

SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Unità Sanitaria Locale della Romagna

AGGIORNAMENTO OBBLIGATORIO MEDICI DI MEDICINA GENERALE

Sabato 12 Dicembre 2015

TITOLO DEL CORSO: *come migliorare la gestione clinica del paziente nefropatico*

Ambito di Rimini

Responsabile del corso
Tesei Fiorenzo
Responsabile Scientifico
Irene Angelini
Referente Formazione
MMG
Ahmad Dannoun

**Sede: SGR Sala Acqua e Sala Energia Via
Chiabrera,34 Rimini**

Segreteria: Monica BIANCHI Dipartimento
Cure Primarie e M.C. Rimini
Tel. 0541.668337 - Fax 0541.668330
monica.bianchi2@aulromagna.it

Liberatoria

LA MALATTIA RENALE CRONICA

*come migliorare la gestione clinica
del paziente nefropatico*

NEFROLOGO E MEDICO DI MEDICINA GENERALE
A CONFRONTO

***Il “referral” del paziente al Nefrologo
Prevenzione dell’Insufficienza Renale
Cronica Progressiva (PIRP)***

Angelo Rigotti
U.O. Nefrologia e Dialisi – AUSL ROMAGNA-Rimini

Rimini, 12 dicembre 2015

MRC: malattia in progressiva espansione
Diventerà problema rilevante di salute pubblica
Porterà a difficoltà di sostenibilità anche economica

Può portare all'ESRD

E' potente amplificatore di malattia e di morte cardio-vascolare

Come possiamo affrontare il problema?

Possiamo incidere significativamente sulla malattia prevenendola, curandola, rallentando la progressione, ottimizzando il trattamento sostitutivo quando raggiunge la fase terminale?

Referral to specialists and models of care

Kidney International Supplements (2013) 3, 112–119;

doi:10.1038/kisup.2012.68

Table 36 | Outcomes of early versus late referral

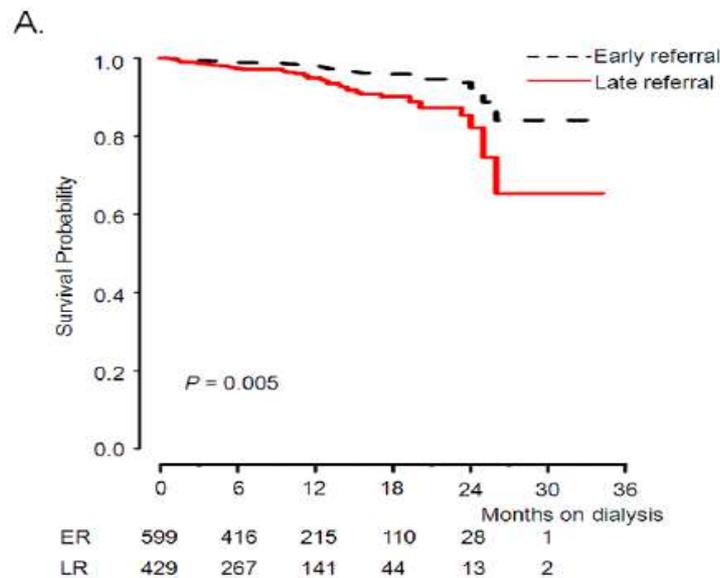
Variable	Early referral mean (SD)	Late referral mean (SD)	P value
Overall mortality, %	11 (3)	23 (4)	<0.0001
1-year mortality, %	13 (4)	29 (5)	0.028
Hospital length of stay, days	13.5 (2.2)	25.3 (3.8)	0.0007
Serum albumin at RRT start, g/dl [g/l]	3.62 (0.05) [36.2 (0.5)]	3.40 (0.03) [34.0 (0.3)]	0.001
Hematocrit at RRT start, %	30.54 (0.18)	29.71 (0.10)	0.013

Abbreviation: RRT, renal replacement therapy.

