

“L’inquadramento clinico della sindrome metabolica”

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Angelo Avogaro: Conflitti di Interesse

- Novo Nordisk
- Amgen
- Astrazeneca
- Bayer
- Boehringer-Ingelheim
- Servier
- Lilly
- Sanofi
- Takeda
- Mediolanum
- Merck Sharp & Dohme
- Janssen
- Menarini Diagnostici
- Novartis
- Bruno Farmaceutici
- Vifor Pharma
- Allergan
- Dayki-Sankio

The Metabolic Syndrome: Nicknames

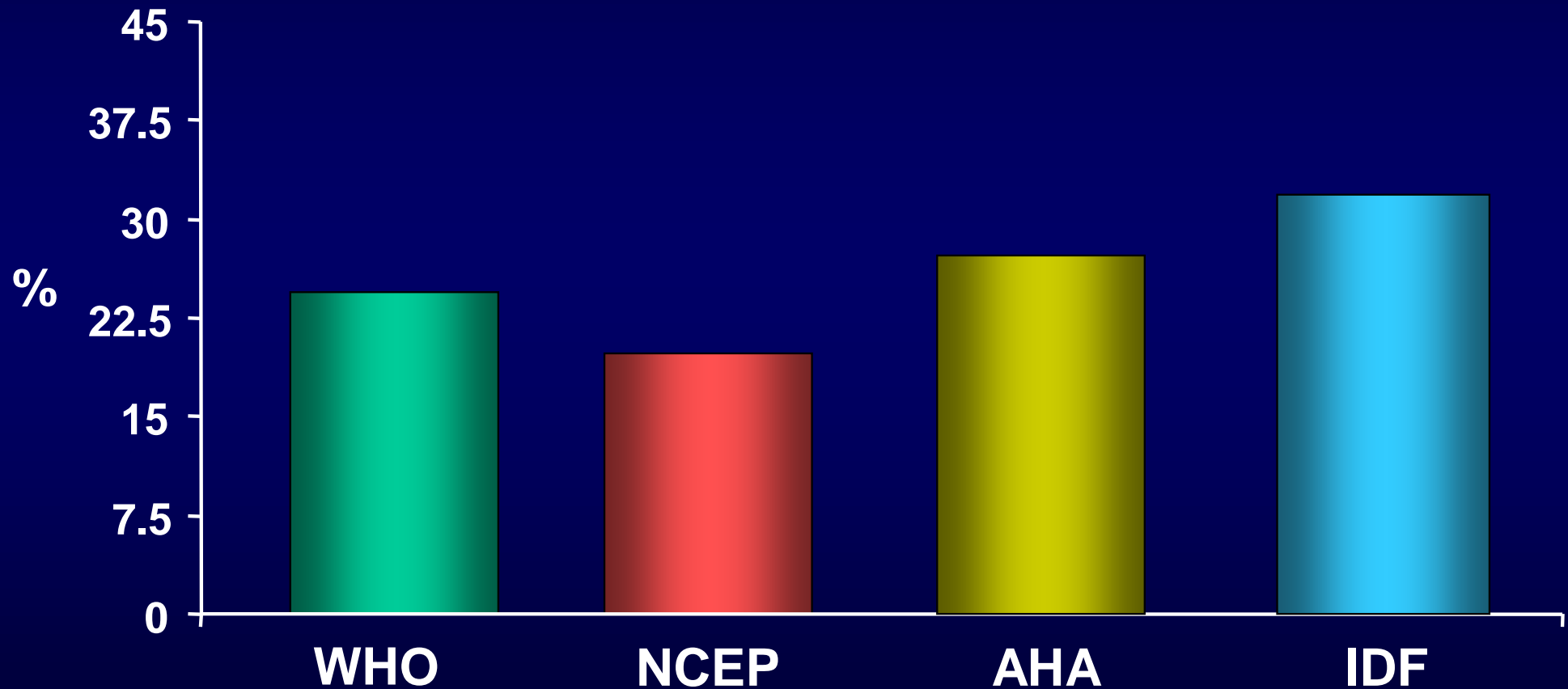
- Syndrome X
- Insulin Resistance Syndrome
- Atherometabolic Syndrome
- Cardiometabolic Syndrome
- New World Syndrome, Deadly Quartet

The Metabolic Syndrome: Recommended Diagnostic Criteria

	WHO 1+2	NCEP Any 3	IDF 1+2	AHA Any 3
High glucose or ins. resist.	necessary			
High glucose		V	V	V
Low HDL-C or high TG	V			
Low HDL-C		V	V	V
High TG		V	V	V
High BP	V	V	V	V
Obesity or high waist	V			
High waist		V	necessary	V
Microalbuminuria	V			

