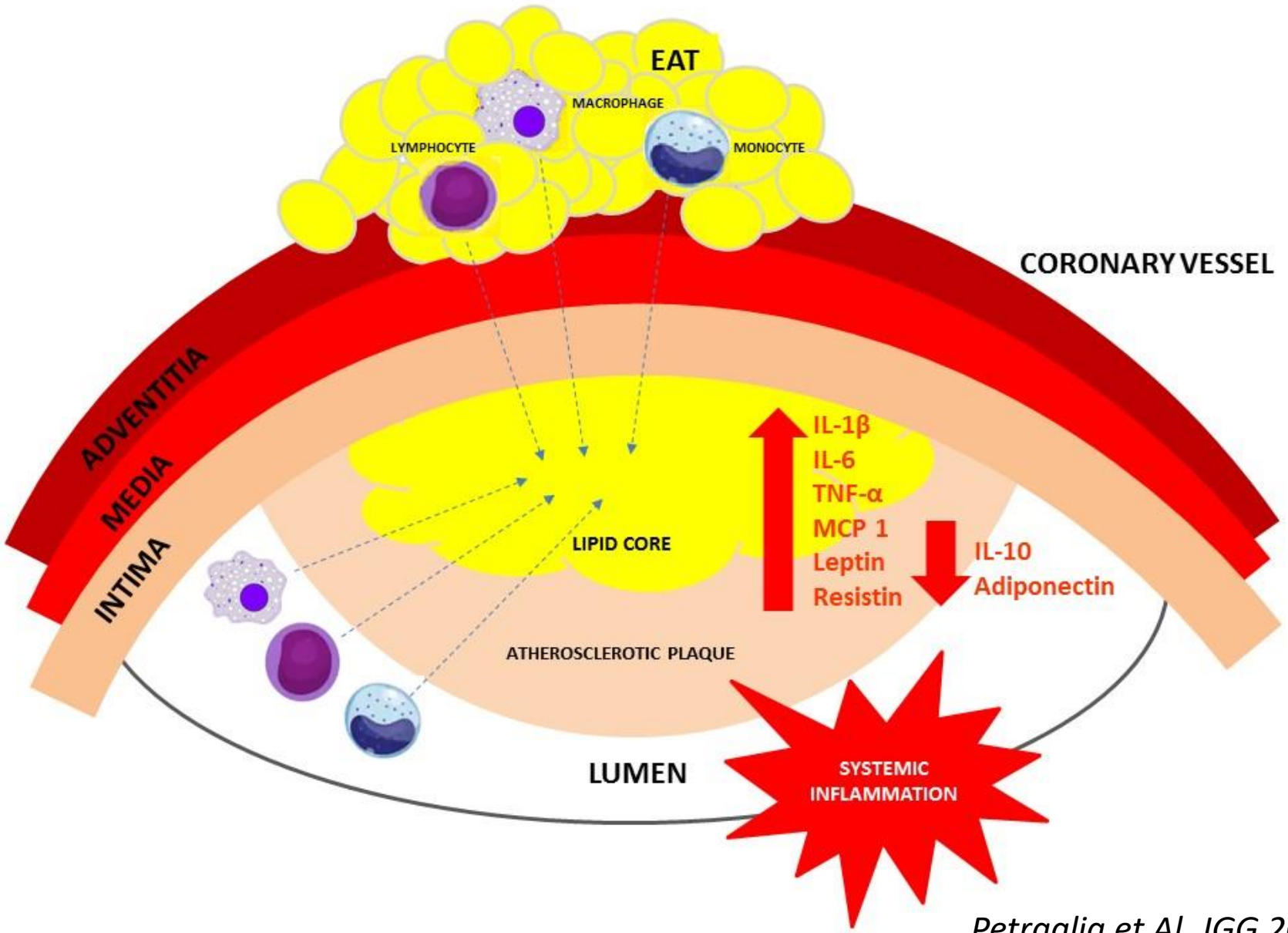




Mazurek et Al, Polish Heart Journal 2013

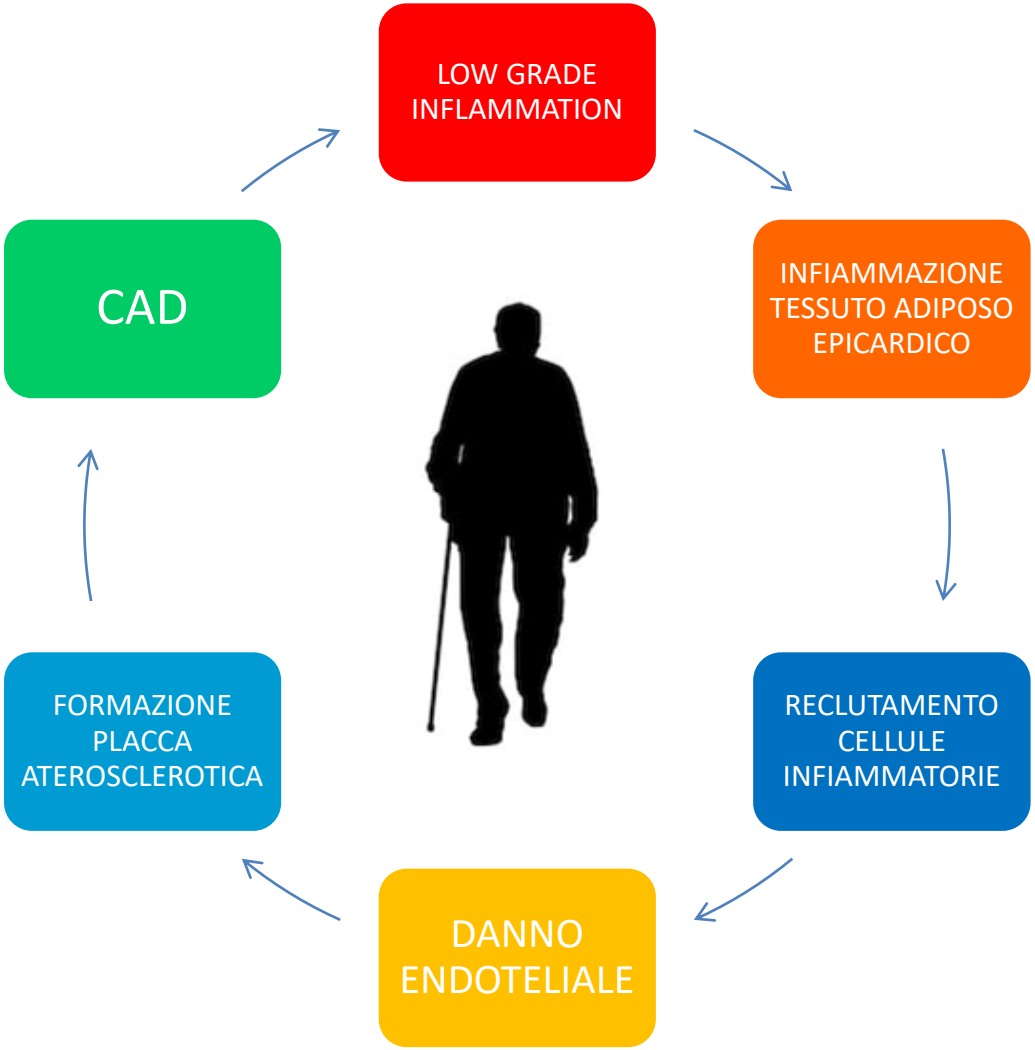


Cheng et Al, Int J Obes 2008

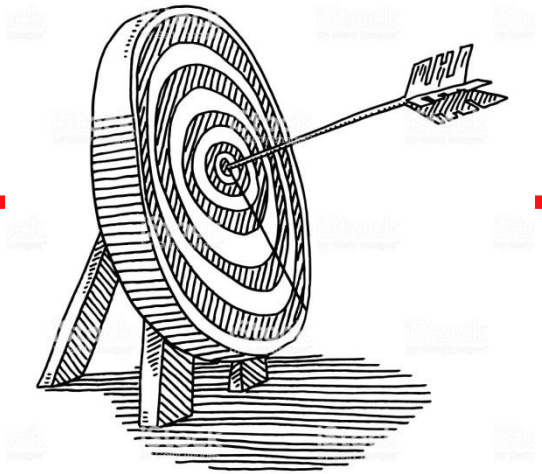


Petraglia et Al, JGG 2019

INFIAMMAZIONE SISTEMICA , TESSUTO ADIPOSO EPICARDICO E CAD



TESSUTO ADIPOSO EPICARDICO COME TARGET TERAPEUTICO



- DIETA E STILI DI VITA
- STATINE
- ANTIDIABETICI ORALI (Liraglutide-Sitagliptin)
- Micro-RNAs