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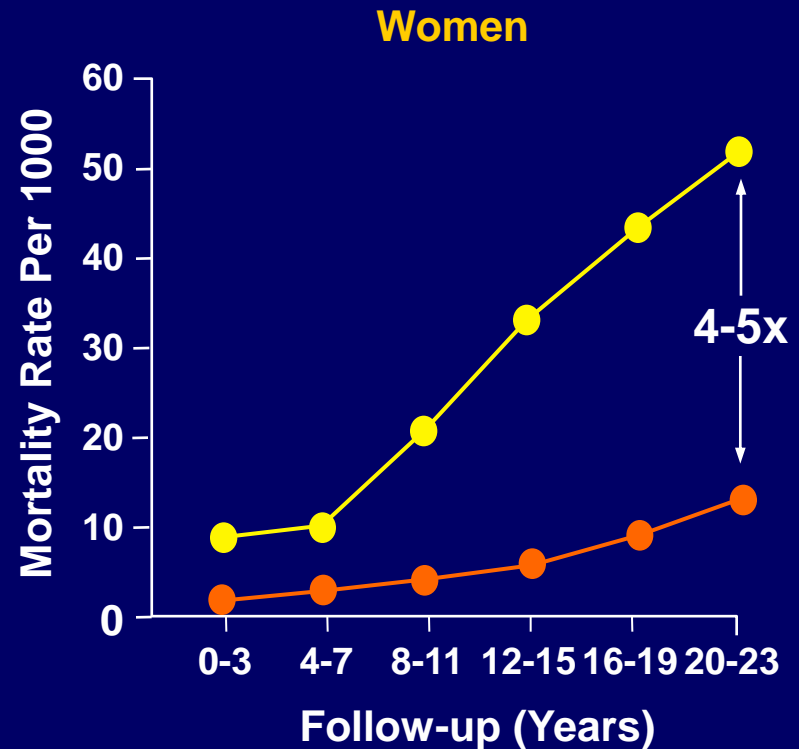
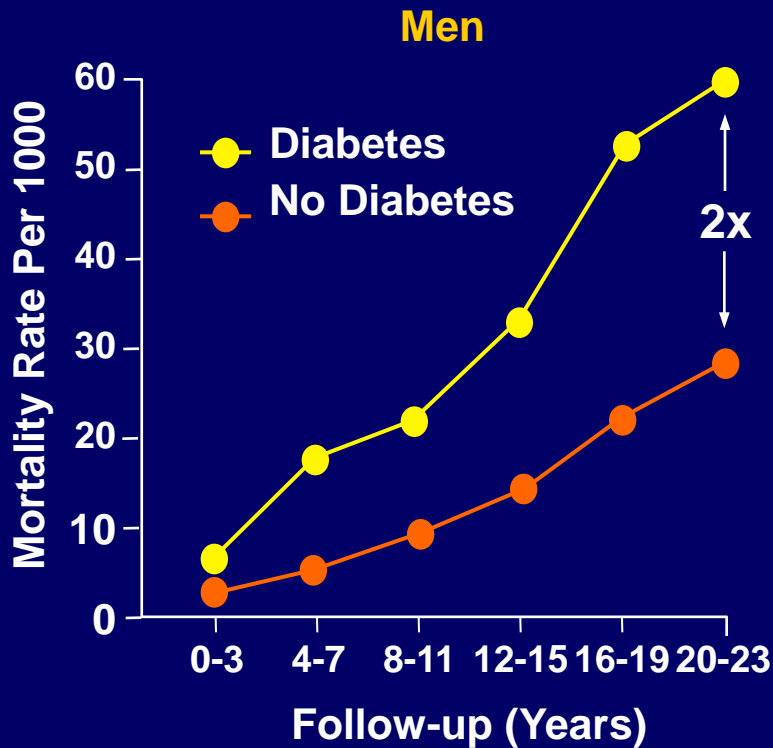
**Is it useful to predict the
cardiovascular risk in diabetes ?**

No !

Barcelona, April 5, 2013

Diabetes is a CV Risk Factor

Framingham and Joslin



Krolewski AS, et al. *Am J Med* 1991;90(Supp 2A):56S-61S.