The Metabolic Syndrome: Size of the Problem

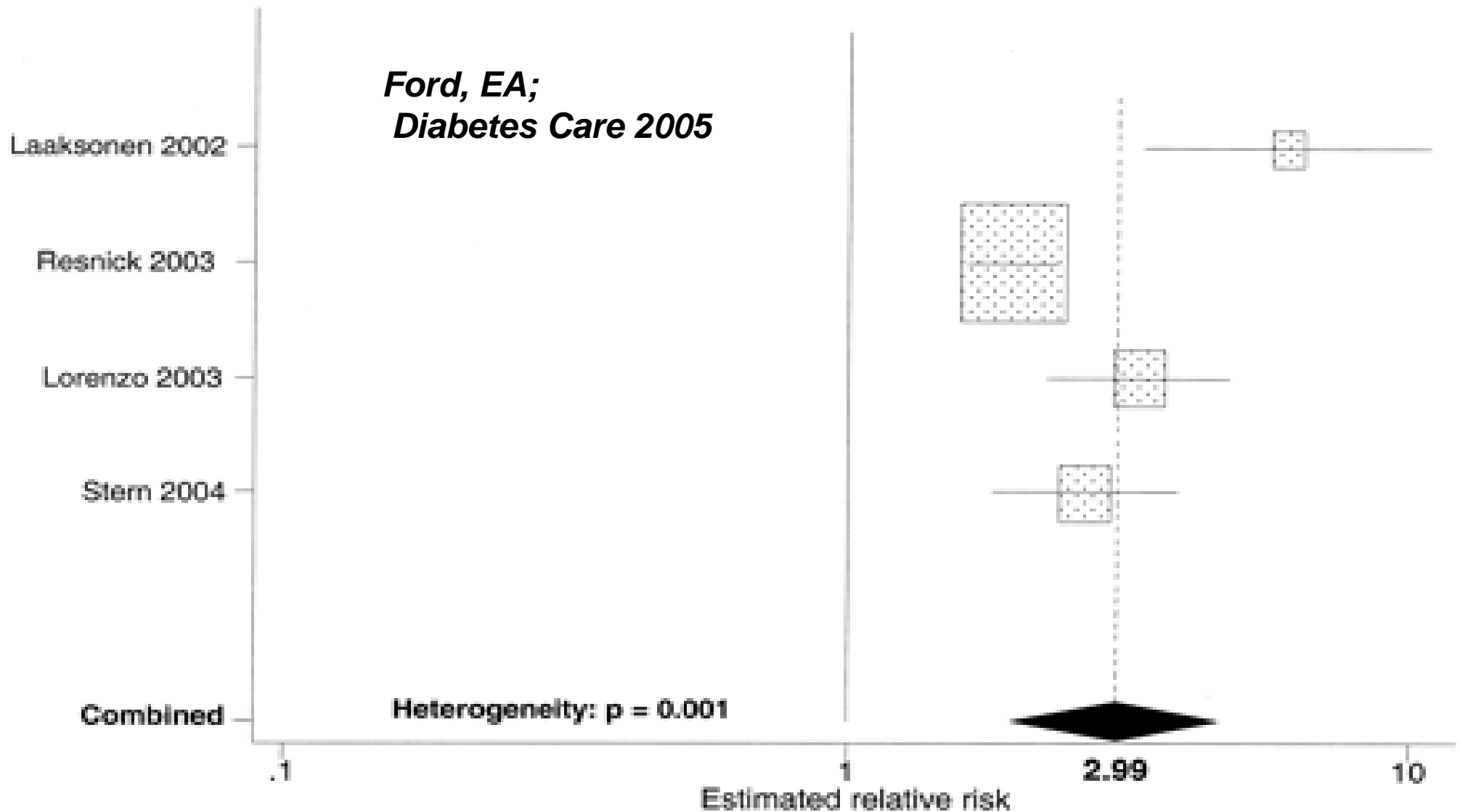
(Bruneck Study; age 40-79; n=919; unpublished)

