



Il contributo di RWE alla conoscenza scientifica delle malattie cardiovascolari: L'Osservatorio delle malattie cardiovascolari di Trieste

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BMJ Open

Developing and validating a novel multisource comorbidity score from administrative data: a large population-based cohort study from Italy

Giovanni Corrao,^{1,2} Federico Rea,^{1,2} Mirko Di Martino,³ Rossana De Palma,⁴ Salvatore Scondotto,^{1,5} Danilo Fusco,³ Adele Lallo,³ Laura Maria Beatrice Belotti,⁴ Mauro Ferrante,⁶ Sebastiano Pollina Addario,^{1,5} Luca Merlino,^{1,7} Giuseppe Mancia,⁸ Flavia Carle^{1,9}

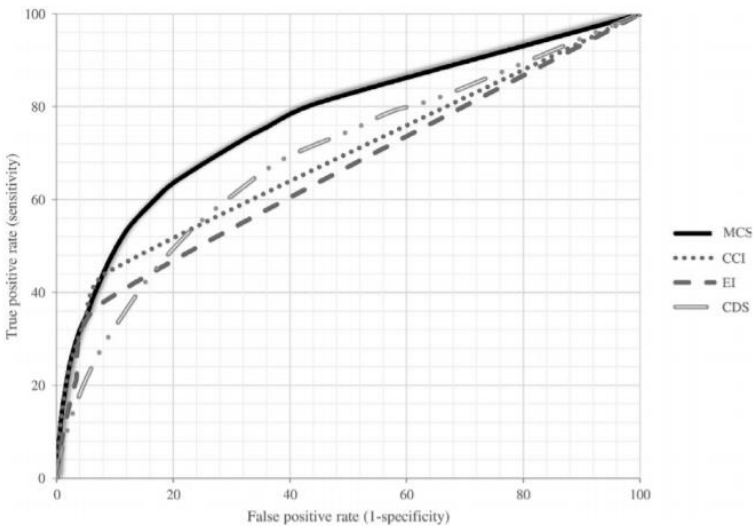


Figure 2 Receiver operating characteristic (ROC) curves comparing discriminant power of multisource comorbidity score (MCS), Charlson Comorbidity Index (CCI), Elixhauser Index (EI) and Chronic Disease Score (CDS) in predicting 1-year survival among National Health System (NHS) beneficiaries (internal validation set).

Anzianità?
Multimorbilità?
Pazienti con
insufficienza cardiaca?
...

Table 1 Assignment of weights in building the multisource comorbidity score (MCS) through a time-to-death multivariate Weibull model		
Disease/condition	Regression coefficient (SE)	Weight
Metastatic cancer	1.63 (0.04)	18
Alcohol abuse	0.99 (0.16)	11
Cancer, without metastasis	0.91 (0.03)	10
Tuberculosis	0.88 (0.28)	10
Psychoses	0.77 (0.05)	8
Liver disease	0.72 (0.05)	8
Anxiety medication	0.52 (0.23)	6
Weight loss	0.51 (0.12)	6
Dementia	0.51 (0.06)	6
Malignancy medication	0.49 (0.05)	5
Parkinson's disease	0.49 (0.09)	5
Lymphoma	0.46 (0.08)	5
Hemiplegia and hemiparesis	0.46 (0.09)	5
Coagulation defects	0.43 (0.10)	5
Disorders of fluid, electrolyte and acid-base balance	0.40 (0.06)	4
Kidney diseases	0.39 (0.04)	4
Kidney dialysis	0.36 (0.17)	4
Heart failure	0.35 (0.02)	4
Other neurological diseases	0.32 (0.07)	3
Rheumatoid arthritis	0.27 (0.11)	3
Anaemias	0.26 (0.04)	3
Cerebrovascular diseases	0.25 (0.03)	3
Diabetes	0.20 (0.02)	2
Vascular diseases	0.20 (0.05)	2
Gout	0.18 (0.03)	2
Epilepsy	0.18 (0.03)	2
Chronic pulmonary diseases	0.16 (0.02)	2
Peptic ulcer	0.16 (0.02)	2
Acute myocardial infarction	0.11 (0.04)	1
Coronary and peripheral vascular disease	0.11 (0.02)	1
Valvular diseases	0.10 (0.06)	1
Arrhythmia	0.09 (0.02)	1
Obesity	0.08 (0.10)	1
Hypothyroidism	0.07 (0.09)	1

