

A ONE-YEAR FOLLOW-UP OF INDIVIDUALS WITH DIABETES AT VERY HIGH CV RISK TREATED WITH STATINS: OUTCOMES AND HEALTH CARE

Maggioni AP §,
Rossi E #,
Cinconze E #,
Calabria S °

On the behalf of the
ARNO Observatory *

arnojournal@cineca.it
www.coreteam.it
www.cineca.it

§ ANMCO Research
Center, Florence, Italy
CINECA -
Interuniversity
Consortium, Casalecchio
di Reno, Bologna, Italy
° CORE – Collaborative
Outcome Research,
Bologna, Italy

* ARNO Observatory
network (LHUs):

R.Roni (Trento), A. De Marco (Belluno), M.Cecchetto (Bassano), MP Cariolato (Ovest Vicentino), A.Maroni (Vicenza), D.Maccari (Pieve di Soligo), R.Callegari (Asolo), M.Ferrari (San Donà di Piave), S.Zardo (Venezia), L.Cordella (Mirano), B.Pari (Chioggia), C.Salvato (Alta Padovana), A.Grion (Padova), MG Zogno (Monselice), A.Ferrarese (Rovigo), V.Lolli (Adria), L.Mezzalana (Verona), S.Brasola (Legnago), L.Castellani (Bussolengo), D.Garibaldi (Lucca), P.Batocchi (Firenze), M.Rais (Viareggio), G.Riccioni (Roma A), R.Di Turi (Roma D), C. De Matthaes (Roma F), A. Orsini (Teramo), G. La Bella (Napoli1), E.Nava (Napoli 3), R.Moscogiuri (Taranto)

Background and Aim

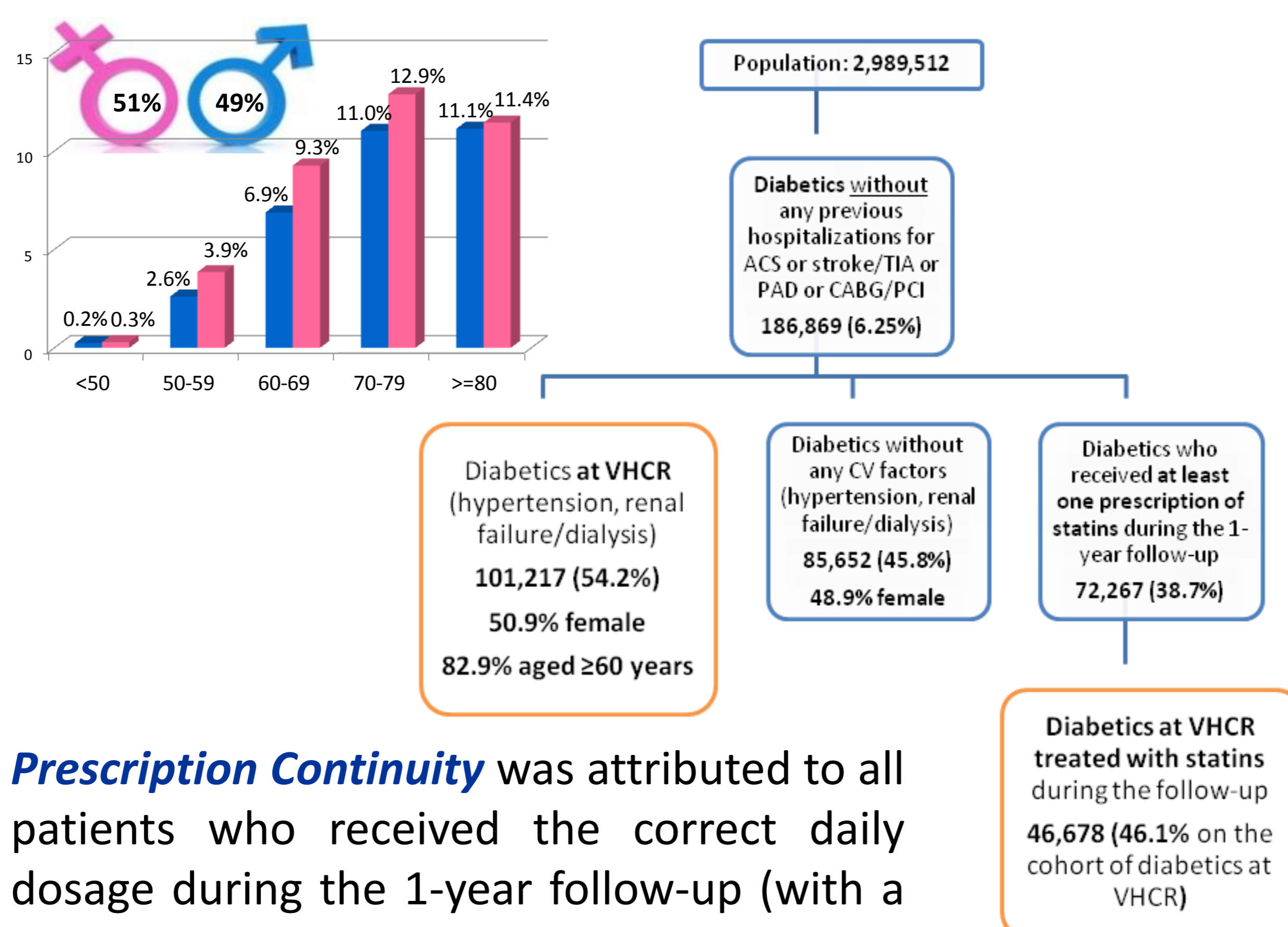
The incidence of Diabetes Mellitus (DM) continues to rise, quickly becoming one of the most prevalent and expensive chronic worldwide diseases. Cardiovascular diseases (CVD) are the most prevalent cause of morbidity and mortality in diabetics. CV risk factors (i.e. hypertension and dyslipidemia) are common in patients with DM and increase the risk of cardiac events. The aim of this analysis is to assess, in a community real-world setting, clinical and economic outcomes of subjects with Diabetes at Very High CV Risk (VHCR), such as those with type 1 or type 2 Diabetes and other CV risk factors or target organ damage.