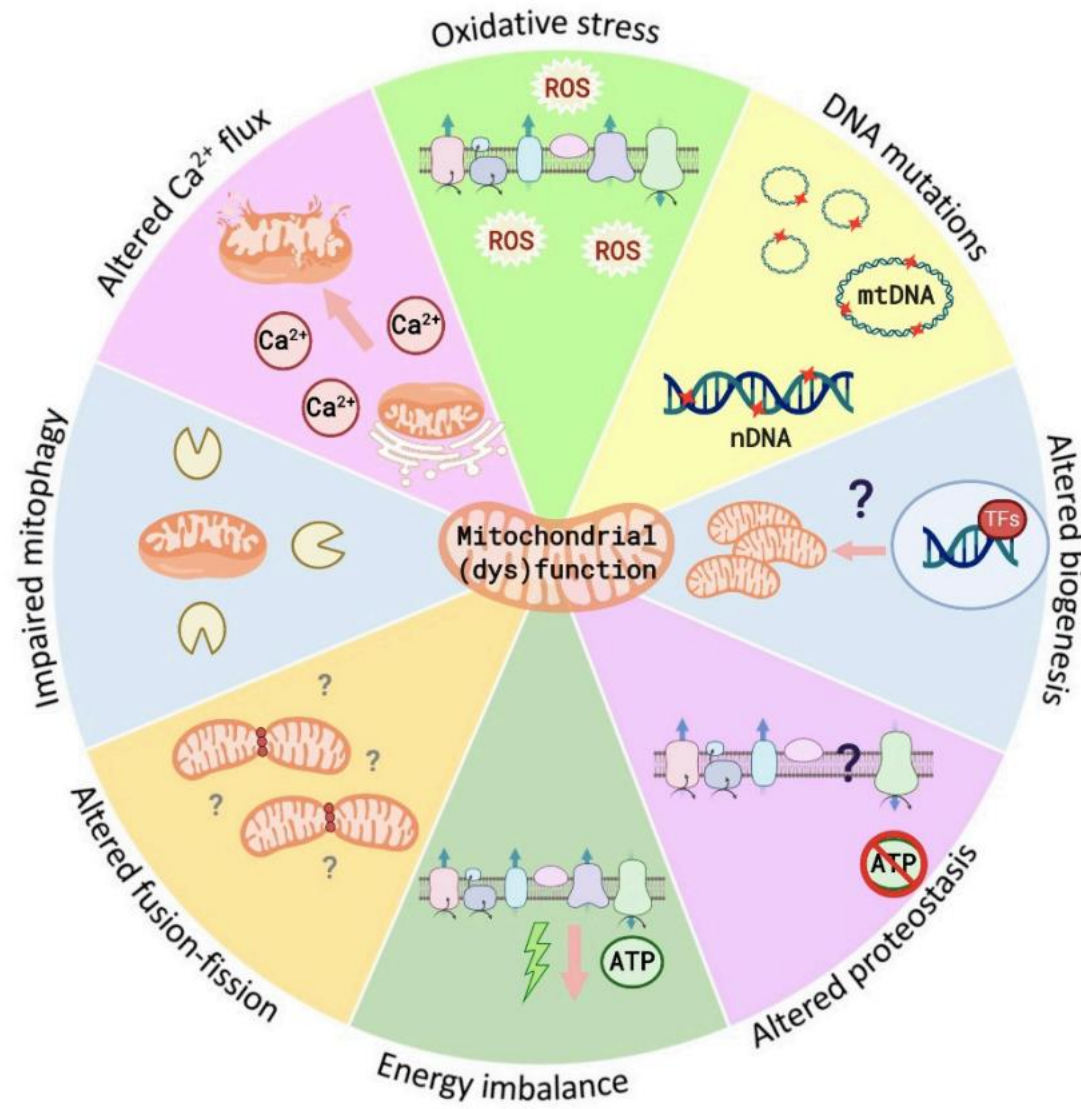


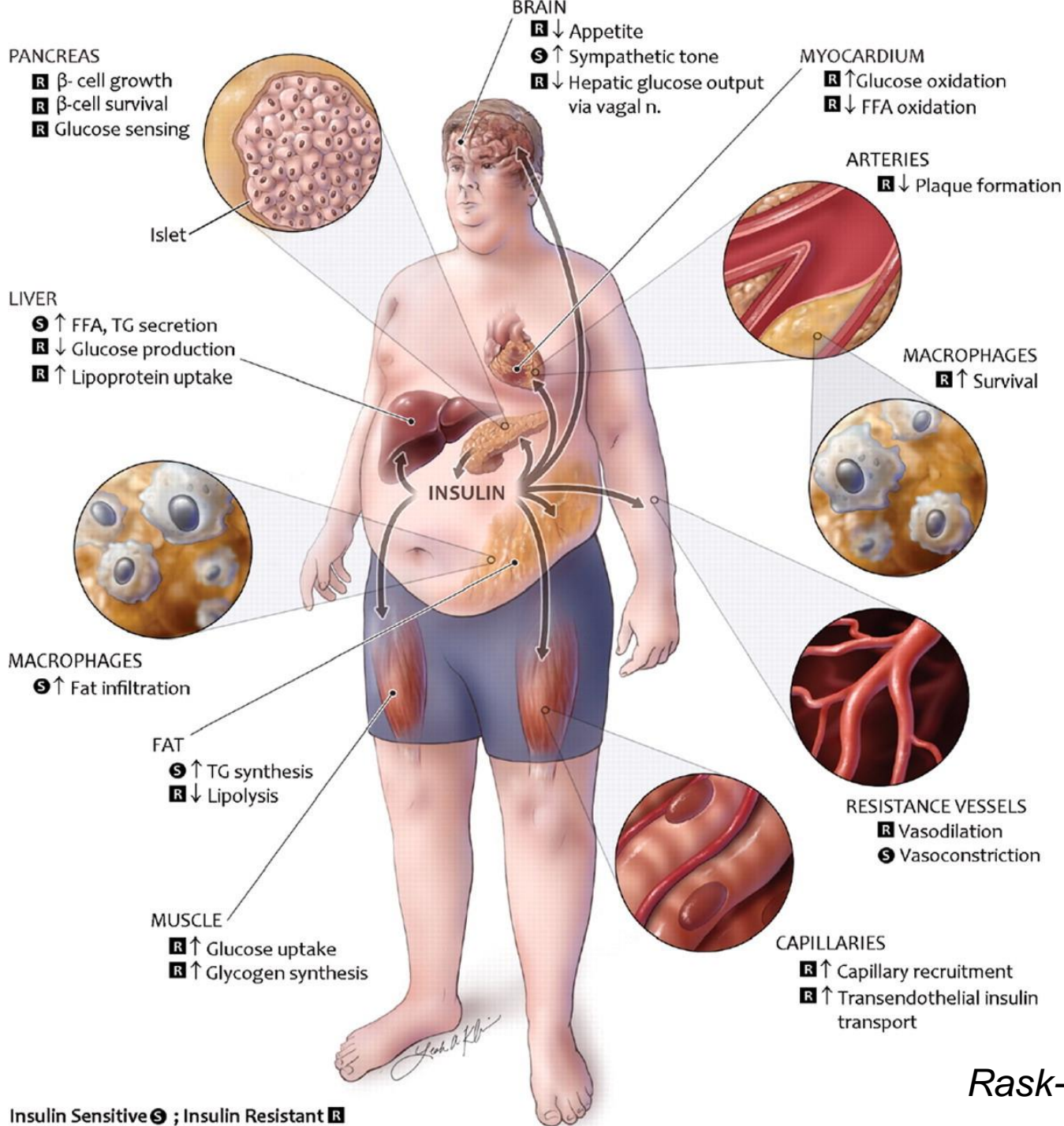
Le virtù della Sindrome Metabolica

- Induce a ricercare le altre componenti quando una è presente
- Identifica soggetti ad alto rischio per malattia cardiovascolare
- Il fenotipico si modifica nel tempo (passaggio da IFG o IGT a diabete)
- Aiuta ad identificare comorbidità

