



# First occurred cardiovascular or renal disease (CVRD) cumulative incidence for type 2 diabetics free of CVRD at baseline: a 5-year SNDS nationwide claims database cohort study

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de BORDEAUX



Inserm



P. Blin<sup>1</sup>, M. Joubert<sup>2</sup>, P. Zaoui<sup>3</sup>, E. Guiard<sup>1</sup>, D. Sakr<sup>1</sup>, C. Dureau-Pournin<sup>1</sup>, MA. Bernard<sup>1</sup>, R. Lassalle<sup>1</sup>,  
F. Thomas-Delecourt<sup>4</sup>, S. Bineau<sup>4</sup>, N. Moore<sup>1</sup>, C. Droz-Perroteau<sup>1</sup>, P. Jourdain<sup>5</sup>

<sup>1</sup> Bordeaux PharmacoeEpi, INSERM CIC-P 1401, Univ. Bordeaux, Bordeaux, France; <sup>2</sup> CHU, Caen, France;

<sup>3</sup> CHU Grenoble Alpes, Grenoble, France; <sup>4</sup> AstraZeneca, Courbevoie, France; <sup>5</sup> APHP, Paris, France

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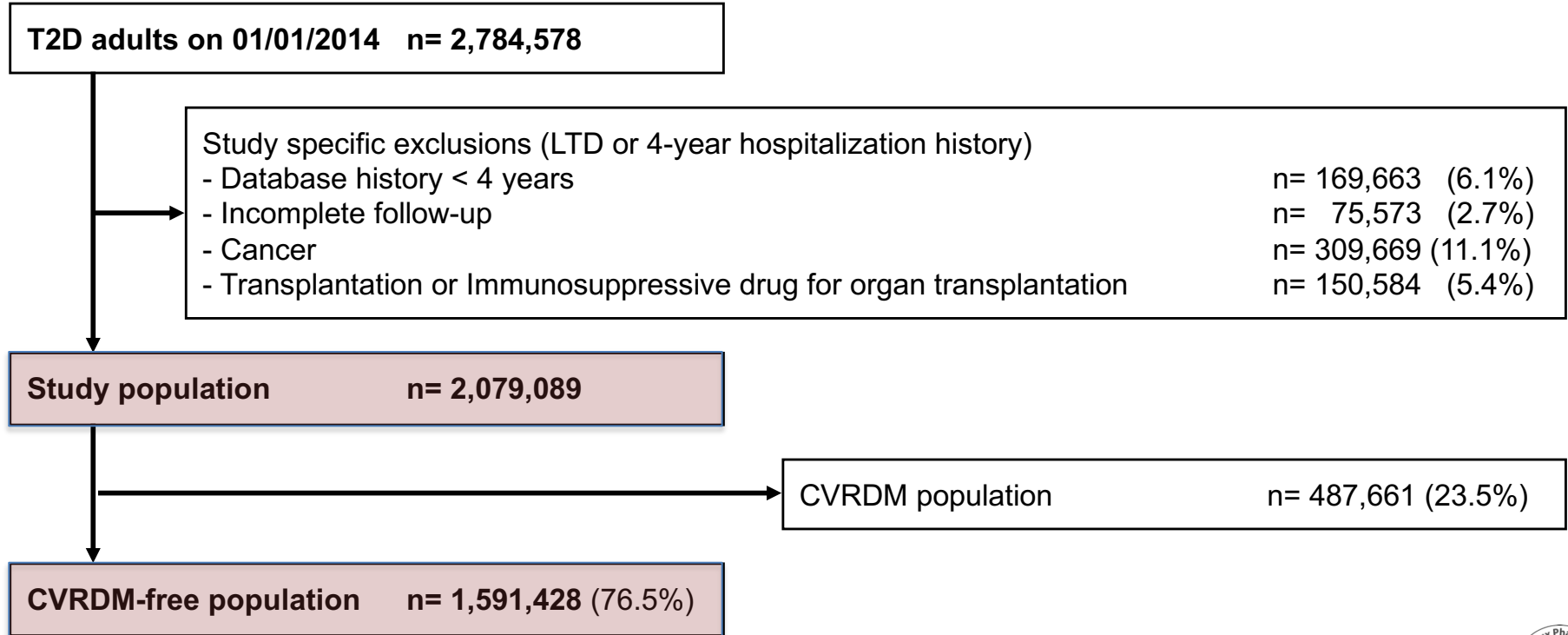
# Background