Adapted from Am J Med, Chan MR, Dall AT, Fletcher KE, *et al.*⁶⁷³ Outcomes in patients with chronic kidney disease referred late to nephrologists: a meta-analysis. 120: 1063-1070, 2007, with permission from Elsevier; accessed <http://download.journals.elsevierhealth.com/pdfs/journals/0002-9343/PIIS000293430700664X.pdf>

Early Referral to a Nephrologist Improved Patient Survival: Prospective Cohort Study for End-Stage Renal Disease in Korea

Total ESRD patients



DM ESRD patients

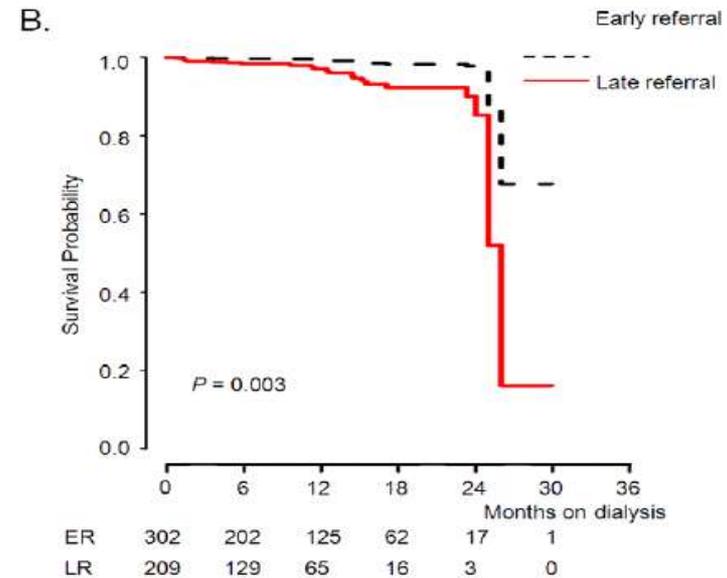


Figure 2. Kaplan-Meier survival curve by timing of referral. (A) Total patients, adjusted for age, gender, modified CCI, BMI, eGFR, serum hemoglobin, calcium, iPTH, uric acid, triglycerides, total cholesterol, and HDL cholesterol. (B) DM ESRD patients, adjusted for age, gender, modified CCI, BMI, eGFR, serum hemoglobin, calcium, iPTH, uric acid, triglycerides, total cholesterol, and HDL cholesterol.
doi:10.1371/journal.pone.0055323.g002

DIFFERENZA TRA I COSTI SANITARI DEI PZ. “EARLY REFERRAL” VERSO “LATE REFERRAL”

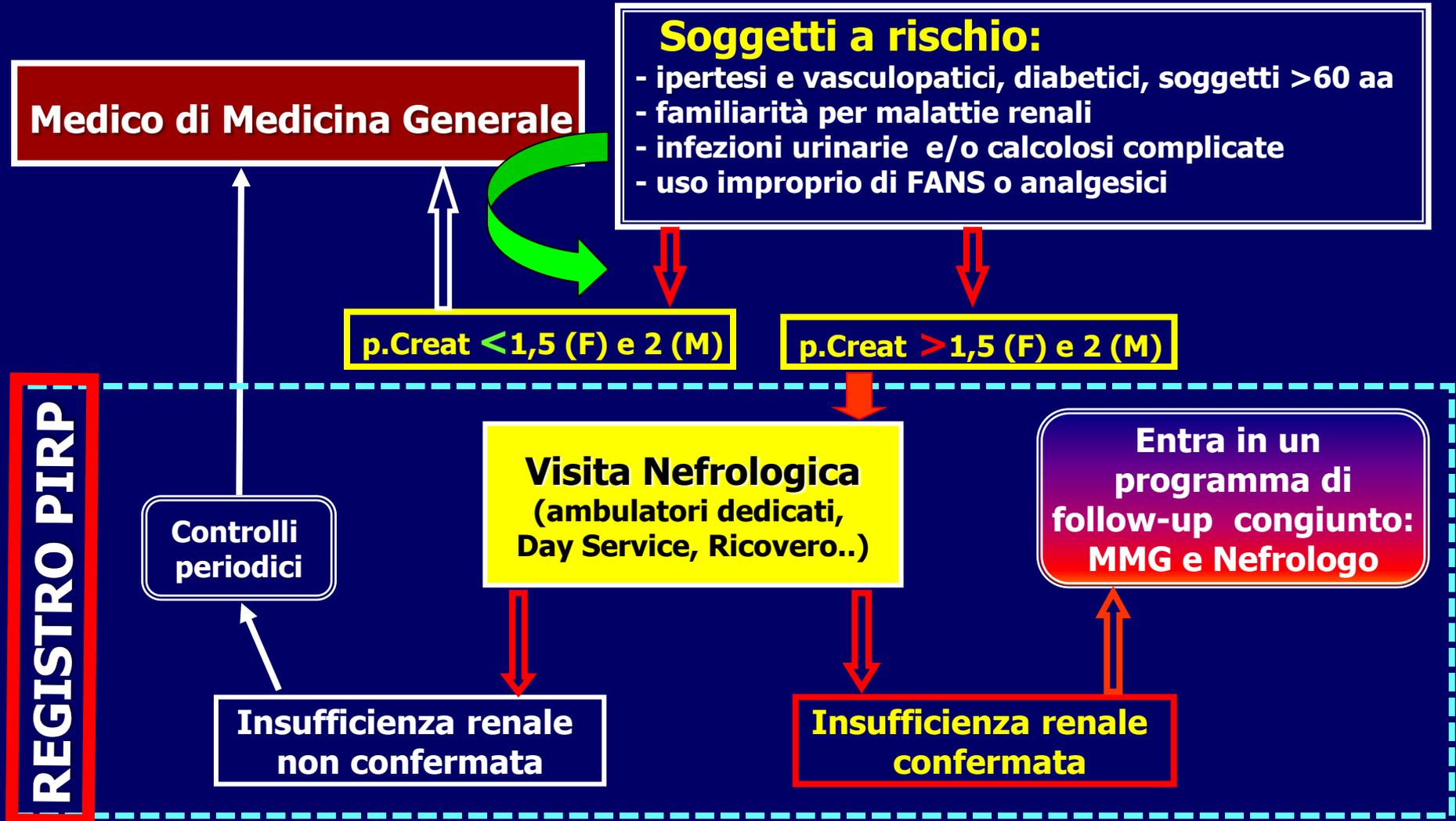
COST EFFECTIVENESS OF EARLY REFERRAL (for a 5-year period)