Editorial

Administrative database, observational research and the Tower of Babel

Annamaria Iorio ^{a,b}, Gianfranco Sinagra ^a, Andrea Di Lenarda ^{a,*}

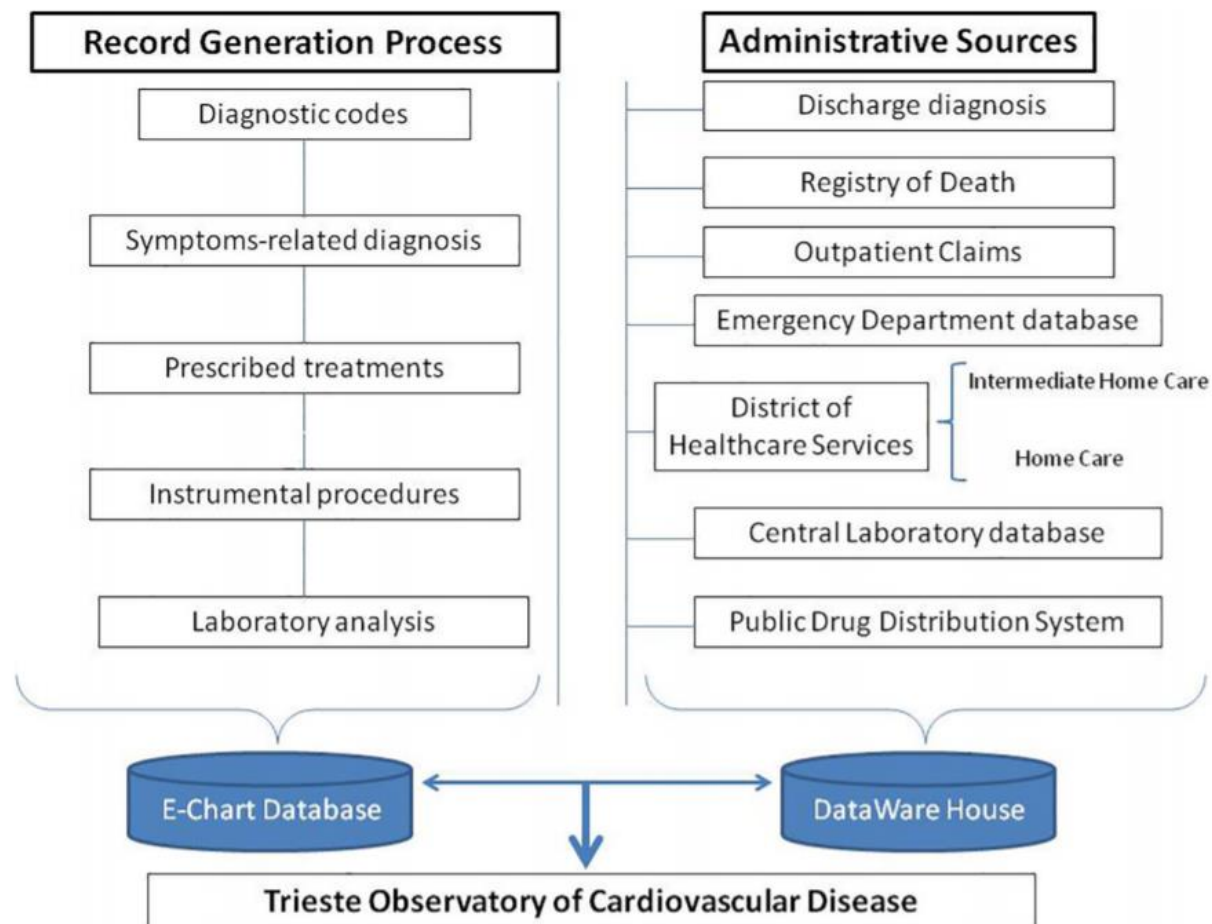


Fig. 1. Trieste Observatory of Cardiovascular Diseases is an example of population-based databases in which administrative data and clinical information are integrated within observational networks.

Agenda

(3 esempi)

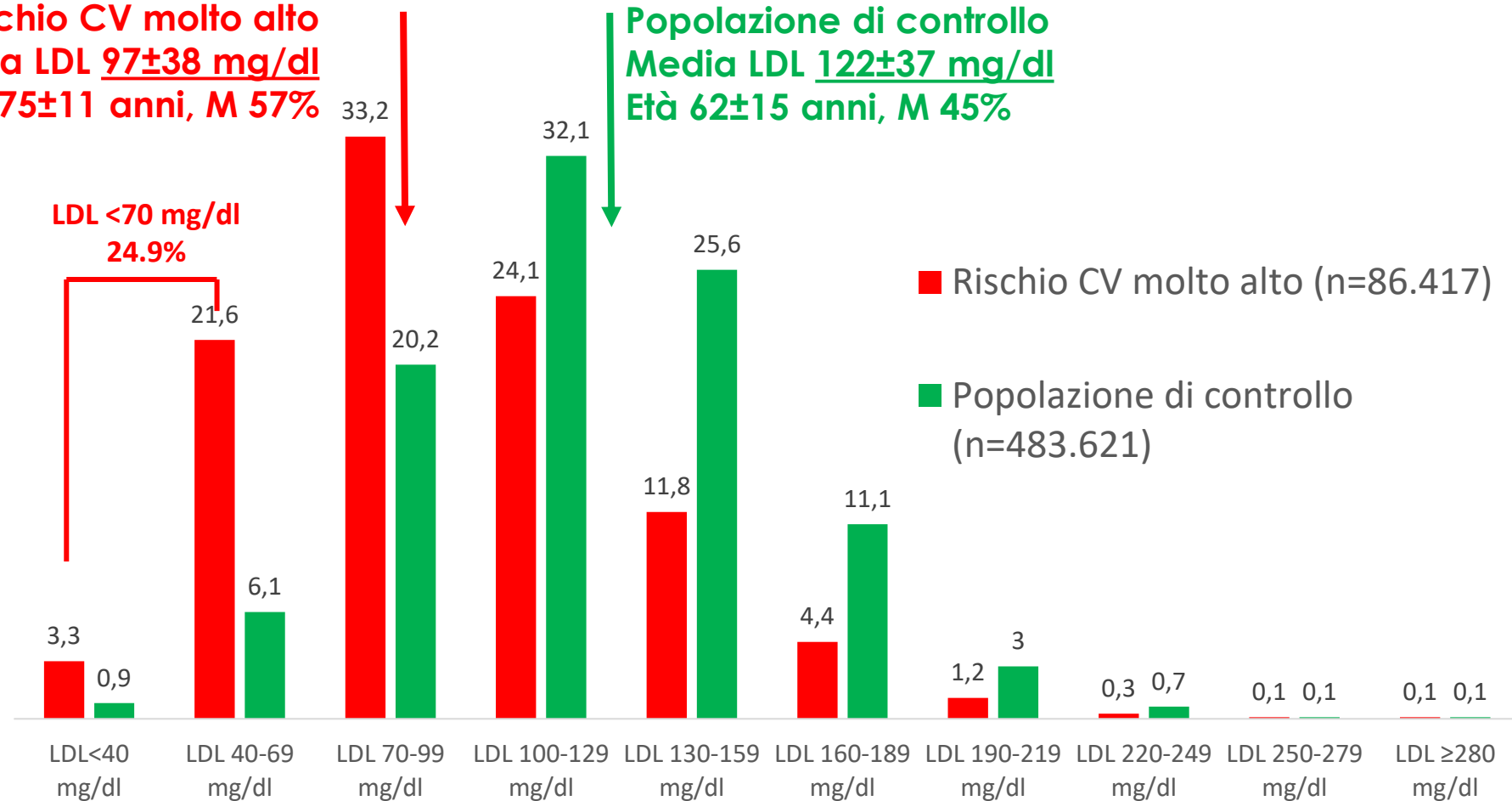
- Profilo lipidico, trattamento and rischio CV
- Fibrillazione atriale e trattamento NOAC
- Pazienti con insufficienza cardiaca, multimorbidità, trattamento e risultato