“Unsatisfactory” CV risk estimates in type 2 DM

- Framingham
- SCORE
- DECODE
- UKPDS risk engine
- TRIAD model
- Riskard algorithm
- Progetto Cuore
- Disease “risk equivalents” (DM, CKD)
- Other risk scores

Coleman RL et al. Diabetes Care 30:1292-3,2007

Pellegrini E et al. Nutr Metab Cardiovasc Dis 21: 885-92,2011

McEwen LN et al. Diabetes Care 35:1301–1309,2012

Fox CS et al. Lancet 380: 1662–73,2012

Alssema M et al. Diabetes Care 35:741–748, 2012

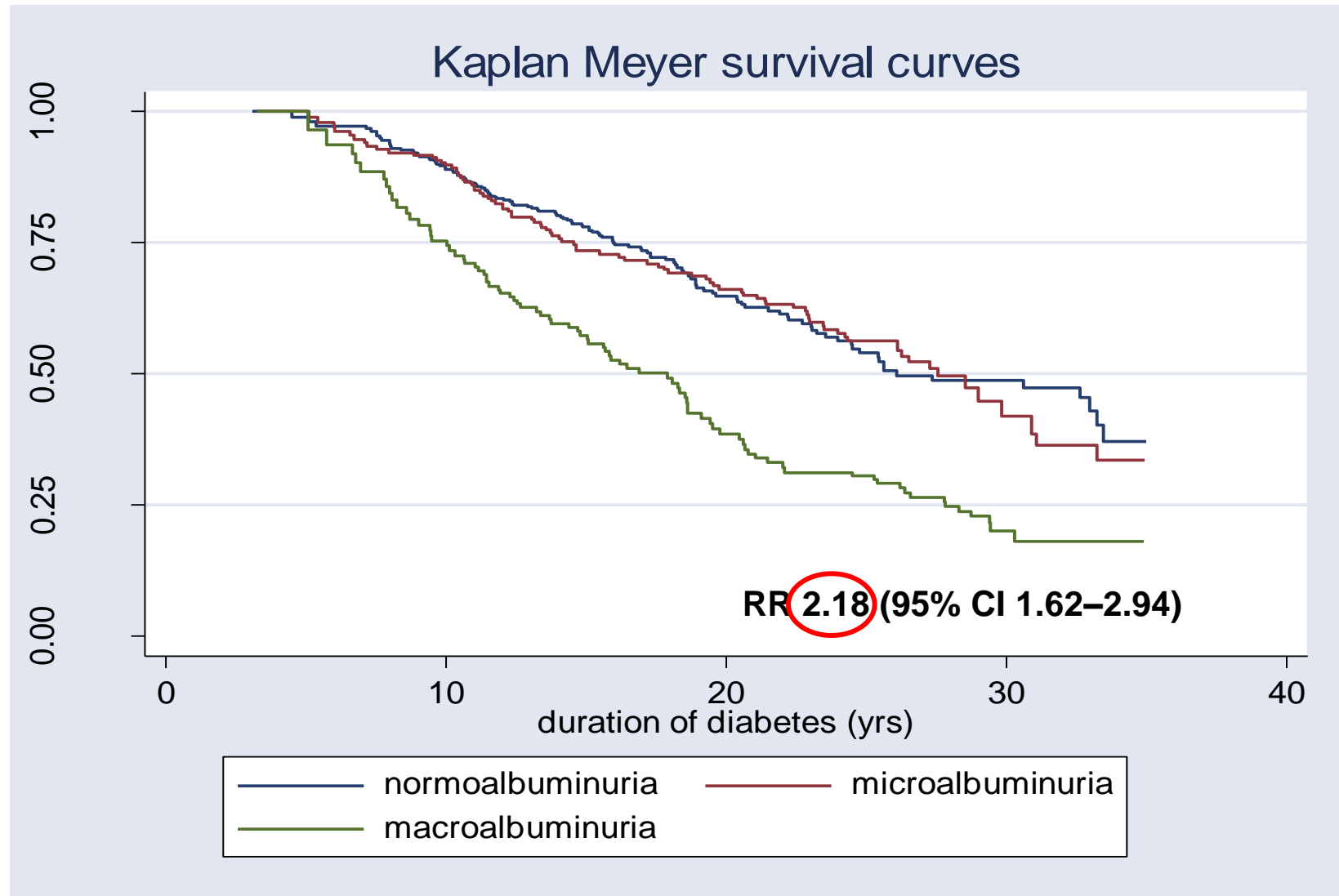
Factors not included in equations/algorithms

