



# Cumulative cardiovascular or renal disease (CVRD) hospital costs for type 2 diabetics free of CVRD at baseline: a 5-year cohort study in the SNDS nationwide claims database

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Inserm



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# Background

- Cost of hospitalization for cardiovascular/renal disease manifestations (CVRDM) not well known for T2D patients free of CVRDM at baseline
- CVRDM for T2D patients defined as:
  - Myocardial infarction (MI)
  - Stroke
  - Peripheral arterial disease (PAD)
  - Heart failure (HF)
  - Chronic kidney disease (CKD)
  - Cardio-Renal disease (CRD)

# Objective & Methods

- **Main objective:** To estimate the 5-year cumulative costs of CVRDM hospitalizations for T2D patients free of CVRDM at baseline
- **Design:** 5-year follow-up cohort study within the SNDS French nationwide claims database
- **Population:** All adults identified with T2D and free of CVRDM on January 1<sup>st</sup>, 2014, without cancer or organ transplantation according to 4-year database history
- **Outcomes:** CVRDM hospitalization (primary or associated diagnoses)
- **Statistical analysis:** 5-year cumulative hospital costs for each CVRDM from the perspective of all payers

# Patient characteristics

**CVRDM-free population**

**n = 1,591,428**

**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 %

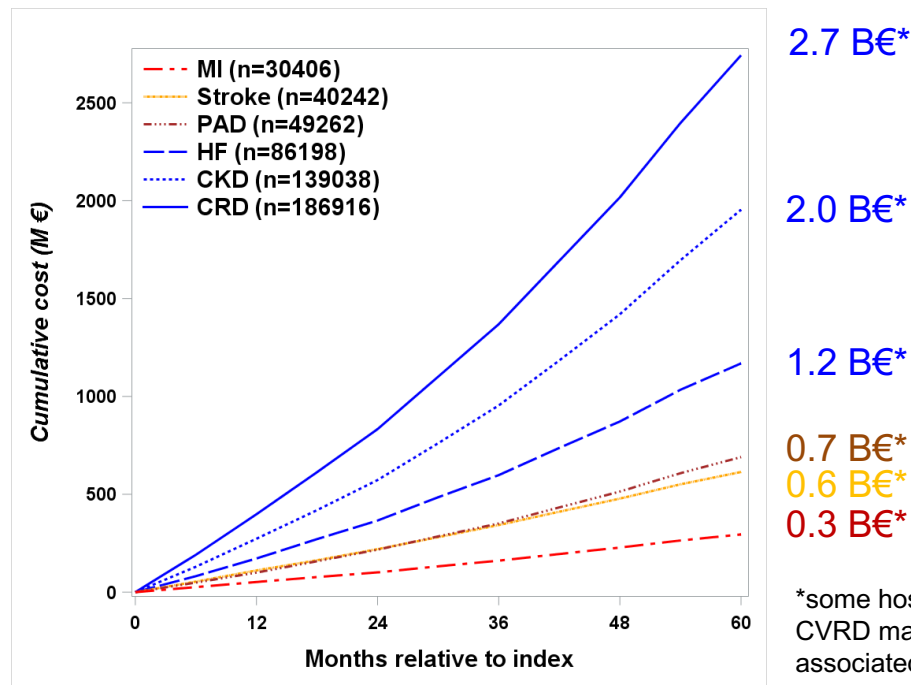
Metiglinides 8.5 %

Ascarbose 3.2 %

Insulin 10.4 %

# 5-year cumulative CVRDM hospital costs (1)

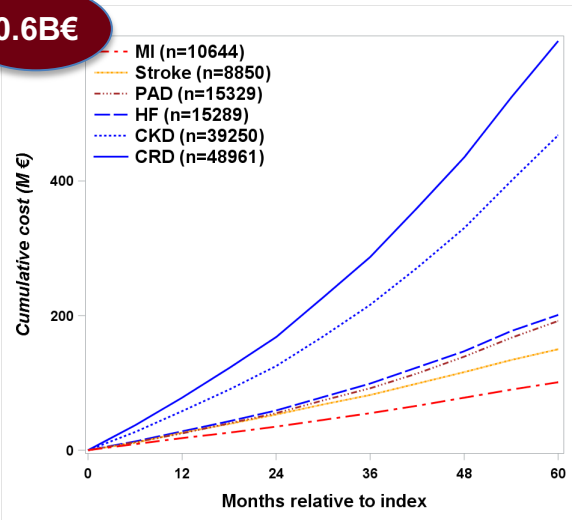
Global cost\* **3.9 billion € (B€)**



\*some hospitalizations may involve  $\geq 2$  CVRD manifestations (primary or associated diagnoses)

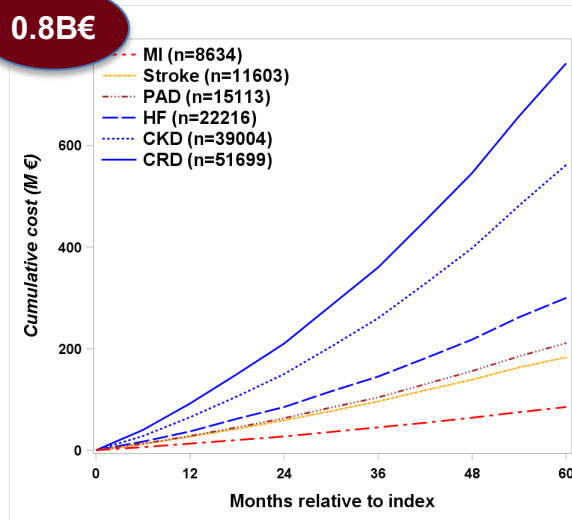
# 5-year cumulative CVRDM hospital costs (2)

0.6B€



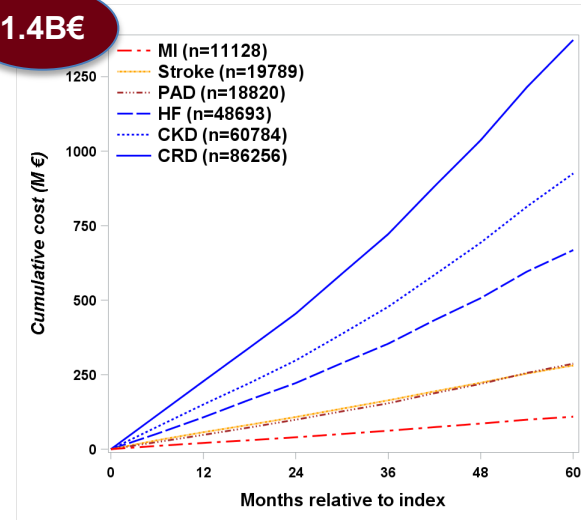
<65 years

0.8B€



[65-75] years

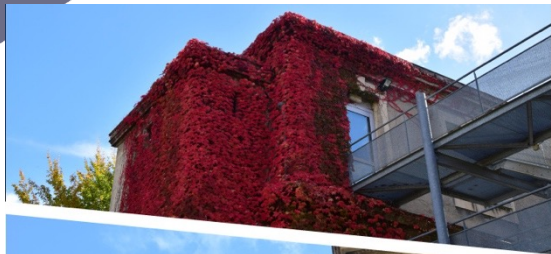
1.4B€



≥75 years

# Conclusion

- The 5-year global cost of CVRDM hospitalization in France was 3.9 billion euros for those initially free of CVRDM
- CRD, HF and CKD hospitalizations together were almost twice as expensive than the MI, stroke and PAD classic complications together
- This should encourage the development of specific preventive strategies



# Thank you for your attention



Bordeaux PharmacoeEpi - <http://www.bordeauxpharmacoeepi.eu>

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