- in the context of the primary prevention of cardiovascular or renal disease for type 2 diabetics, the risk of the first occurred manifestation is not well known
- Manifestations include:
  - Myocardial infarction (MI)
  - Stroke
  - Peripheral arterial disease (PAD)
  - Heart failure (HF)
  - Chronic kidney disease (CKD)
  - Cardiorenal disease (HF or CKD together)

# Objective & Methods

- **Main objective:** To assess the 5-year cumulative incidence of the first occurred cardiovascular or renal disease manifestation for type 2 diabetics
- **Design:** 5-year follow-up cohort study within the SNDS French nationwide claims database
- **Population:** All adult identified with type 2 diabetes, free of such manifestations as of January 1st, 2014, without cancer or organ transplantation according to a 4-year database history
- **Outcome:** First occurred cardiovascular or renal disease hospitalization
- **Statistical analysis:** Cumulative incidence estimated using the cumulative incidence function, with other manifestations and death as a competing risk

# Study flow chart



# CVRDM-free patient characteristics

**Follow-up (years), mean ± (sd)** 4.8 (0.7)

**Age (years), mean ± (sd)** 65.2 (12.1)

**Male** 48.2 %

## Diabetic complications

Diabetic eye complications 1.9 %

Diabetic neuropathy 1.4 %

Severe hypoglycaemia 0.6 %

Keto-lactate acidosis 0.5 %

Lower limb amputations 0.1 %

## Cardiovascular drug dispensing

(3 last months before index date)

Low dose aspirin 22.2 %

Statins 40.1 %

Antihypertensives 5.1 %

ACEI or ARB 53.7 %

Beta blockers 23.8 %

Calcium channel blocker 17.5 %

Low ceiling diuretics 1.1 %

P2Y12 antagonists, % 3.3 %

## Type of last antidiabetic treatment dispensing

(3 last months before index date)

None 13.3 %

Monotherapy 49.0 %

Bitherapy 20.8 %

Tritherapy or more 6.5 %

Insulin 10.4 %

## Last antidiabetic drug dispensing

(3 last months before index date)