Independent association with CVD

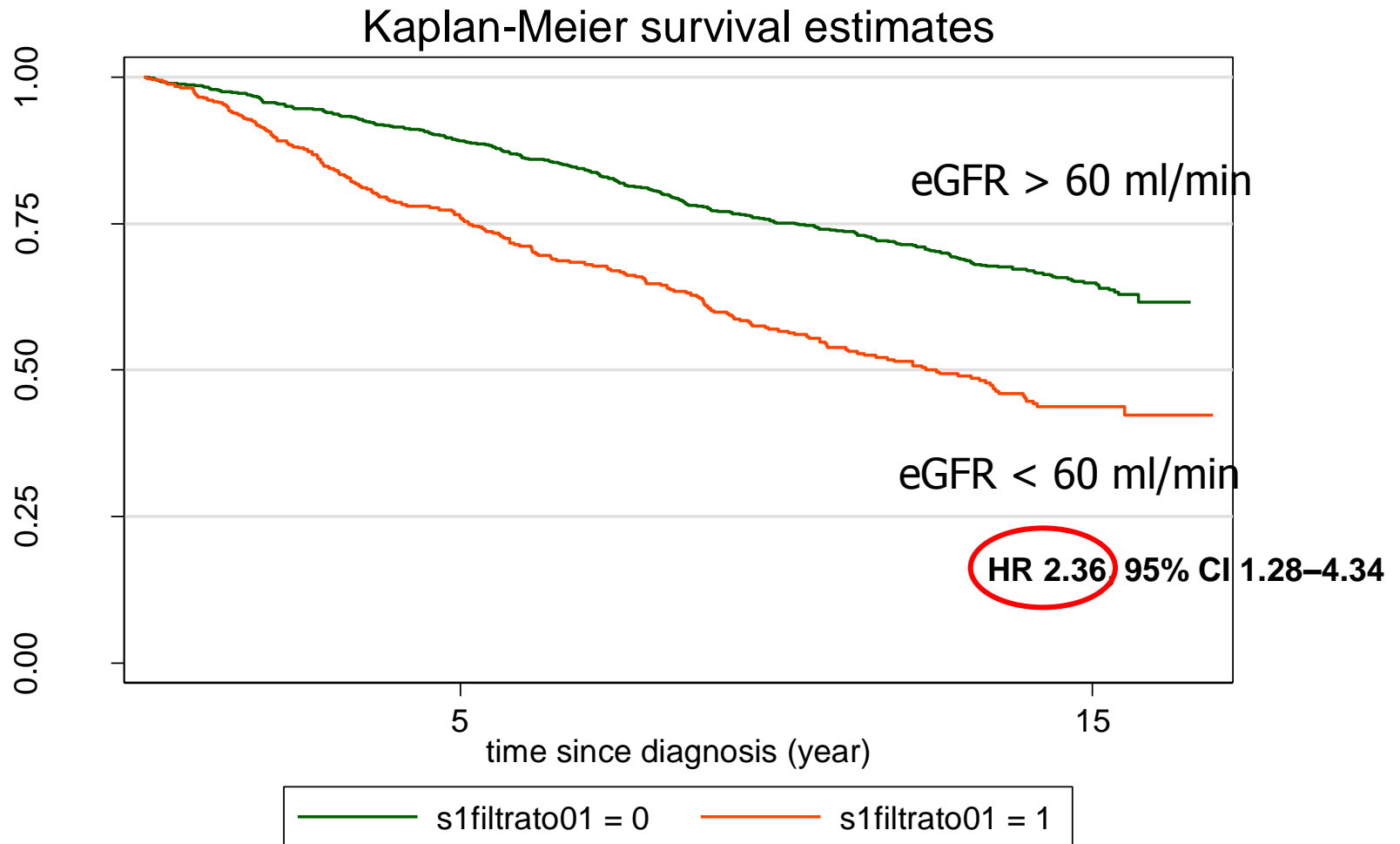
- Microalbuminuria/proteinuria
- eGFR
- autonomic neuropathy
- dispersion of QT duration
- NT-proBNP
- Hypoglycemia
- Metabolic legacy: “good” and “bad”

Diabetes Care 23:1381-3,2000
Diabetologia 50:941-948,2007
Diabetes Care 35:581-3,2012
Diabetes Care 36:894–900,2013
Diabetes Care 2013 (accepted)