Distribuzione LDL basata sul rischio CV

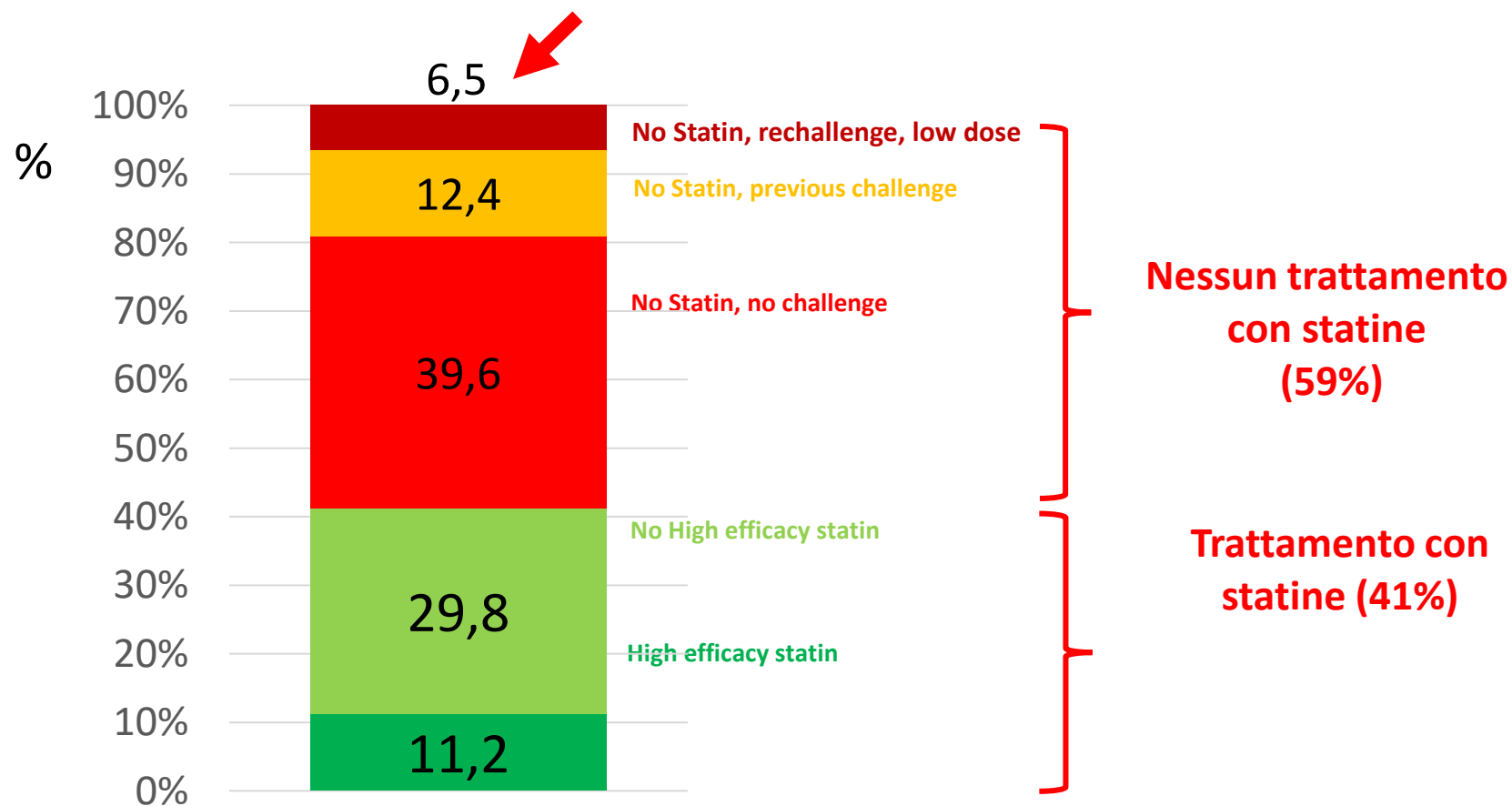
(ultimo LDL disponibile - 2009-2018 in 570.038/845.669 casi:
67.4% di ≥ 35 popolazione FVG)

Rischio CV molto alto
Media LDL 97 ± 38 mg/dl
Età 75 ± 11 anni, M 57%

Popolazione di controllo
Media LDL 122 ± 37 mg/dl
Età 62 ± 15 anni, M 45%



Prescrizione di statine e (possibile) intolleranza nella Regione Friuli Venezia Giulia (n=98618)



Agenda

(3 esempi)

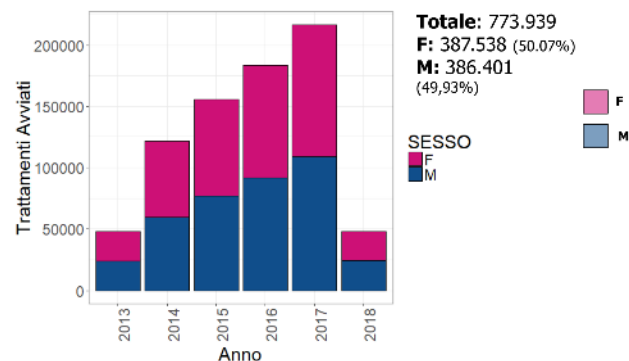
- Profilo lipidico, trattamento e rischio CV
- Fibrillazione atriale e trattamento NOAC
- Pazienti con insufficienza cardiaca, multimorbidità, trattamento e risultato

Non-vitamin K antagonist oral anticoagulation agents in patients with atrial fibrillation: Insights from Italian monitoring registries



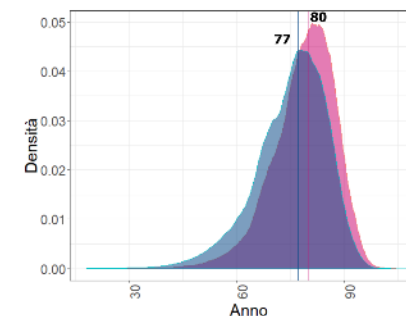
P.P. Olimpieri^a, A. Di Lenarda^{b,*}, F. Mammarella^{a,*}, L. Gozzo^a, A. Cirilli^a, M. Cuomo^a, M.M. Gulizia^c, F. Colivicchi^d, G. Murri^d, D. Gabrielli^{e,1}, F. Trotta^{a,1}

Trattamenti avviati (FANV) Anno e Genere – nuovi trattamenti



BLITZ AF
(n=4126)
M 59.4%

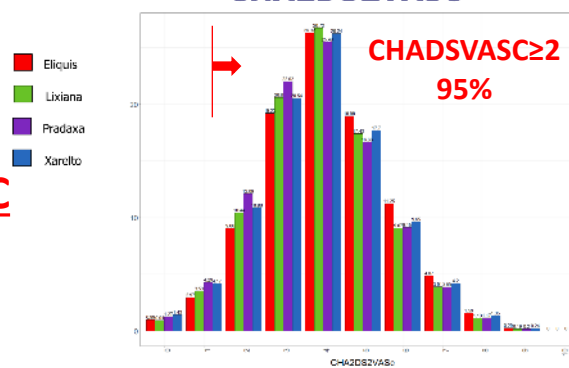
Trattamenti avviati (FANV) Distribuzione età



BLITZ AF
(n=4126)
Age
74±11 years

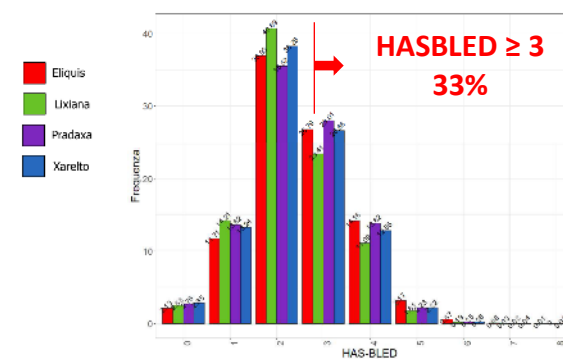
SESSO	MINIMO	1° QUANTILE	MEDIANA	3° QUANTILE	MASSIMO	MEDIA	DEV. STD
F	19	74	80	85	109	79	9
M	18	69	77	82	103	75	10