Metformin 14.1 %

Sulfonylurea 29.1 %

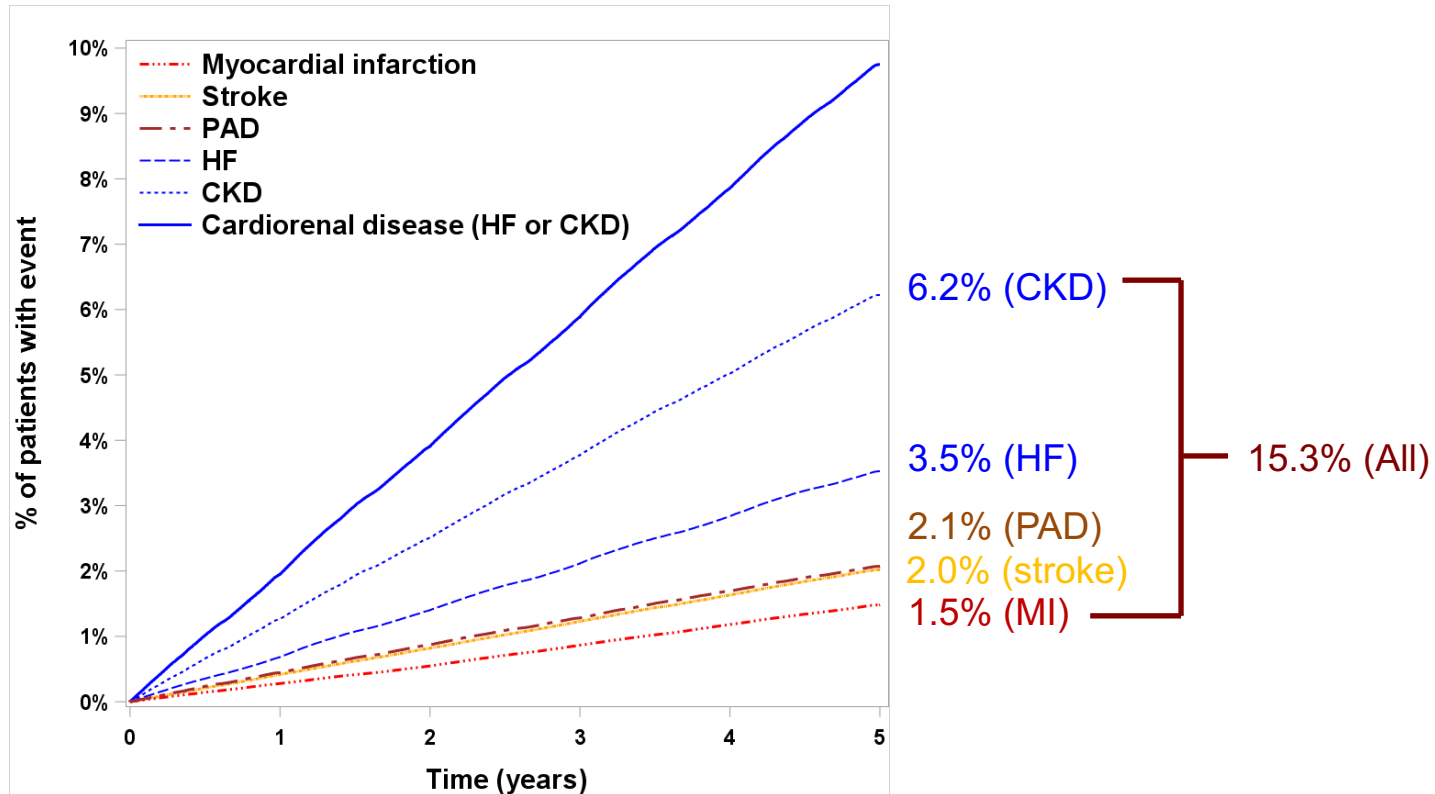
DPP-4 inhibitors 11.7 %

Metiglinides 8.5 %

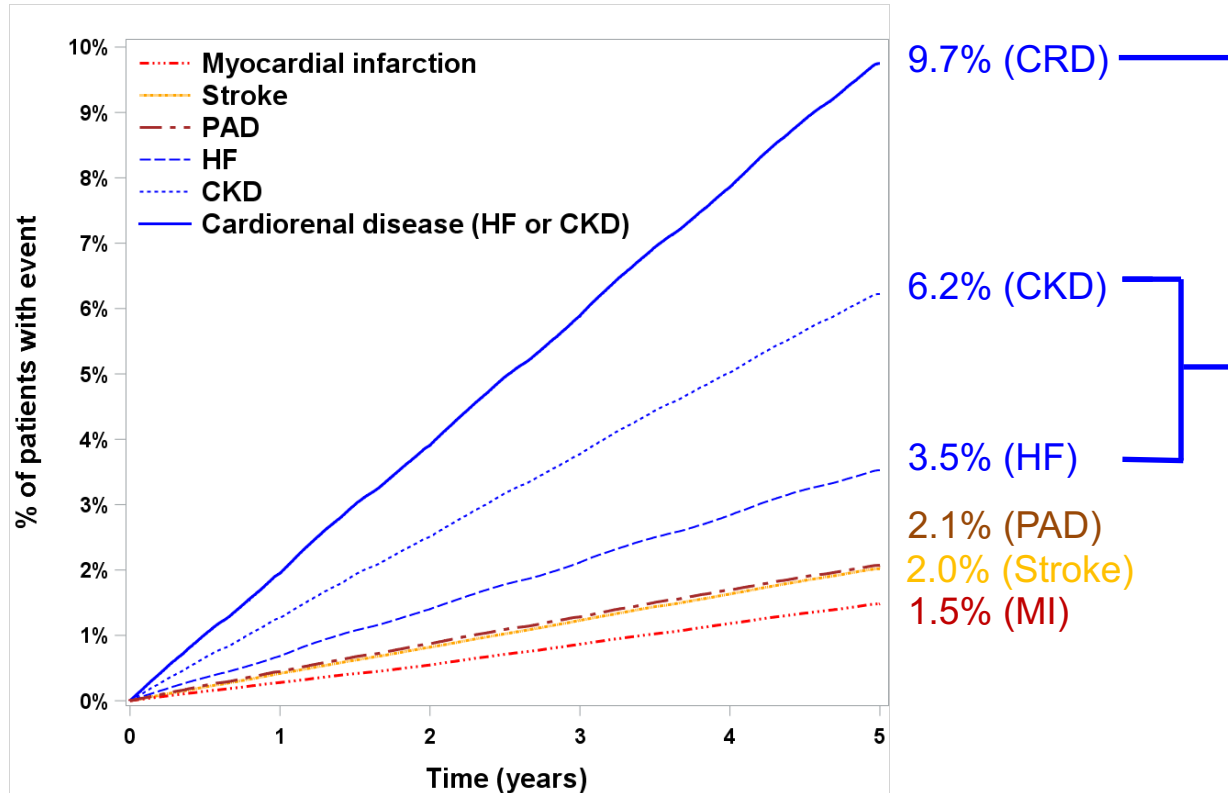