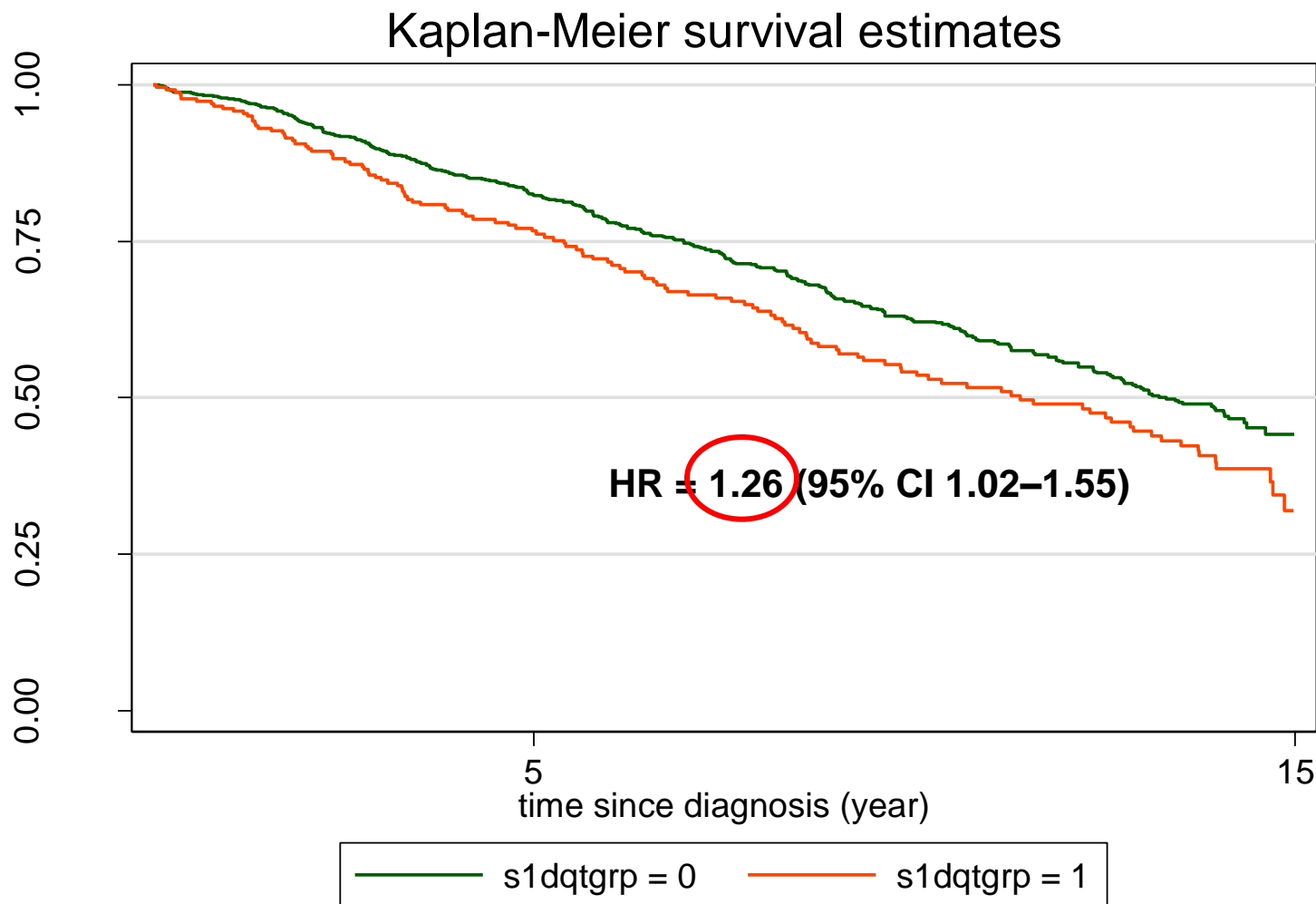
Cardiovascular mortality and AER: Casale Monferrato Study