The Metabolic Syndrome as a Predictor of Type 2 Diabetes





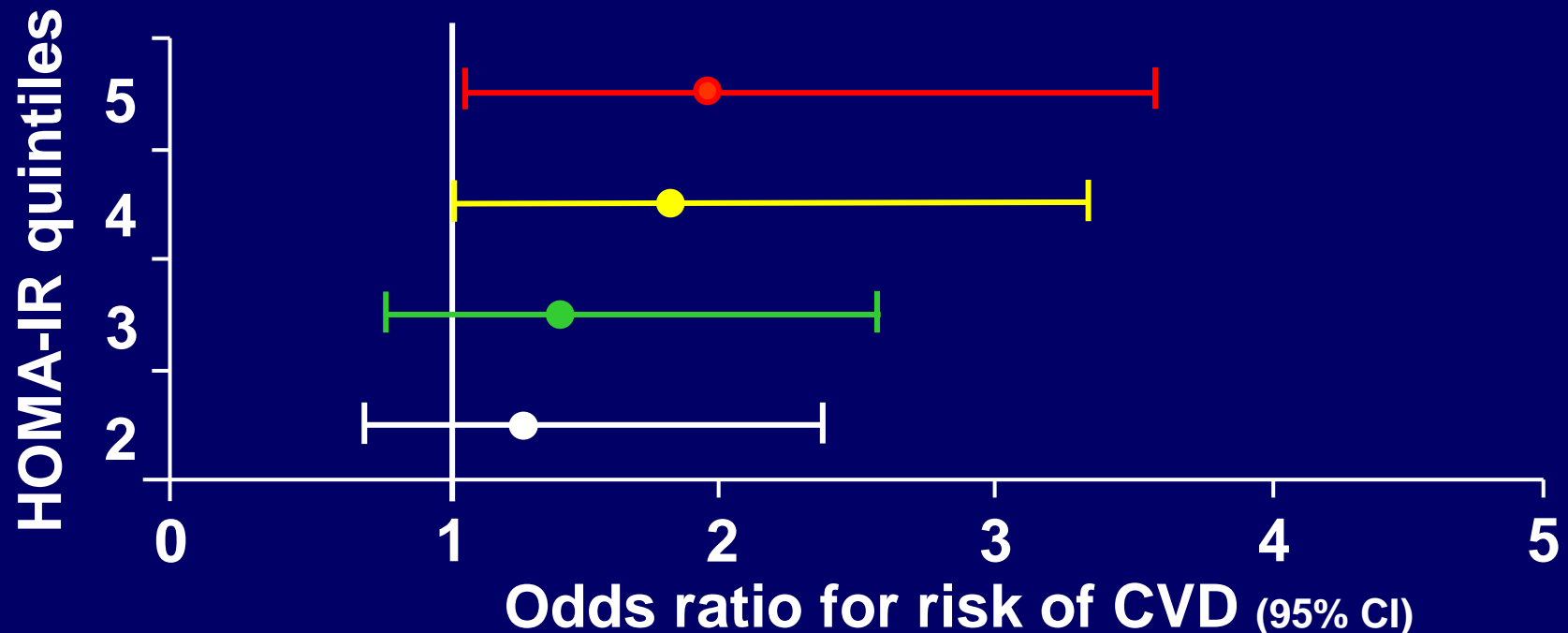


Insulin Sensitive **S** ; Insulin Resistant **R**

Rask-Madsen et al. ATVB 2012

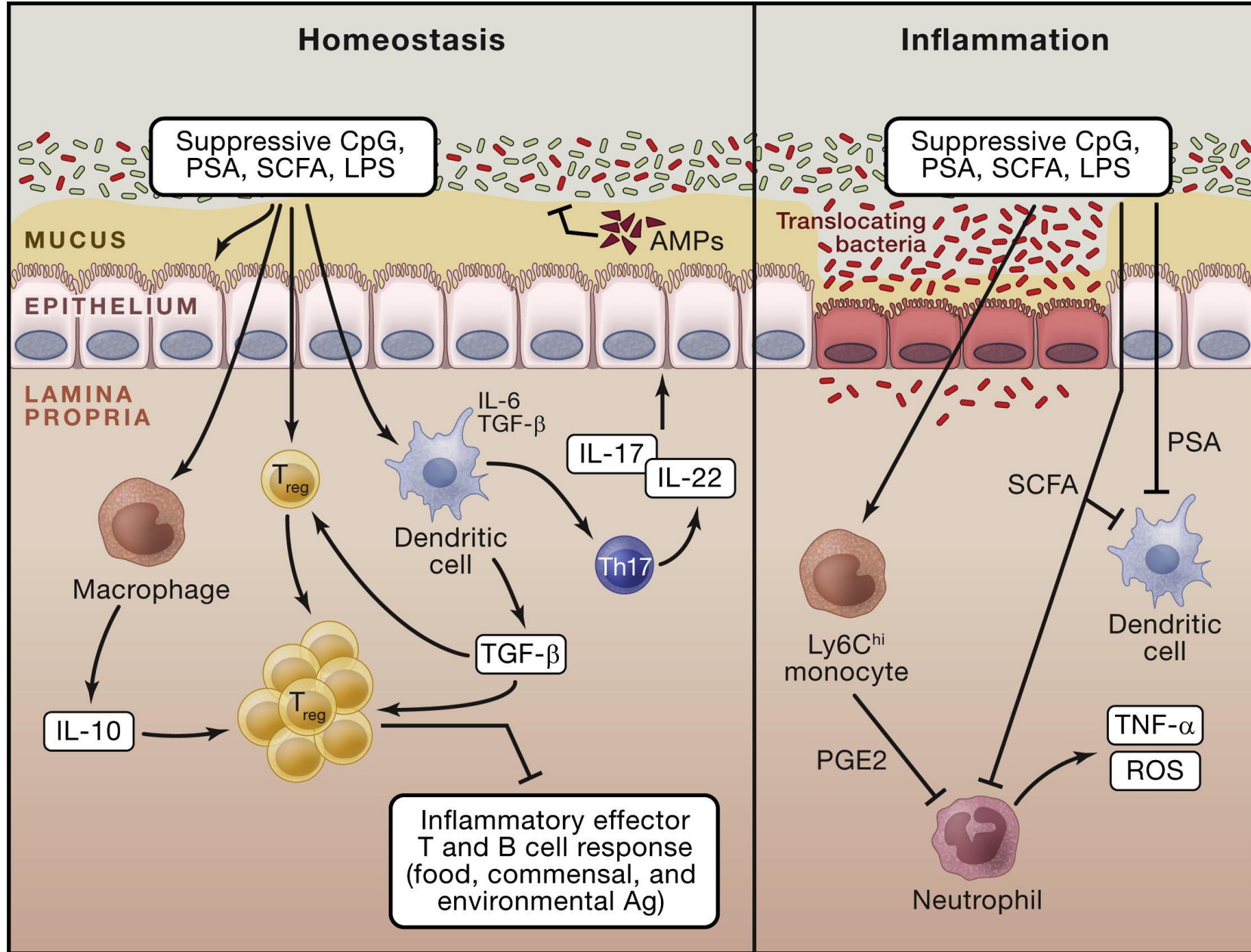
Increased insulin resistance is associated with increased CV risk