Methods

Starting from ARNO Observatory database (11 million citizens), a record linkage analysis of hospital discharge, disease exemption and prescription records was carried out. A cohort of patients from a subset of 6 Local Health Units (LHUs) with available, complete and good quality data on pharmaceutical prescriptions, specialist/diagnostic procedures and hospitalizations was selected. The accrual period lasted from January 1st to December 31st 2011. Diabetics without a previous CVD, but with at least another CV risk factor (hypertension, renal failure/dialysis) were followed up to 1 year to describe epidemiological and clinical characteristics, 1-year follow-up outcomes and their costs (drugs in charge to INHS, diagnostic procedures, hospitalizations). Greater attention was focused on statins treatment (rate of prescriptions, dosage and adherence) during the 1-year follow-up.

Results

Of 2,989,512 subjects, 101,217 (3.4%) were patients with Diabetes at VHCR – Fig. 1. **Prevalence (%) profile, by age group and gender** is shown in Fig. 2.



Prescription Continuity was attributed to all patients who received the correct daily dosage during the 1-year follow-up (with a 20% tolerability). It was found greater among high intensity statins users compared to lower intensity ones (53.6% vs 40.1%) – Fig. 4.

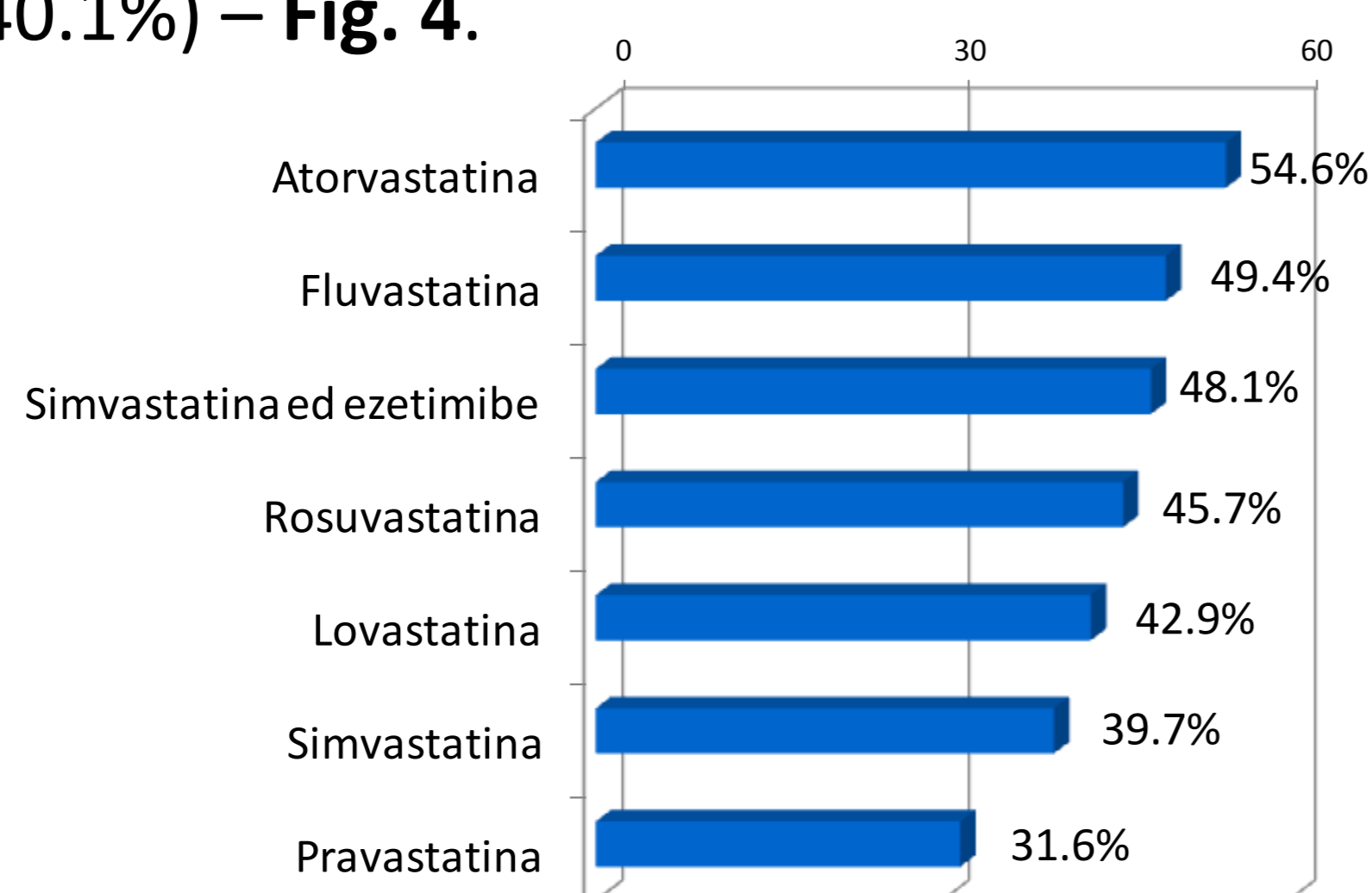
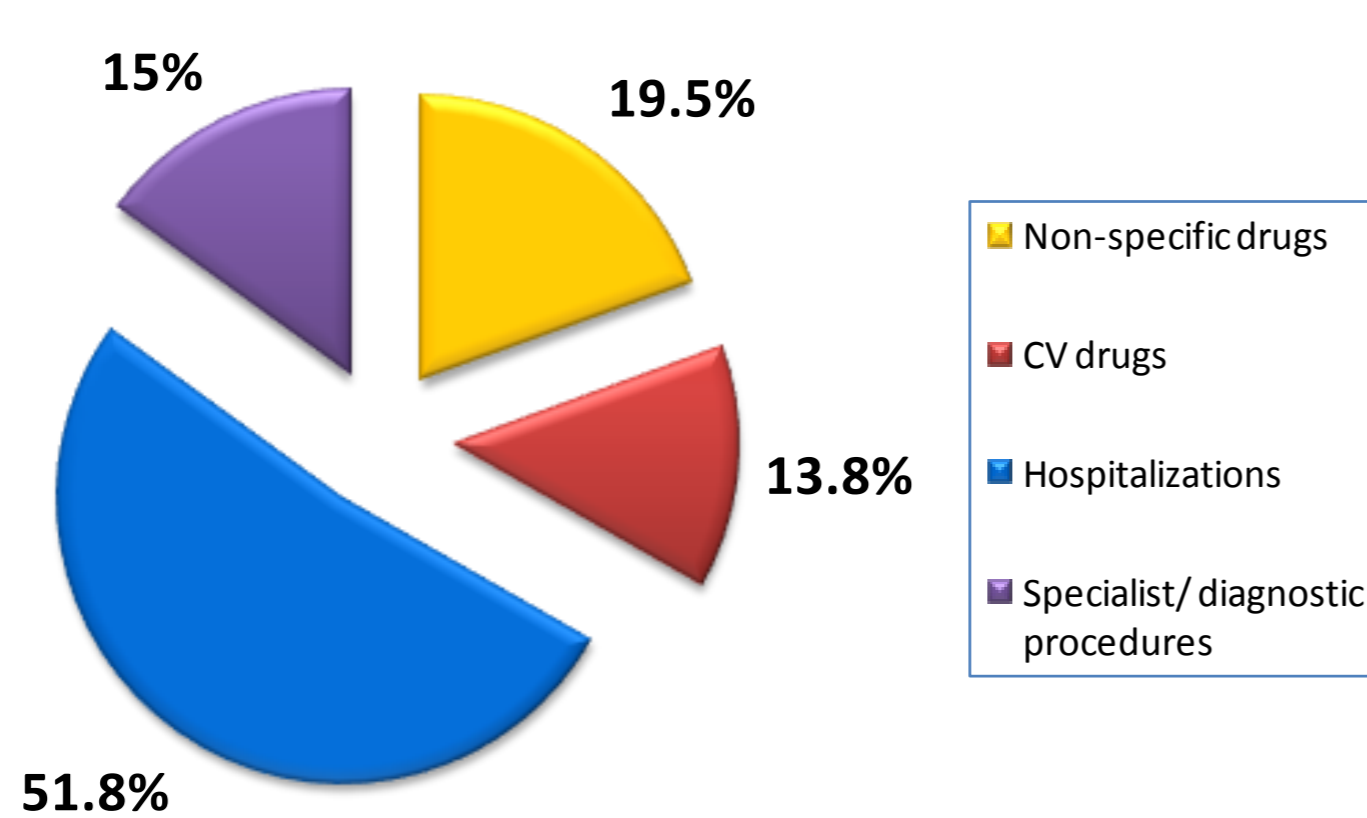
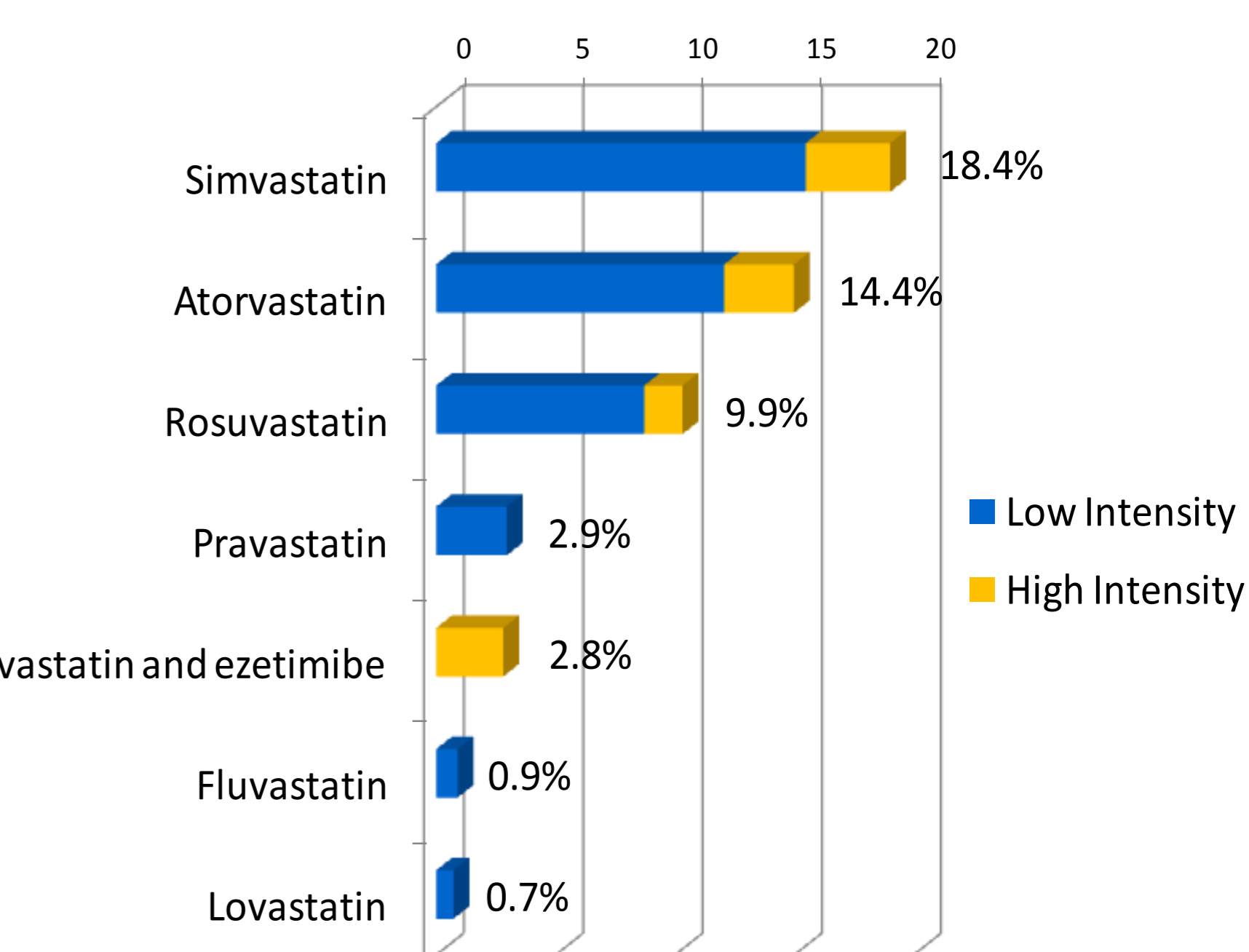