Table 2. Results of Base-Case Analysis for Early Versus Late Referral Strategies

Outcome Variable	Early Referral	Late Referral	Incremental Cost-Effective Ratio (CDN\$/Life-Year Gained)
Cost of nephrology care (CDN\$)	130,912	164,262	-208,438
Patient life-years	3.52	3.36	
Life-years free of RRT	2.18	1.76	
Total hospital inpatient days	25	41	

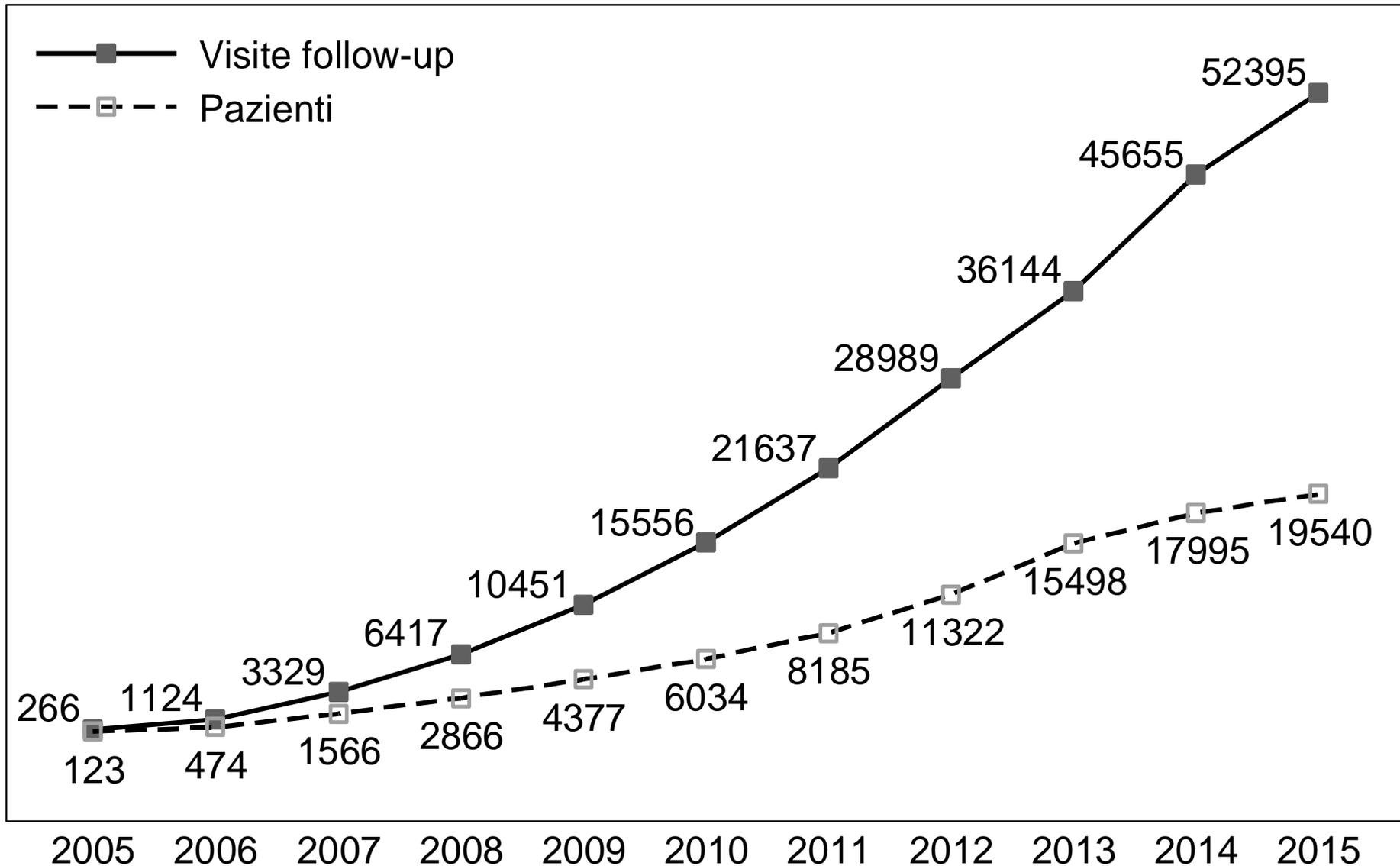
Abbreviations: CDN\$, Canadian dollars; RRT, renal replacement therapy.