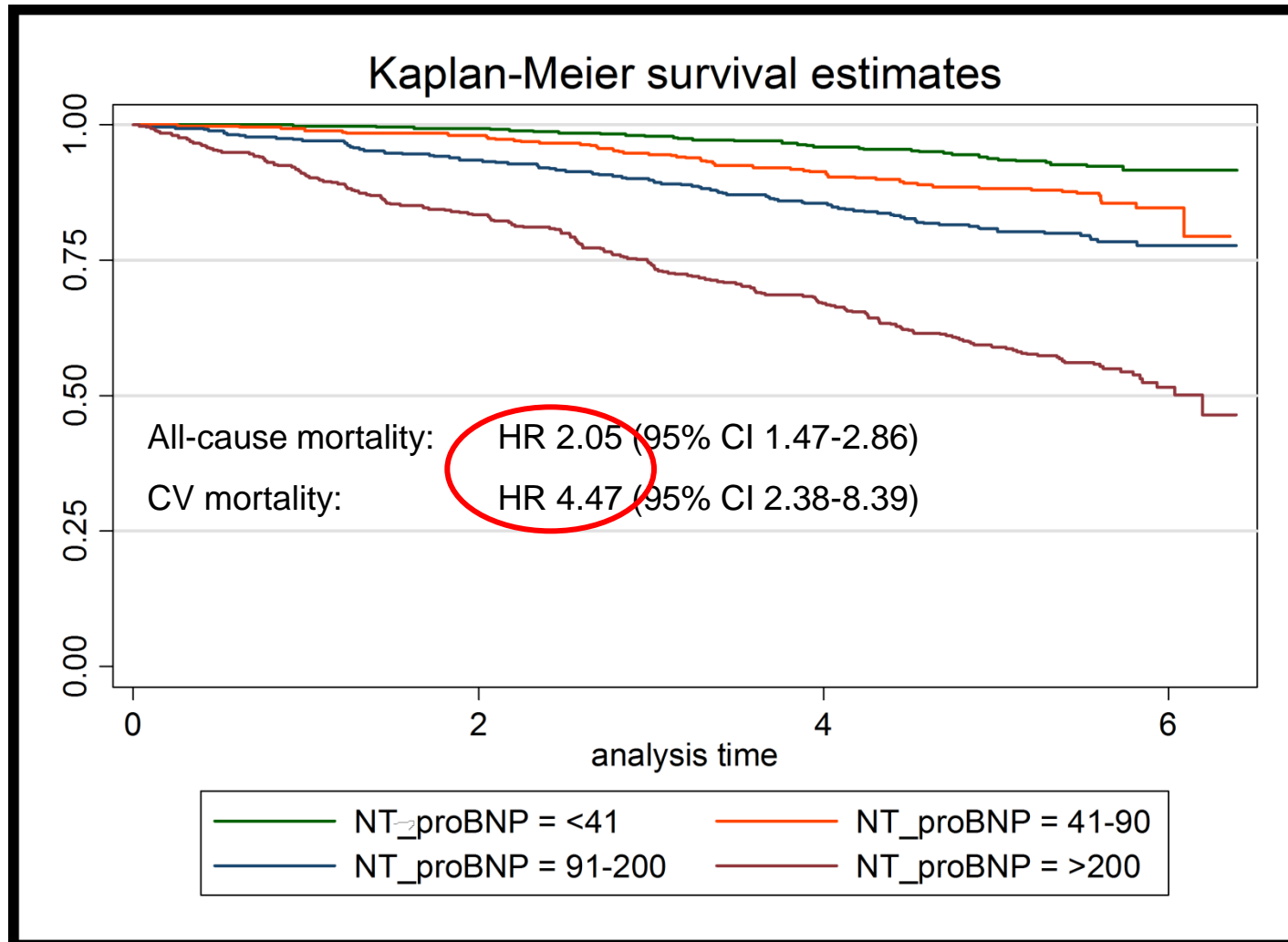
Cardiovascular mortality and eGFR: Casale Monferrato Study