Distribuzione punteggio CHA2DS2VASC



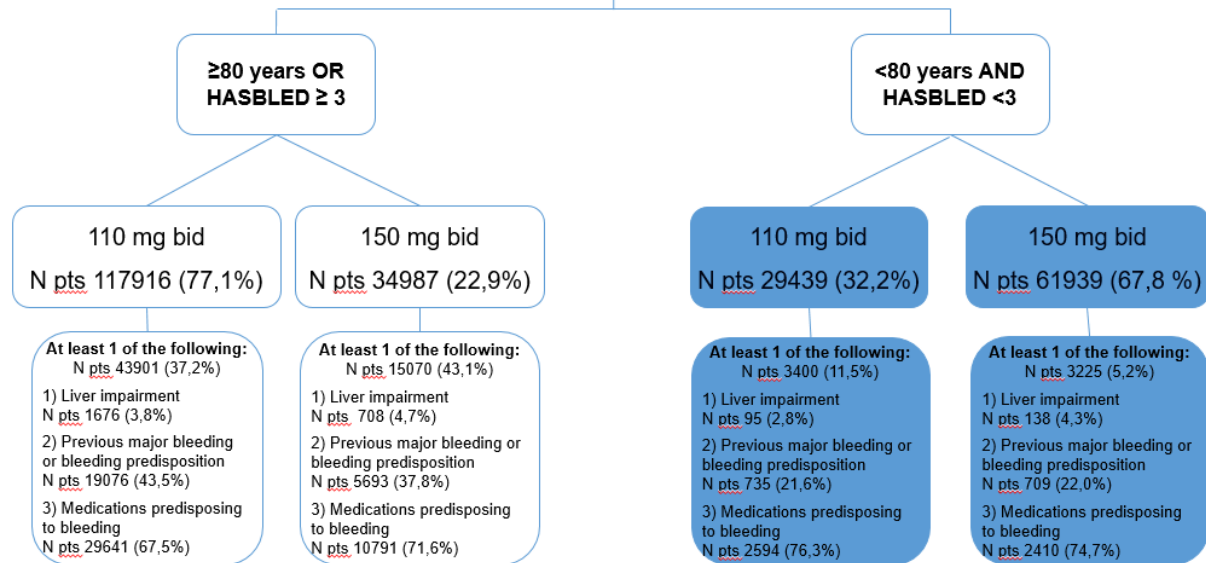
BLITZ AF
(n=4126)
CHADSVASC
≥ 2 83%

Distribuzione punteggio HAS-BLED

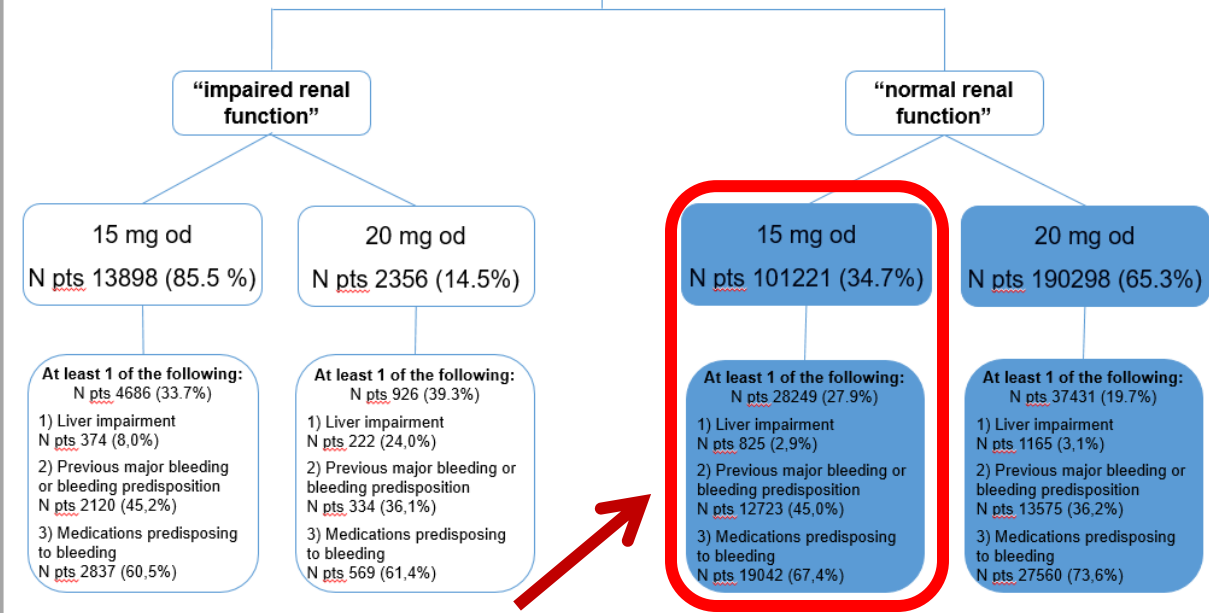


BLITZ AF
(n=4126)
HASBLED ≥ 3
13%

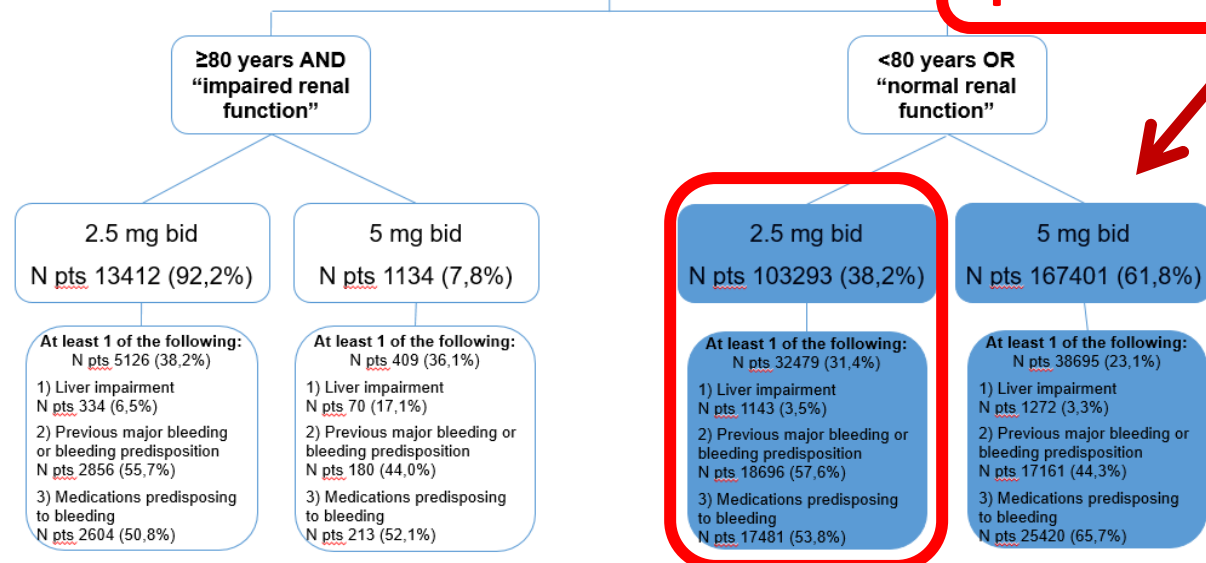
Dabigatran



Rivaroxaban

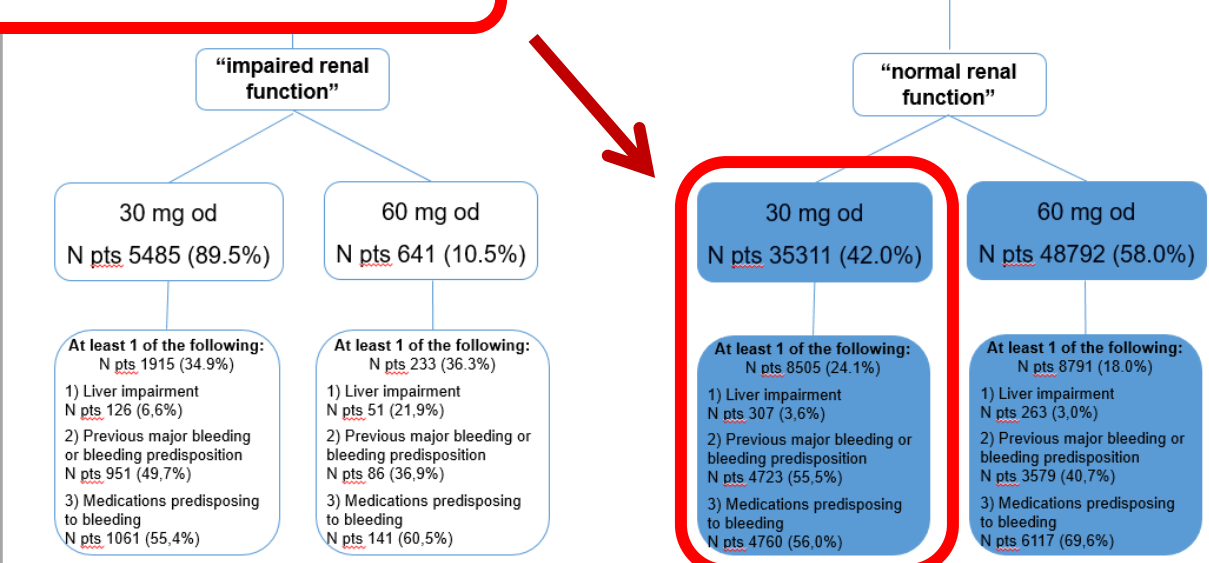


Apixaban



**240.000 pazienti
potenzialmente sottodosati**

Edoxaban



Agenda (3 esempi)

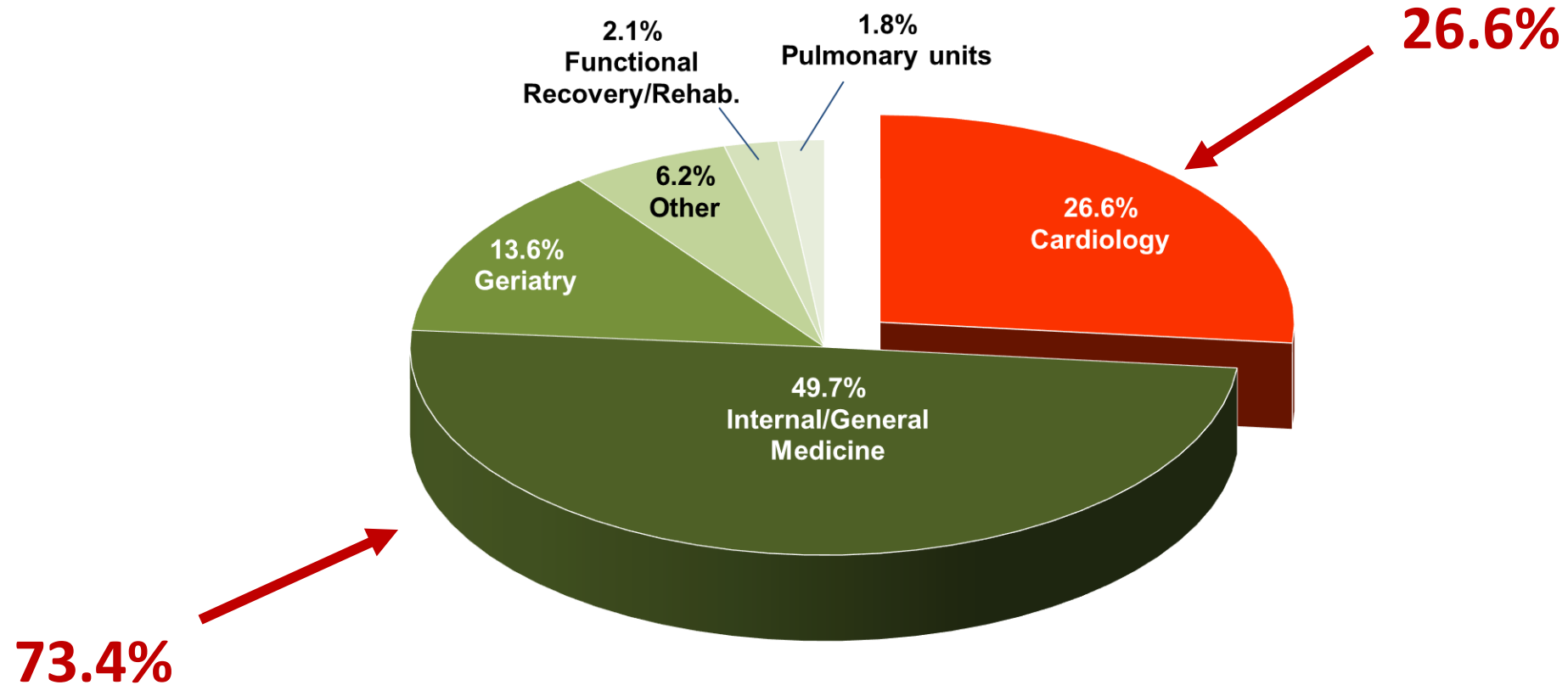
- Profilo lipidico, trattamento e rischio CV
- Fibrillazione atriale e trattamento NOAC
- Pazienti con insufficienza cardiaca, multimorbidità, trattamento e risultato

The real-world evidence of heart failure: findings from 41 413 patients of the ARNO database

Aldo P. Maggioni^{1,*}, Francesco Orso^{1,2}, Silvia Calabria³, Elisa Rossi⁴, Elisa Cinconze⁴,
Samuele Baldasseroni⁵, and Nello Martini⁶, on behalf of the ARNO Observatory[†]