PREVENZIONE INSUFFICIENZA RENALE CRONICA PROGRESSIVA P. I. R. P.

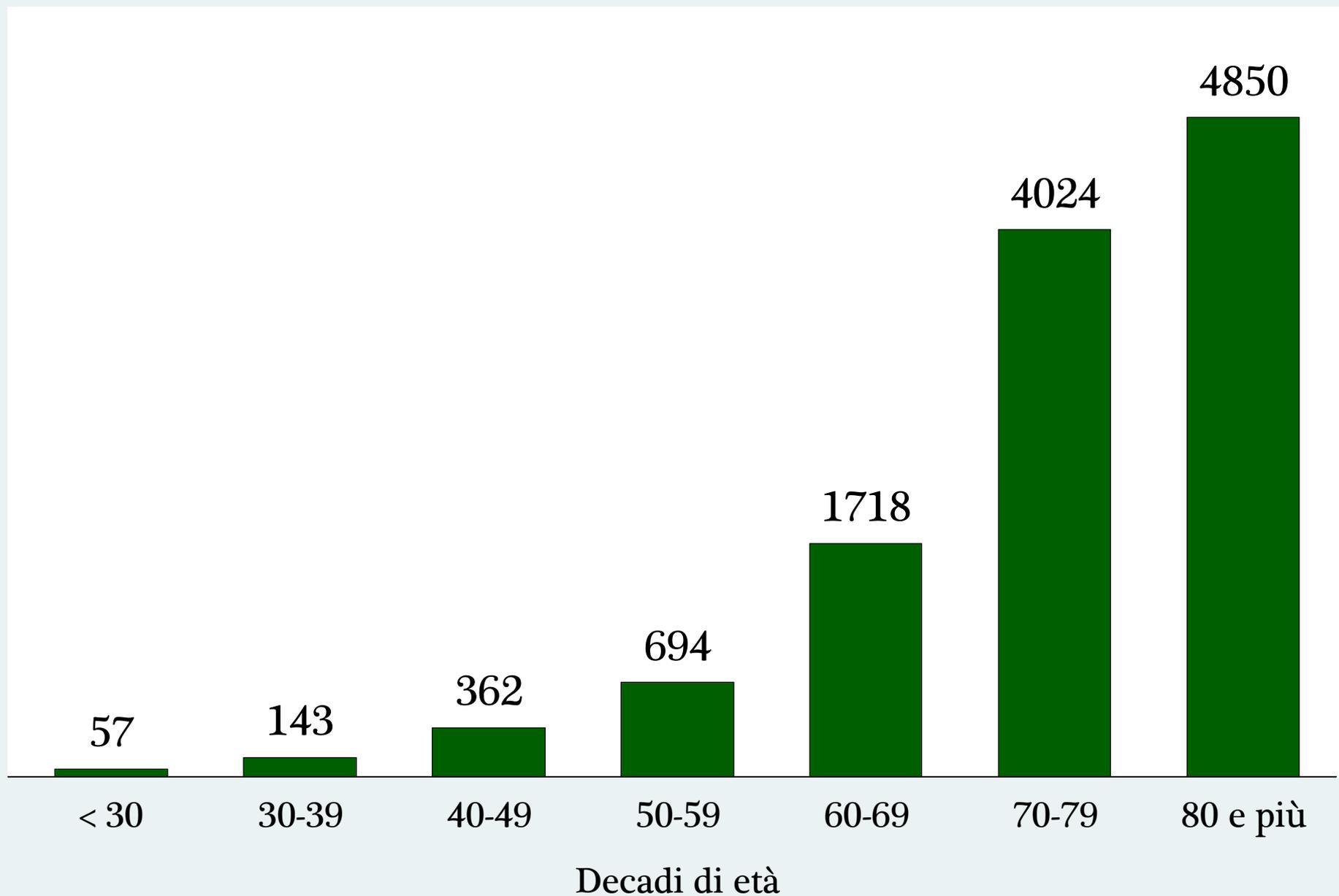


Attività del registro PIRP, cumulata negli anni