Fig. 6 - % costs for patients with Diabetes at VHCR



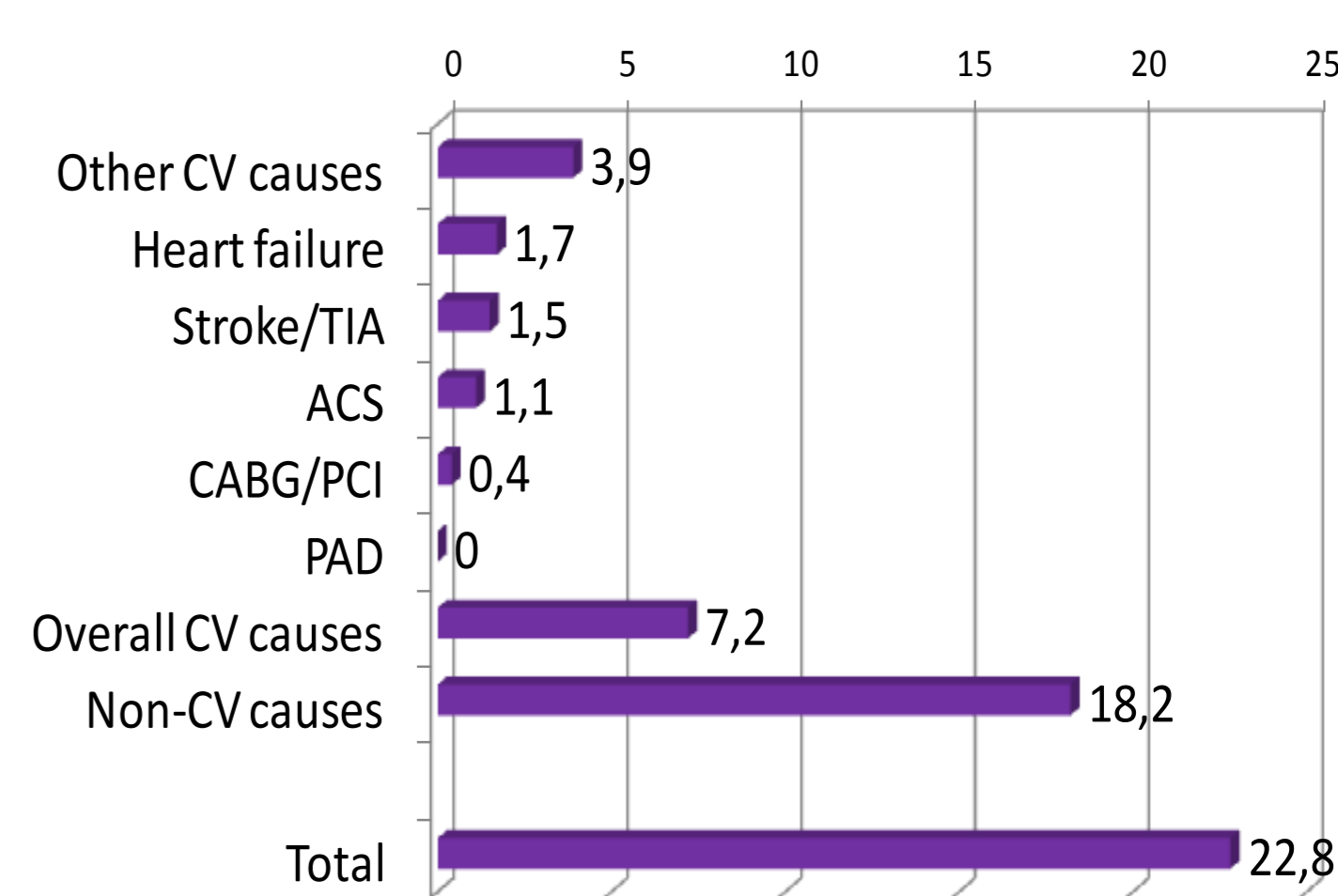
The **average yearly cost/patient supported by NHS** was € 3,001: € 1,555 for hospitalizations, € 998 for drugs and € 449 for diagnostic/outpatient visits. Fig. 6 shows how costs are allocated in the cohort (%).

46.1% of patients with Diabetes at VHCR received at least one prescription of statins during the 1-year follow-up. 56.9% was treated with high Intensity ones. **Rate of prescriptions of statins** during the first year after the discharge are shown in Fig. 3.



Re-hospitalization Diagnosis	% patients discharged (N=101.217)	Mean hospitalizations /discharged (n)
ACS	1.1	1.3
Stroke/TIA	1.5	1.2
PAD	0.0	1.0
CABG/PCI	0.4	1.1
Heart Failure	1.7	1.3
Other CV causes	3.9	1.3
Overall CV causes	7.2	1.5
Non - CV causes	18.2	1.6
Total	22.8	1.7

23,116 patients with Diabetes at VHCR were hospitalized (22.8% for cardiovascular events). Tab. 1 and Fig. 5 provide the **rate and the mean number of hospitalizations, and their reasons** over the 1-year follow-up.



Conclusions

In this community setting diabetics at very high CV risk were frequently hospitalized. Although at high risk, less than 50% of them was prescribed on statin therapy and prescription continuity was suboptimal. Diabetics at very high CV risk account for a significant portion of economic resources, hospitalization being the main cost driver. LHUs Authorities together with Physicians and Patient Associations should work to close the gap between the existing evidence-based recommendations and current clinical practice. This would result in reducing both diabetes morbidity and health cost disease.