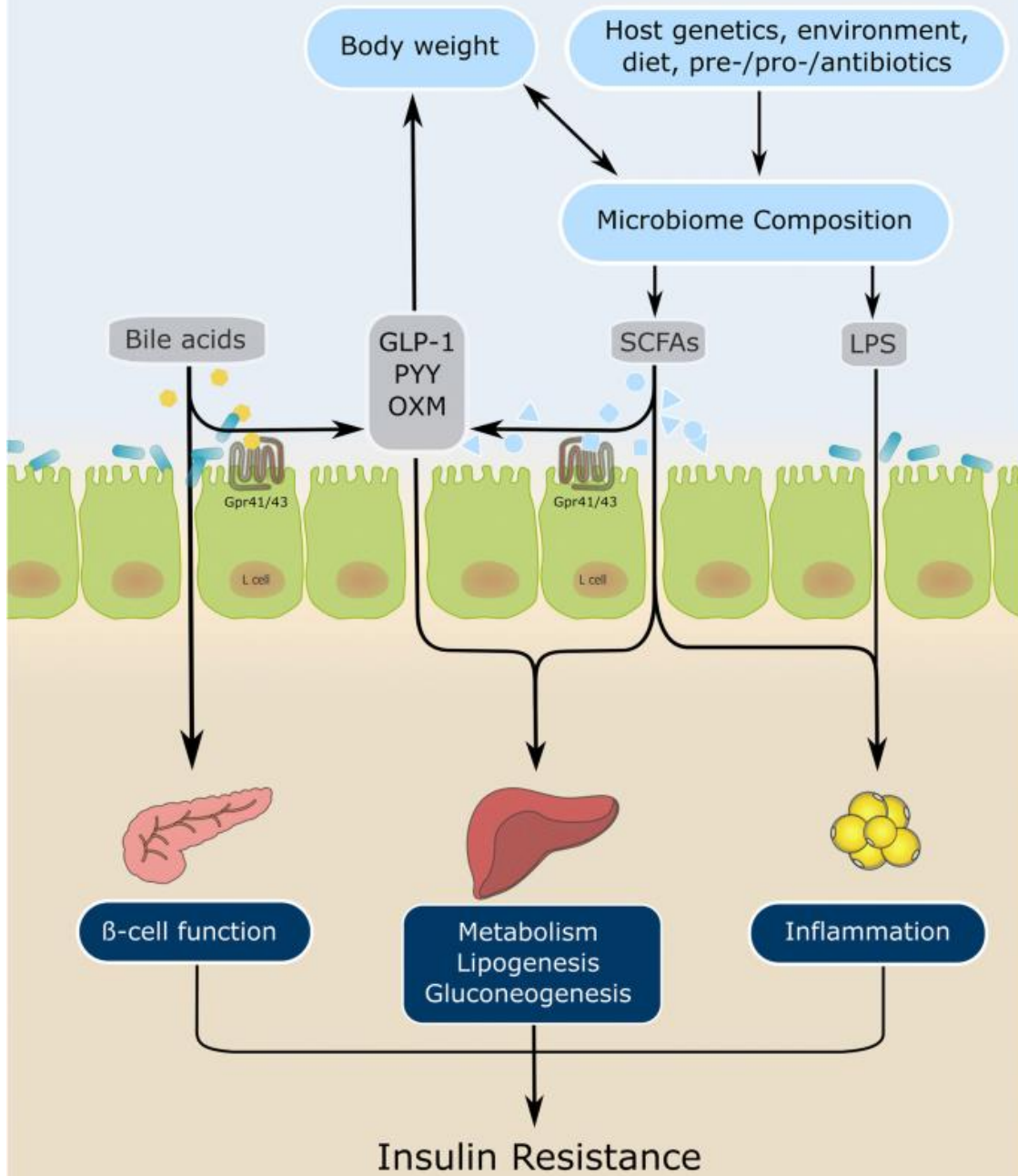
San Antonio Heart Study: HOMA-IR and 8-year risk of CV outcomes



Quintile of HOMA-IR adjusted for age, sex, ethnicity, LDL, triglyceride, HDL, systolic blood pressure, smoking, alcohol consumption, leisure time exercise and waist circumference (median split)

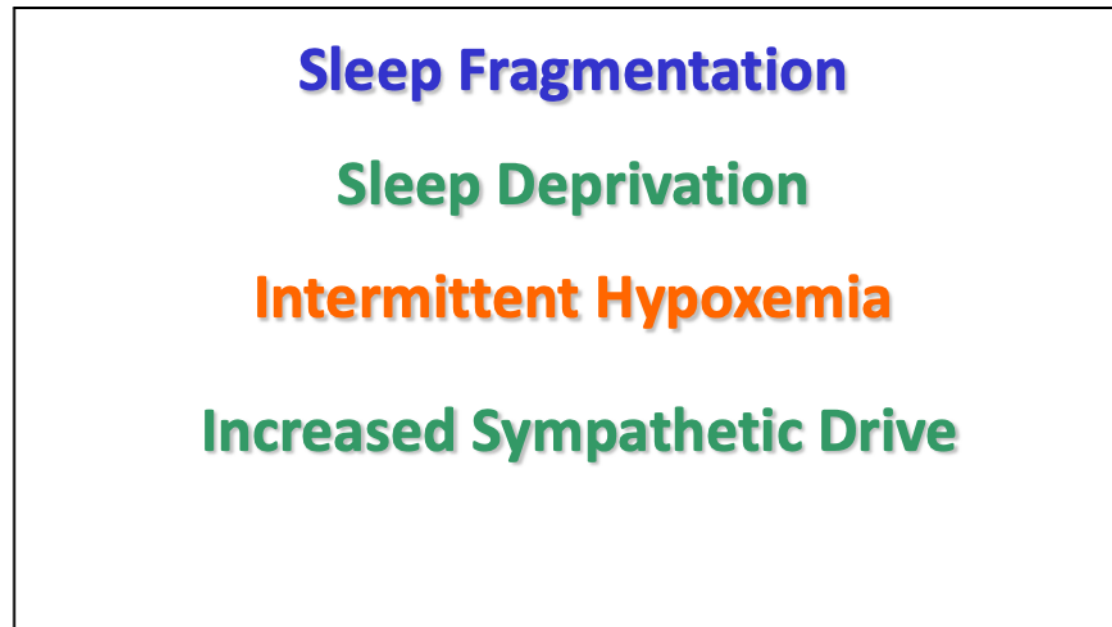
*p=0.0185 for increased CV disease risk across HOMA-IR quintiles