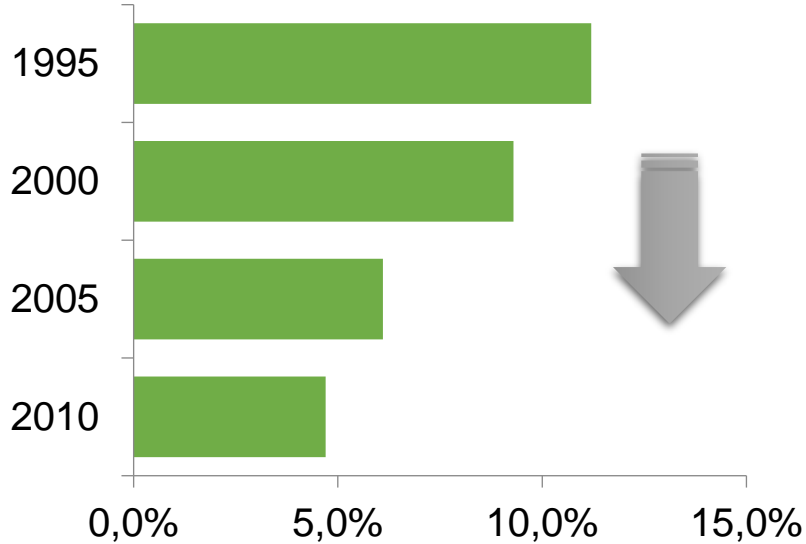
Dove sono i pazienti con AHF ammesso?



Risultati sui risultati dei pazienti ANMCO Trial – Registri e RWE

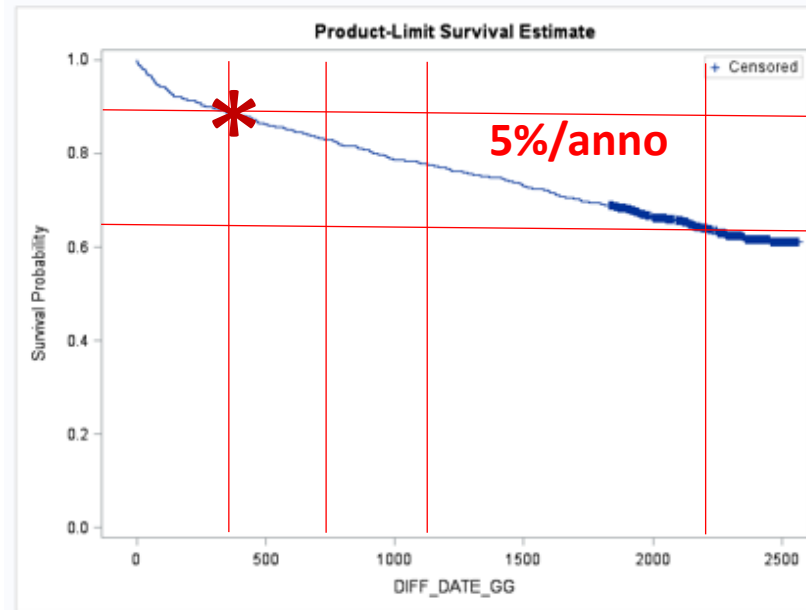
5963 nuovi pazienti HF; cohort 2009-2010; Regione FVG

IN-HF Registro di Cardiologia HF cronico – 1y mortalità



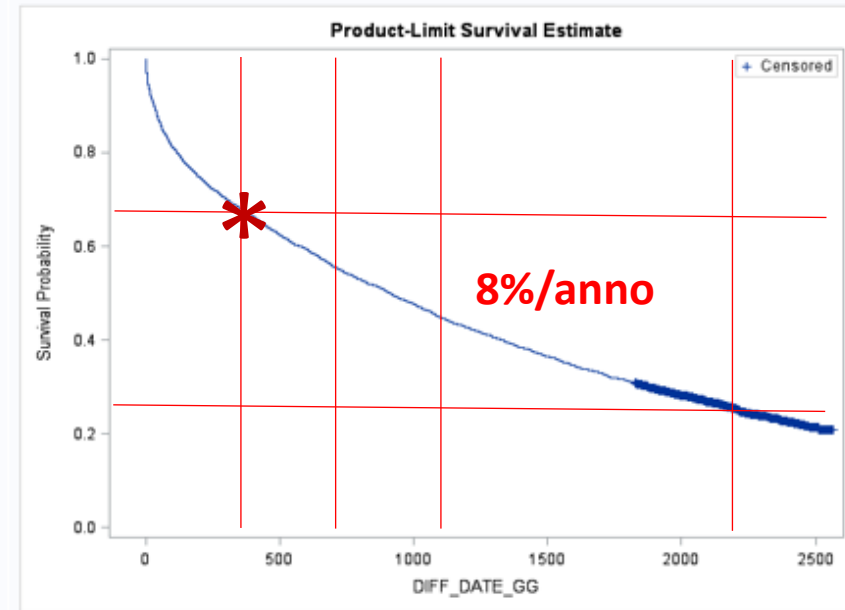
1y mortalità
<5%!

pazienti HF <70 yo



1y mortalità
≈10%!