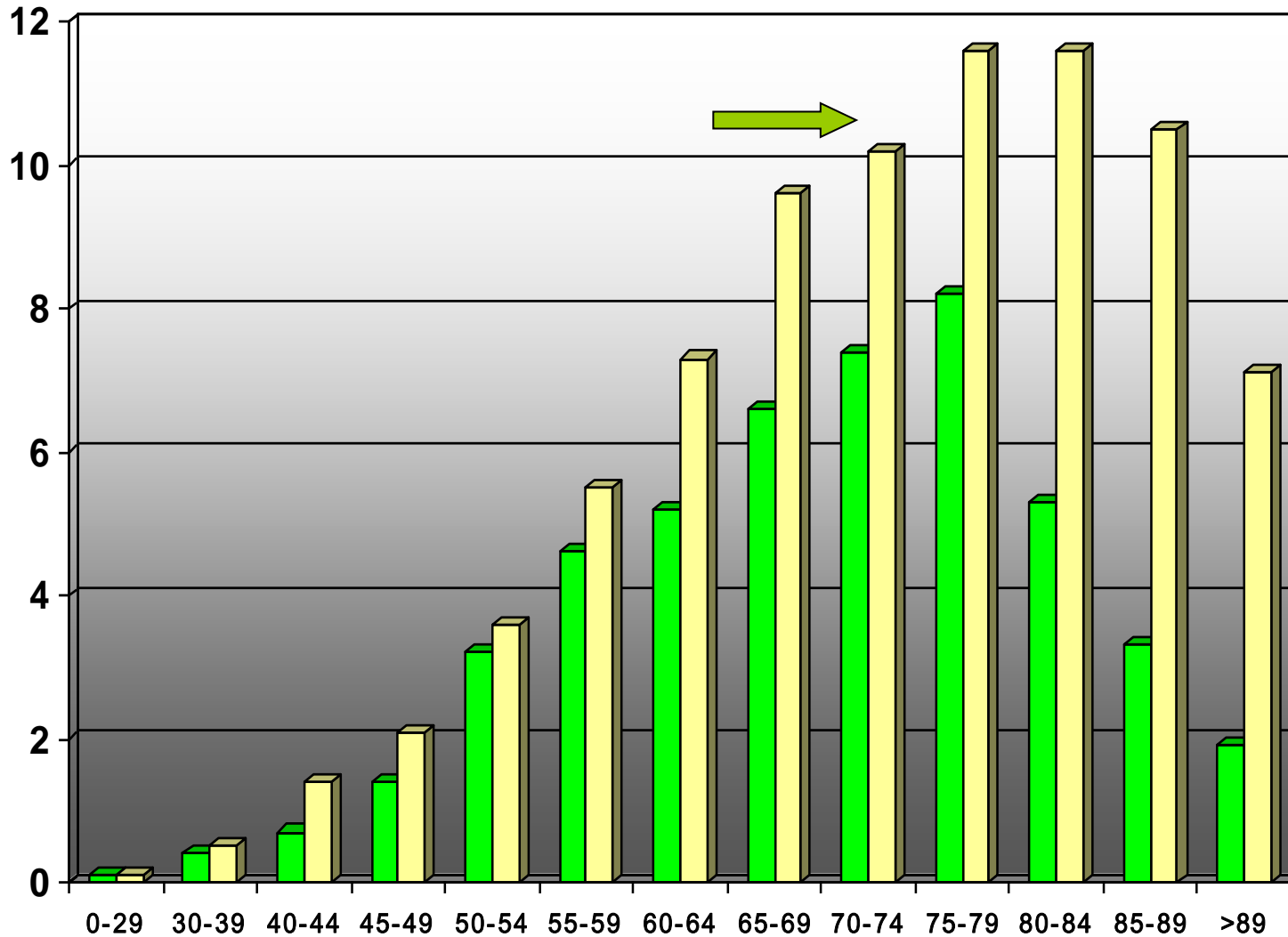
Cardiovascular mortality and dQTc: Casale Monferrato Study



Cardiovascular mortality and NT-proBNP: Casale Monferrato Study



Casale Monferrato Study, prevalence of DM in 1988 and 2000



2/3 of patients with DM is > 65 yr

Co-morbid Conditions in DM

not included in the equations/algorithms
may decrease survival

- CHF
- Hearing impairment
- Obstructive sleep apnea
- Fatty liver disease
- Certain cancers
- Fractures
- Cognitive impairment
- Depression
- Pain
- Polypharmacy
- Vitamin D deficiency
- Socioeconomic conditions

JAGS 56:484-92;2008

Coronary Artery Disease 18:571–576,2007

Diabetes Care 35:1301–1309, 2012

CONCLUSIONS

The prediction of CV risk in diabetes is NOT useful by using the available risk-assessment tools.

The characteristics of diabetic population is changed in the last decades.

Other CV risk factors and co-morbidities should be considered in evaluating life expectancy.

“Personalized” risk assessment (not “evidence-based” algorithms) is mandatory for intervention.

Prediction of CV risk alone is NOT useful in the majority of the patients.

Innovative strategies: microRNAs (?)