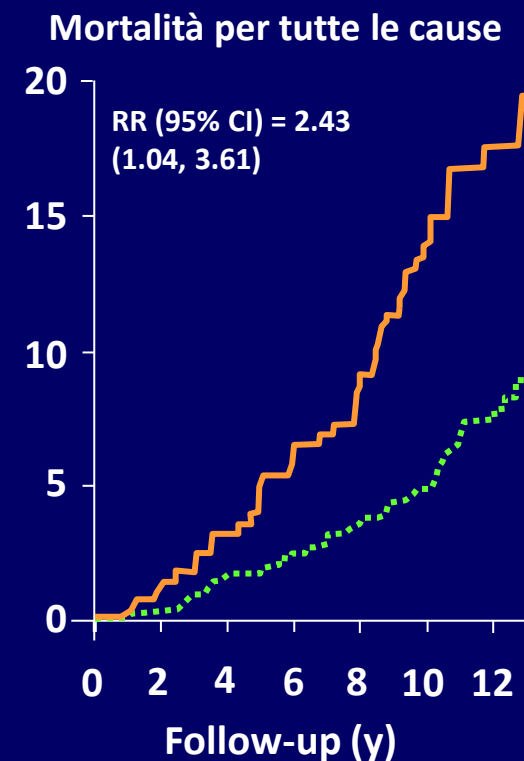
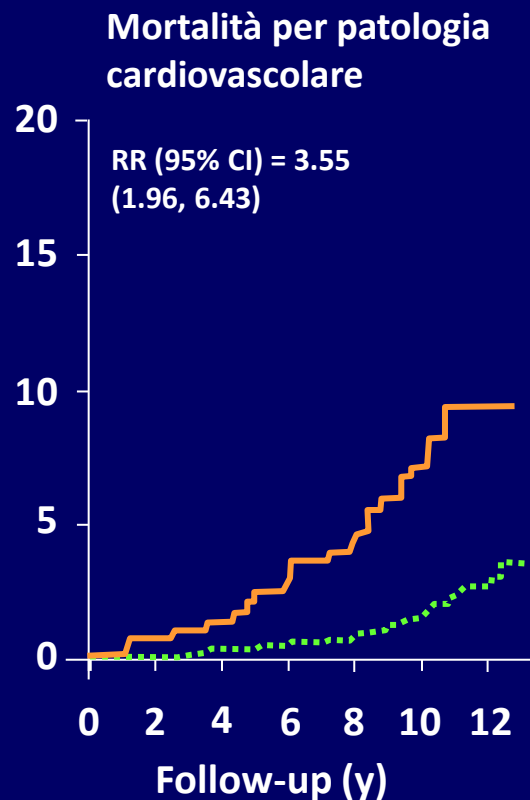
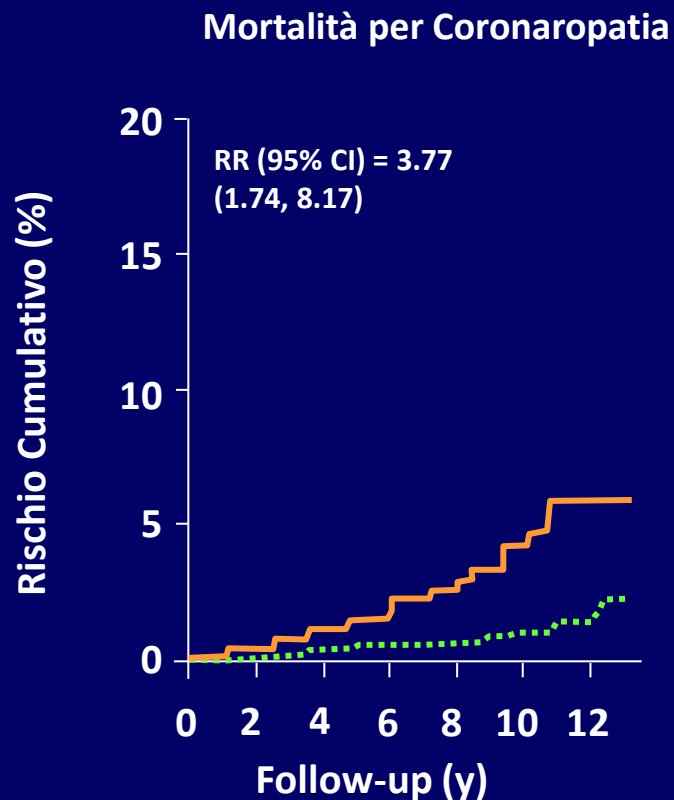
Sleep Disorders-Metabolic Syndrome

Sleep
Disorders



Metabolic
Syndrome

Sindrome Metabolica e Malattia Cardiovascolare



Sindrome metabolica

— Sì

..... No

Odds Ratio for 5-yr Incident CHD in Subjects without Diabetes and Definite Hypertension

(Bruneck Study; Bonora et al, Diabetes Care 26:1251, 2003)

Model 1 (individual putative risk factors)