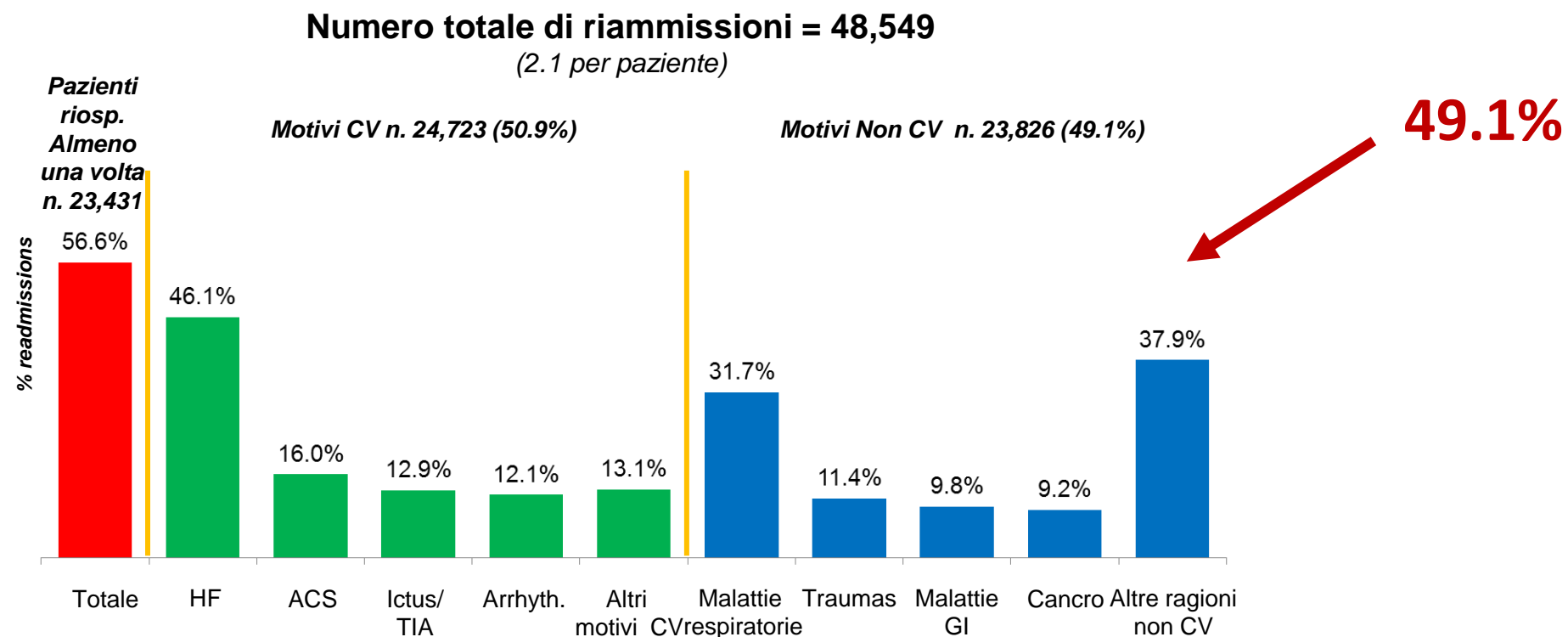
pazienti HF ≥70 yo



1y mortalità
>30%!

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Samuele Baldasseroni⁵, and Nello Martini⁶, on behalf of the ARNO Observatory[†]



HF=heart failure; ACS=acute coronary syndrome; TIA=transient ischemic attack; CV=cardiovascular; GI=gastrointestinal

Prevalence and prognostic impact of non-cardiac co-morbidities in heart failure outpatients with preserved and reduced ejection fraction: a community-based study

Annamaria Iorio^{1,2}, Michele Senni^{1*}, Giulia Barbati², Stephen J. Greene³, Stefano Poli², Elena Zambon², Concetta Di Nora², Giovanni Cioffi⁴, Luigi Tarantini⁵, Antonello Gavazzi⁶, Gianfranco Sinagra², and Andrea Di Lenarda⁷

Età media 77 yo

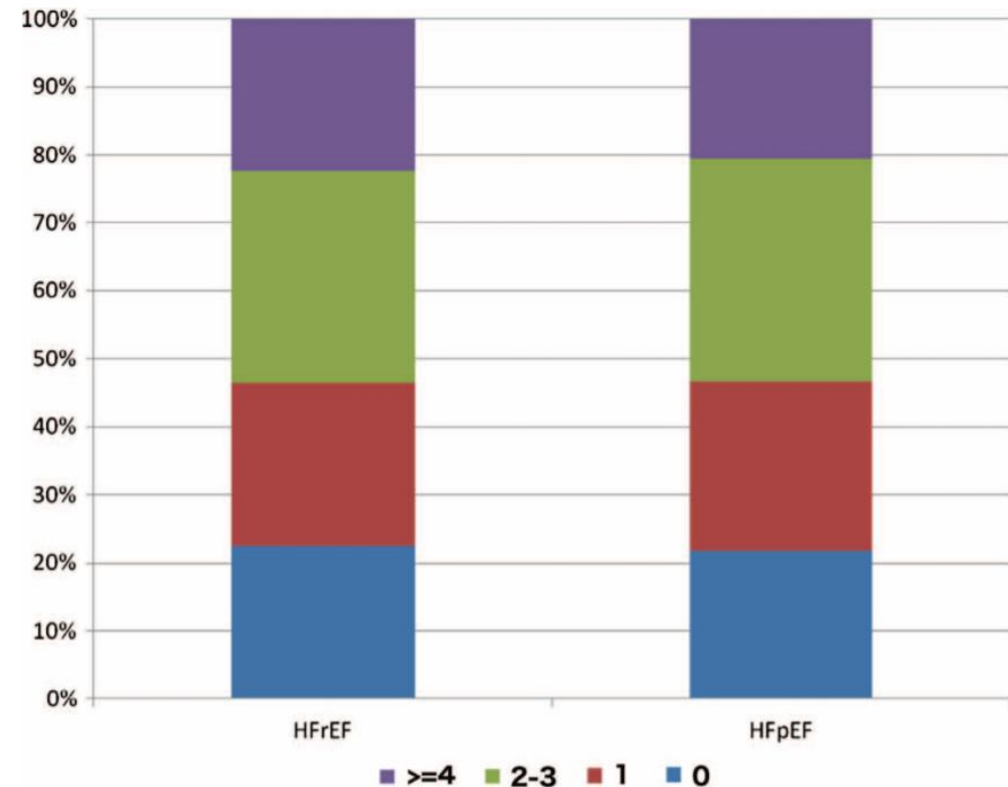


Figure 2 Co-morbidity load (0, 1, 2, 3, ≥4 co-morbidities) according to left ventricular ejection fraction groups. HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction.

Prevalence and prognostic impact of non-cardiac co-morbidities in heart failure outpatients with preserved and reduced ejection fraction: a community-based study