Dati al 31.08.2015



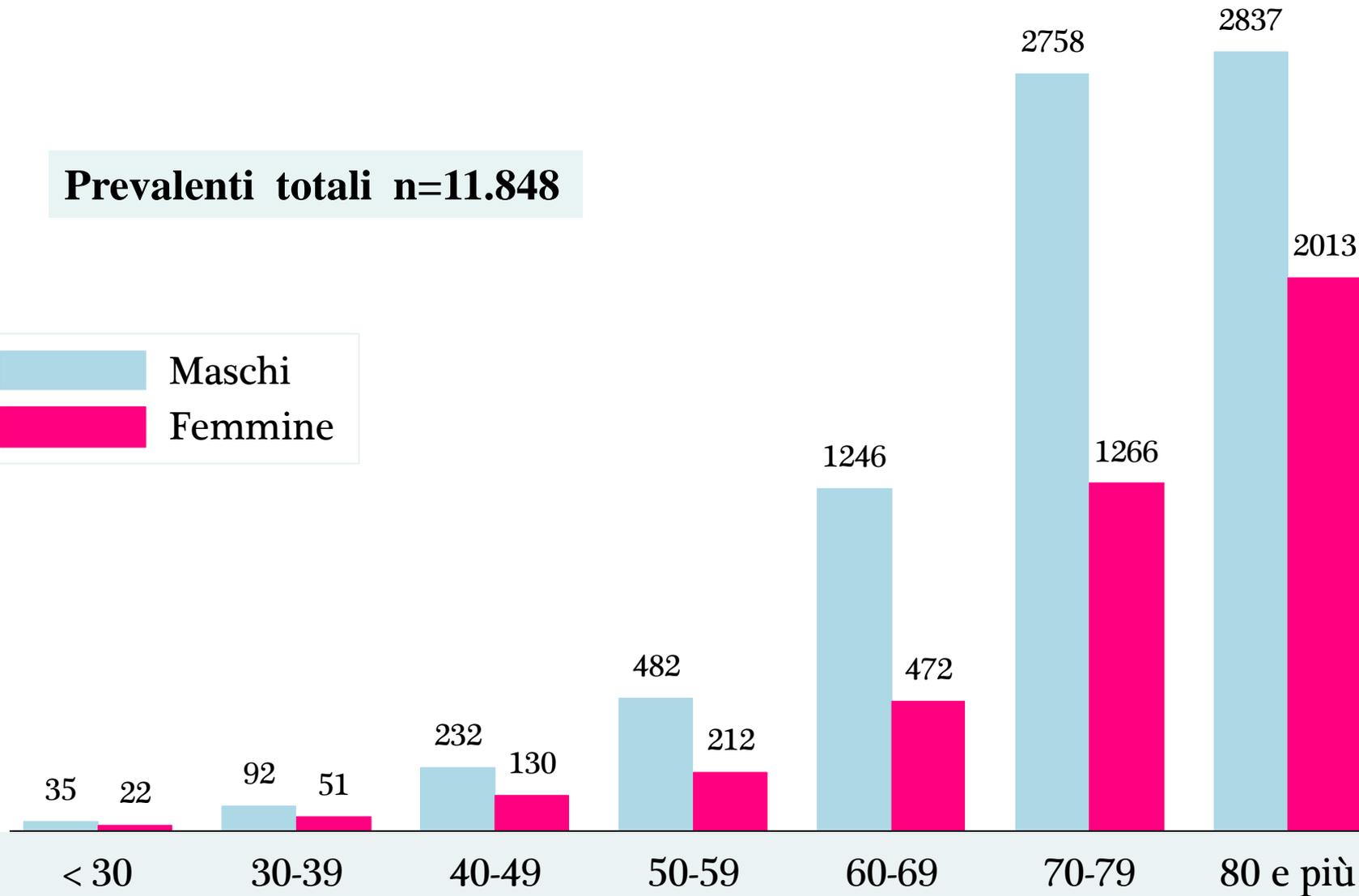
Numero pazienti prevalenti al 31.12.2014 per classi d'età