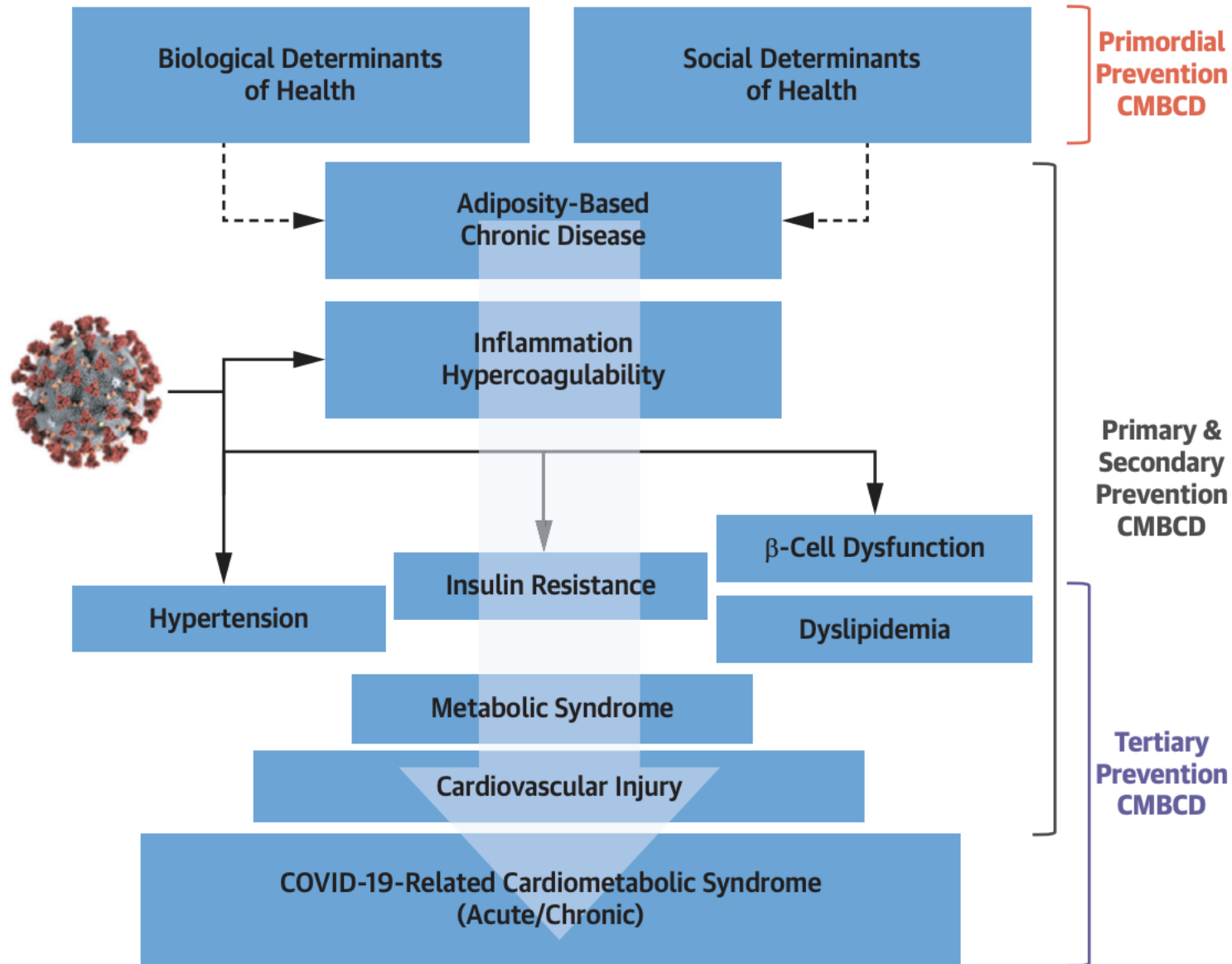
IFG/IGT	1.7 (N.S)
Insulin Resistance	1.4 (N.S.)
Central Obesity	1.1 (N.S.)
Dyslipidemia	1.3 (N.S.)
Mild hypertension	2.5 (N.S)
Microalbuminuria	2.4 (N.S.)

Model 2

Metabolic Syndrome	3.7 (p<0.05)
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Adjusted for sex, age, life style factors, LDL cholesterol, baseline CHD

CENTRAL ILLUSTRATION Effects of Severe Acute Respiratory Syndrome Coronavirus 2 on the Development of a Coronavirus Disease-Related Cardiometabolic Syndrome



CONCLUSIONI

- La sindrome metabolica coinvolge il 15-25% della popolazione adulta dei paesi occidentali.
- Essa è una significativa predittrice di eventi cardiovascolari (infarto del miocardio ed ictus) e di mortalità cardiovascolare (OR=2.0-4.0) anche in assenza di diabete.
- La presenza di diabete esalta il rischio cardiovascolare della sindrome metabolica.
- L'identificazione dei pazienti con sindrome metabolica ad elevato rischio di eventi cardiovascolari è molto utile per una conseguente strategia terapeutica.
- La prevenzione primaria e secondaria della sindrome metabolica rappresenta oggi un impegno primario della medicina clinica.