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Età media 77 yo

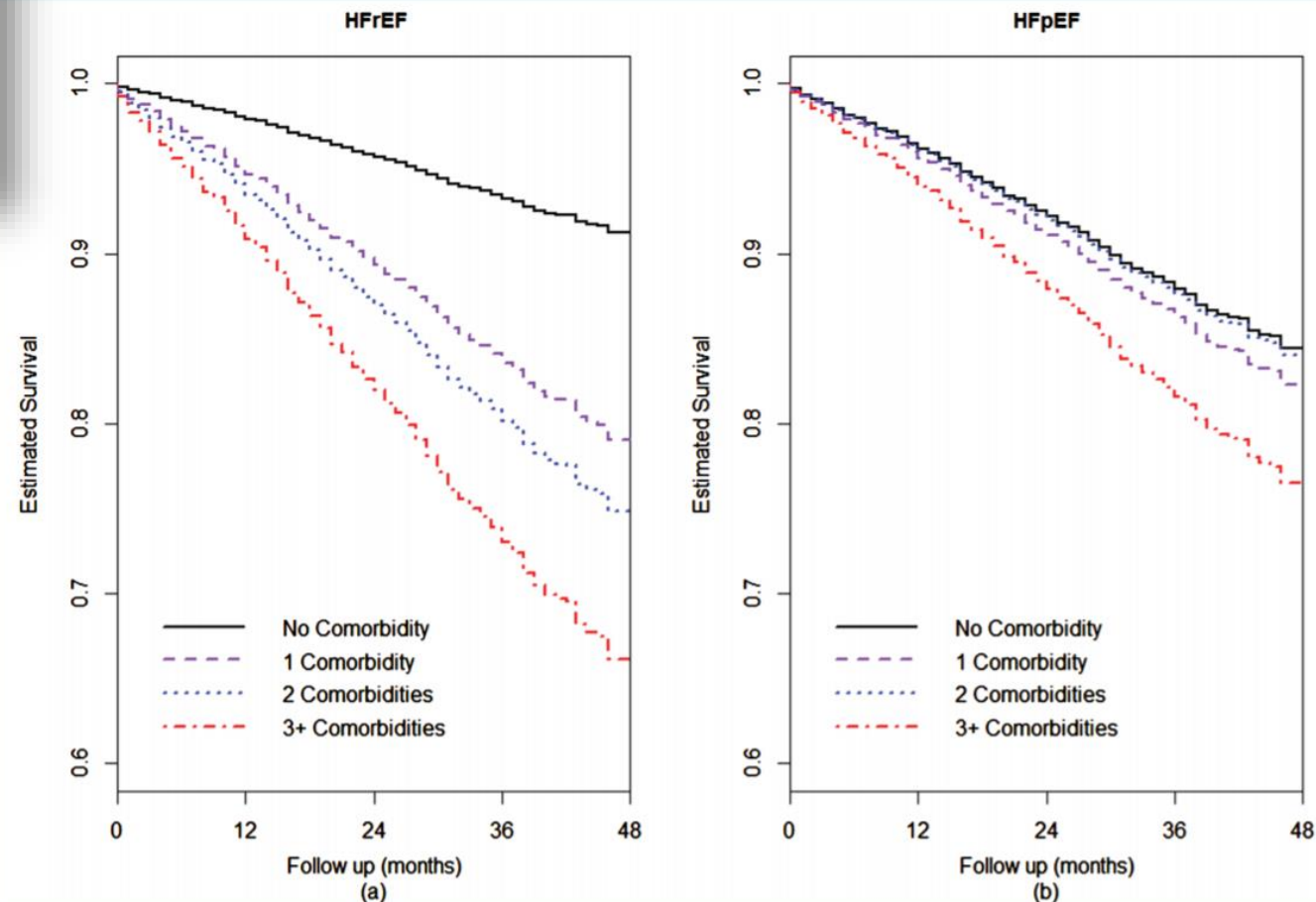


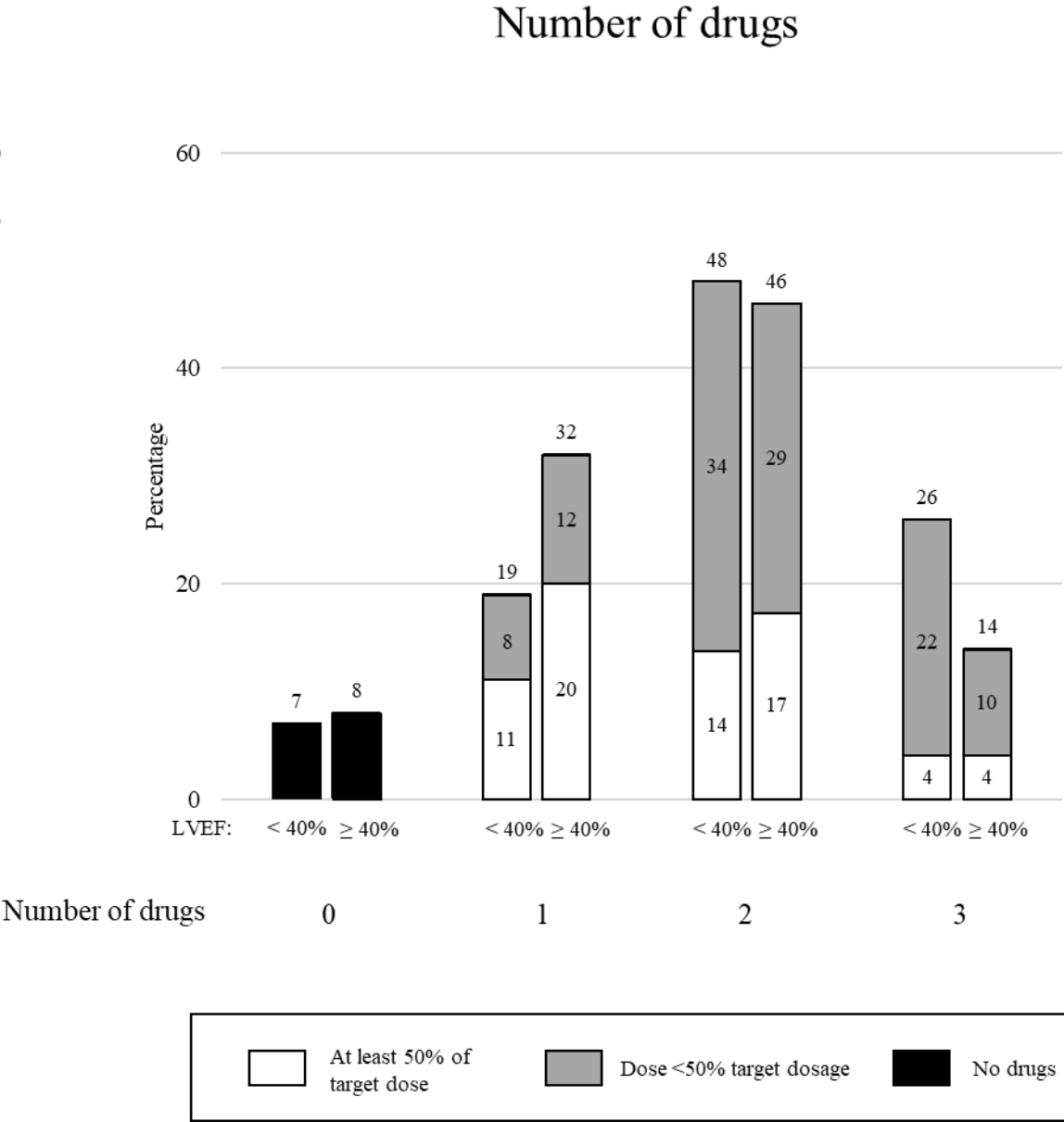
Figure 3 Estimated survival curves from the Cox model according to co-morbidity load (0, 1, 2, ≥ 3 co-morbidities) in patients with heart failure with reduced (HFrEF, A) and preserved ejection fraction (HFpEF, B).

Patients' adherence to disease modifying treatment in a community based-sample of patients
with chronic heart failure

*Federico REA^{1,2}, *Annamaria IORIO^{3,4}, Giulia BARBATI^{5,1}, Riccardo BESSI³, Matteo CASTRICHINI³, Vincenzo NUZZI³, Arjuna SCAGNETTO⁵, Elena PERUZZI⁶, Michele SENNI⁴, Giovanni CORRAO^{1,2}, Gianfranco SINAGRA³, Andrea DI LENARDA³

Eur Heart J 2020, submitted

In un potenziale registro della comunità osservazionale sono stati esaminati 2528 pazienti ambulatoriali con HF (età media 76, 58% uomini). Di questi 609 avevano un LVEF <40%.



*...gli approcci di apprendimento automatico sono essenzialmente scatole nere,
in cui non puoi davvero ispezionare
"Come l'algoritmo sta realizzando ciò che sta realizzando"*



- Non linearità (punteggi semplici rispetto a modelli più complessi)
- Interazioni / associazione
- Numero di eventi / variabili