Ascarbose 3.2 %

Insulin 10.4 %

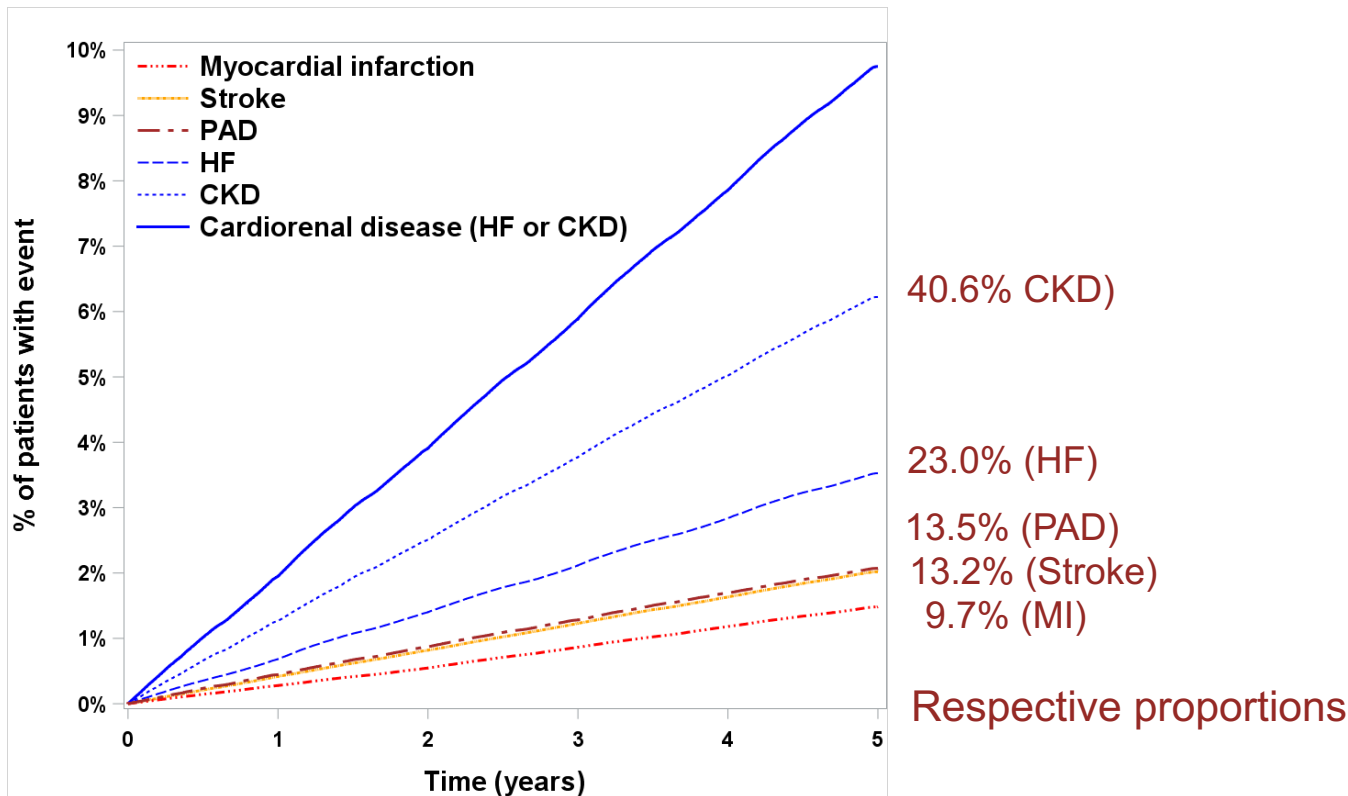
# 5-year cumulative incidence of the first occurred cardiovascular or renal disease manifestations (1)