Distribuzione pazienti prevalenti al 31/12/2014 per classi d'età e genere

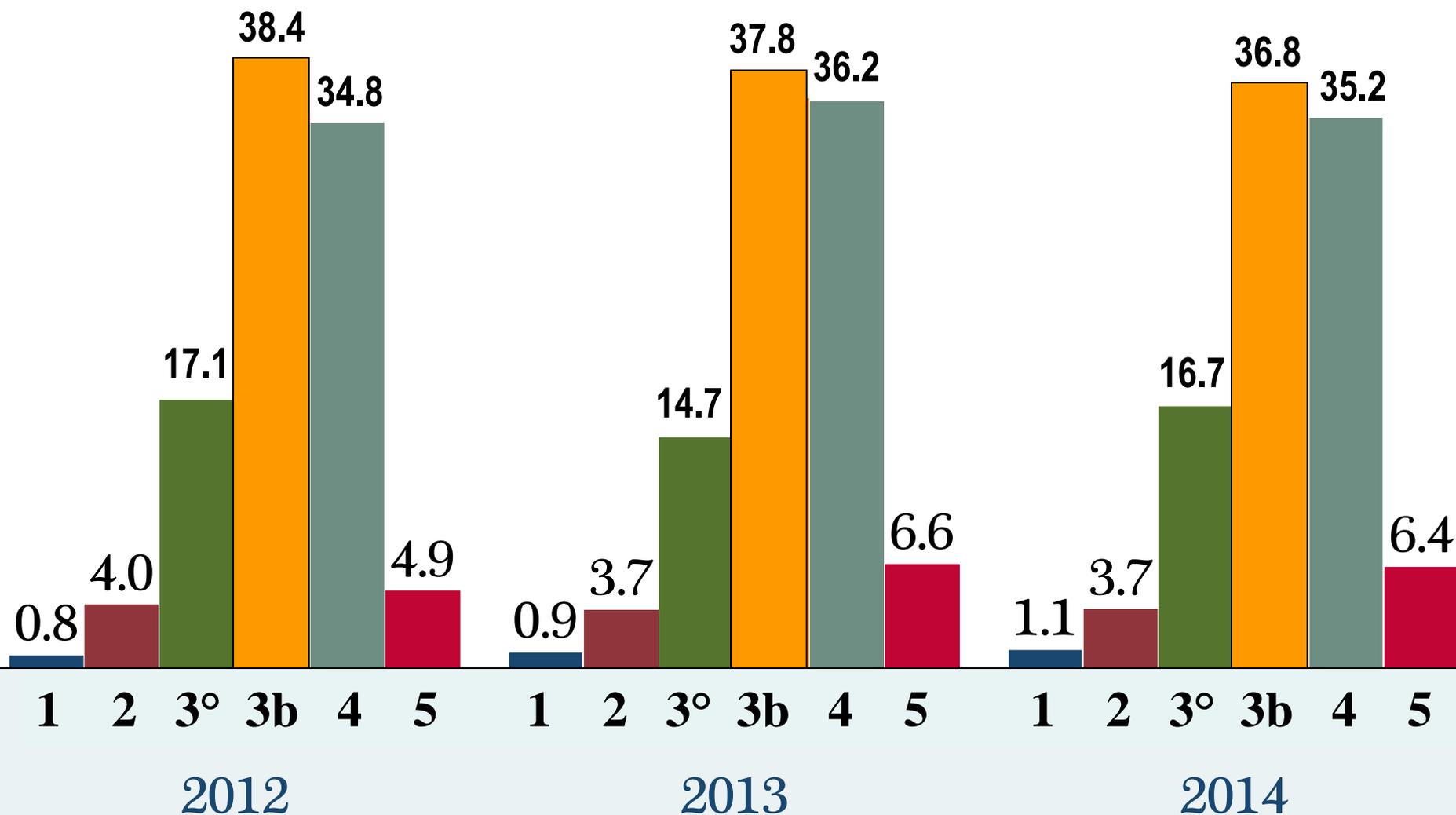
Prevalenti totali n=11.848