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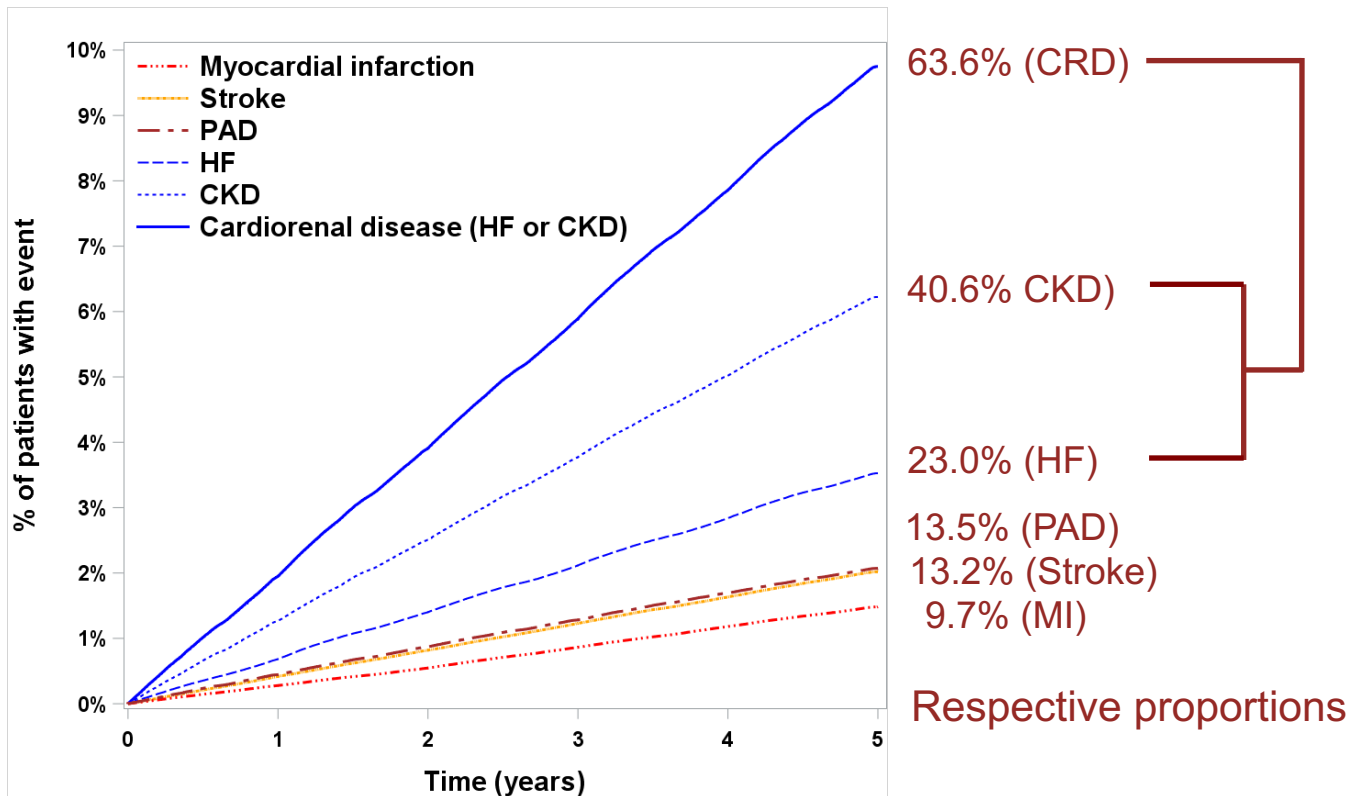