Maschi
Femmine



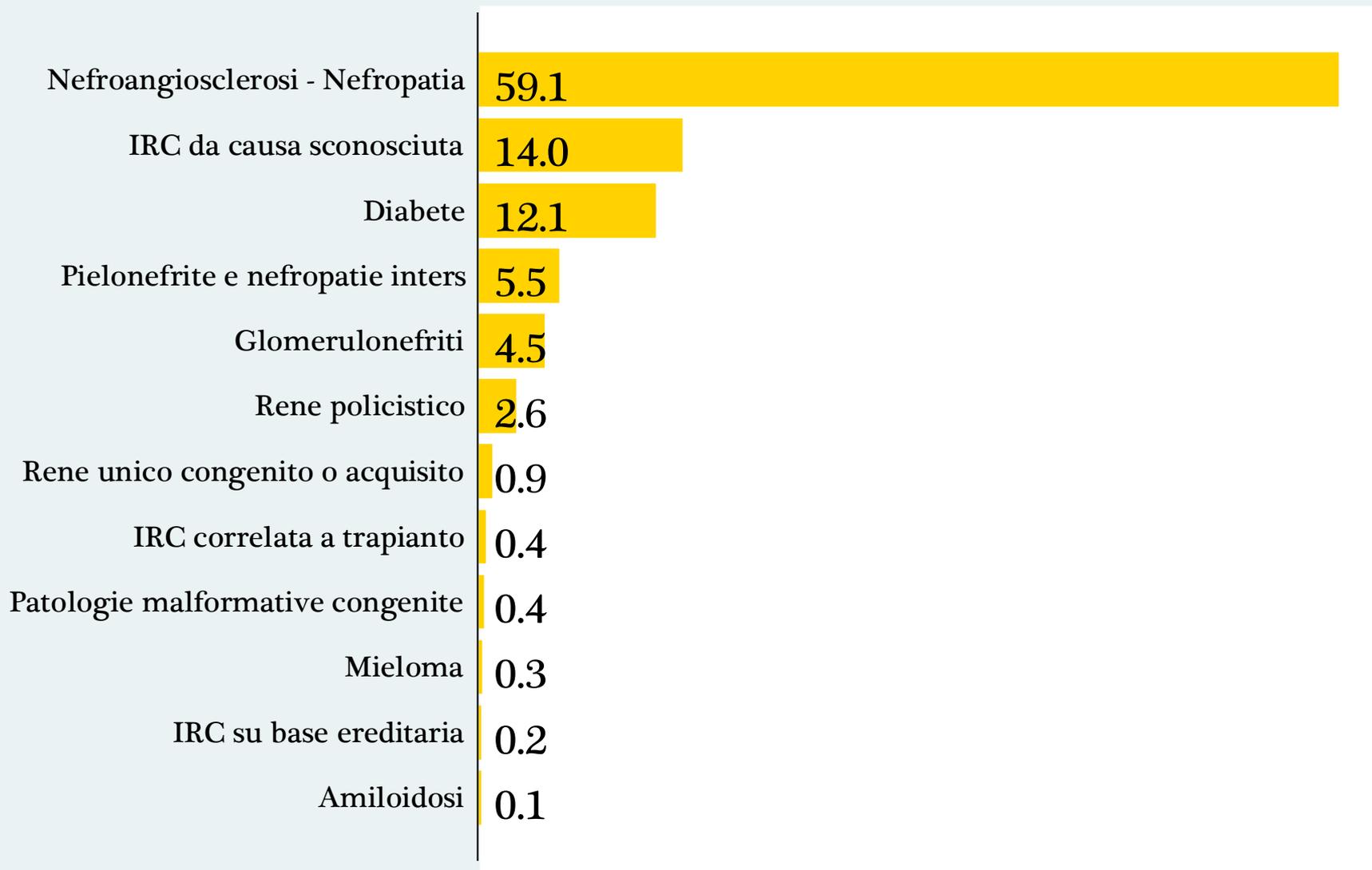
Età attuale pazienti

Distribuzione per classi VFG pazienti incidenti (%) 2012-2014