# 5-year cumulative incidence of the first occurred cardiovascular or renal disease manifestations (1)

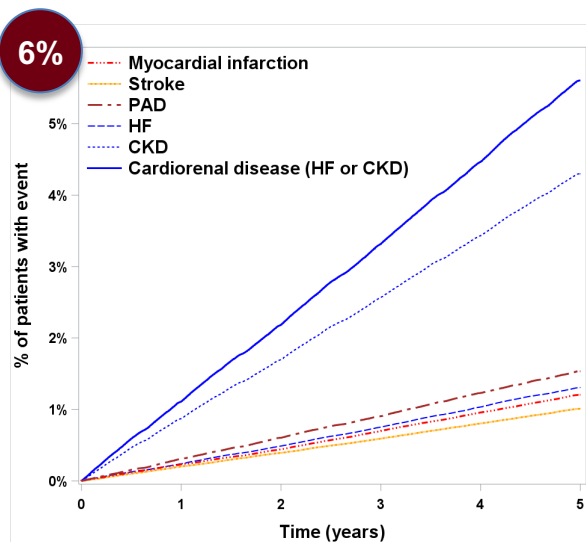




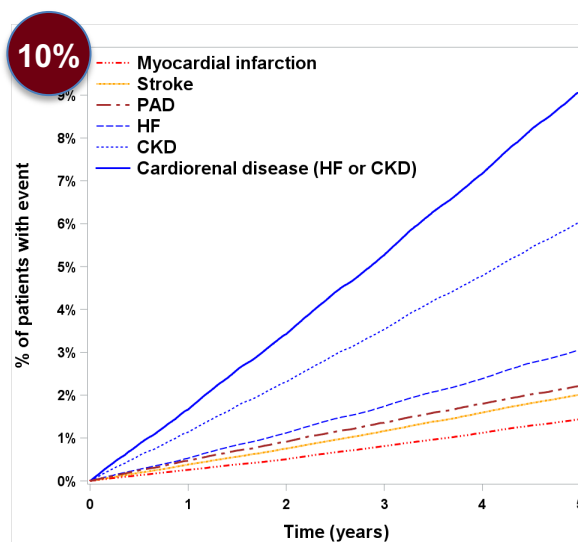
# 5-year cumulative incidence of the first occurred cardiovascular or renal disease manifestations (1)



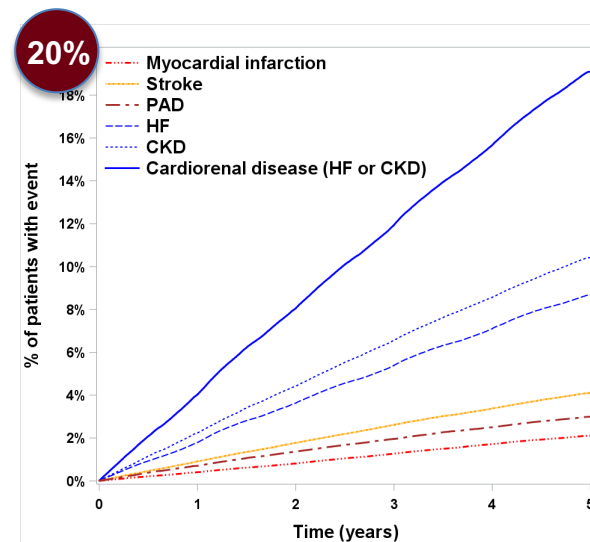
# 5-year cumulative incidence of the first occurred cardiovascular or renal disease manifestations (2)



<65 years



[65-75] years



≥75 years

# Conclusion

- MI, stroke and PAD remain classic major first occurred cardiovascular or renal manifestation for type 2 diabetics
- Heart failure and CKD, nowadays represent individually a higher risk than each of these classic manifestations, and together twice more risk than the three classic manifestations together
- This should encourage the development of early recognition markers and specific preventive strategies



# Thank you for your attention



Bordeaux PharmacoEpi - <http://www.bordeauxpharmacoepi.eu>

Plateforme de recherche en Pharmaco-épidémiologie

CIC Bordeaux CIC1401

INSERM - Université de BORDEAUX - CHU de Bordeaux - Adera

Bâtiment Le Tondu - case 41 - 146 rue Léo Saignat - 33076 Bordeaux Cedex

Acc. +33 (0)5 57 57 46 75 – Fax +33 (0)5 57 57 47 40