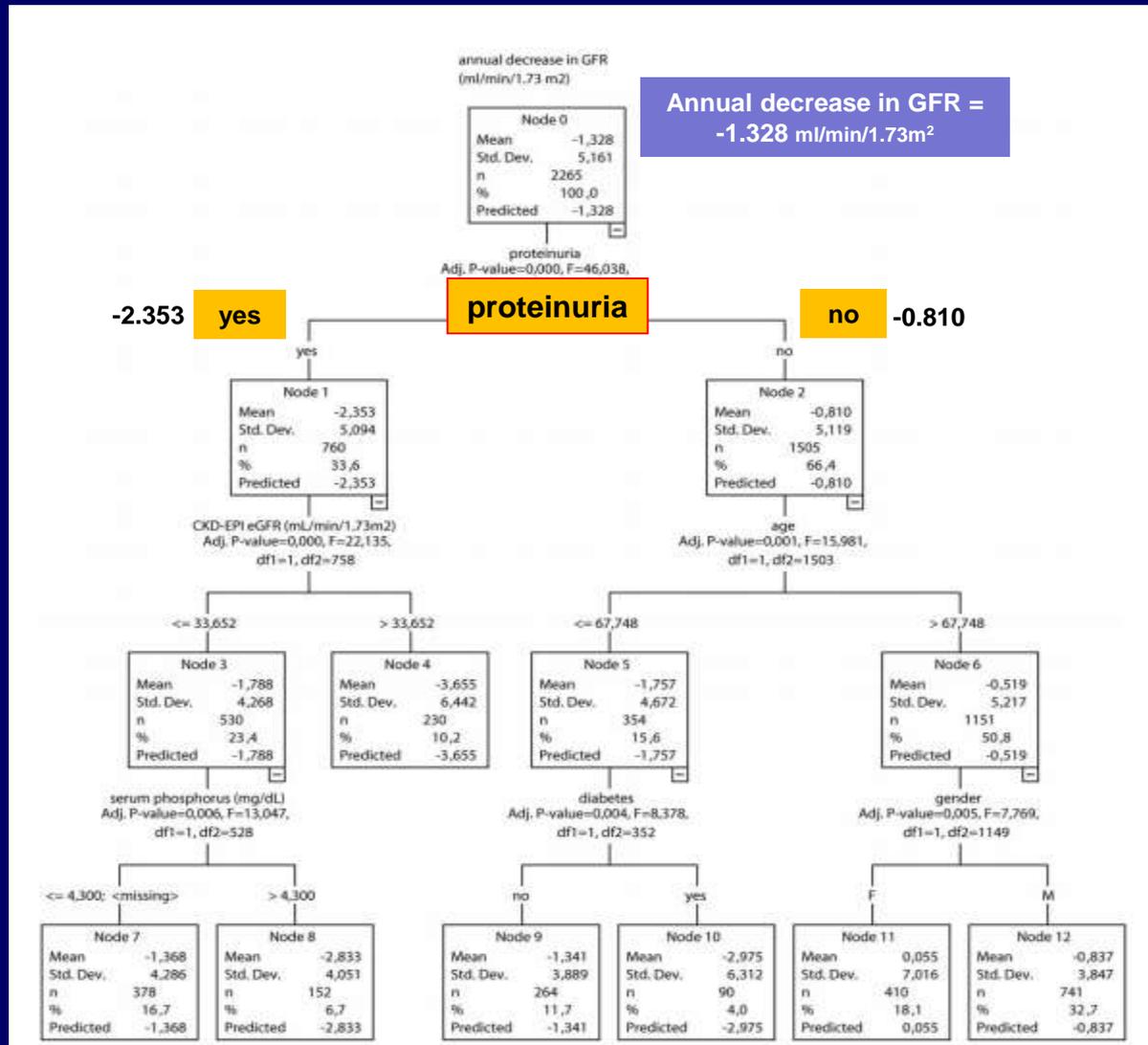
VFG (CKD-EPI) alla I° visita

Principali nefropatie di base in tutti i pazienti

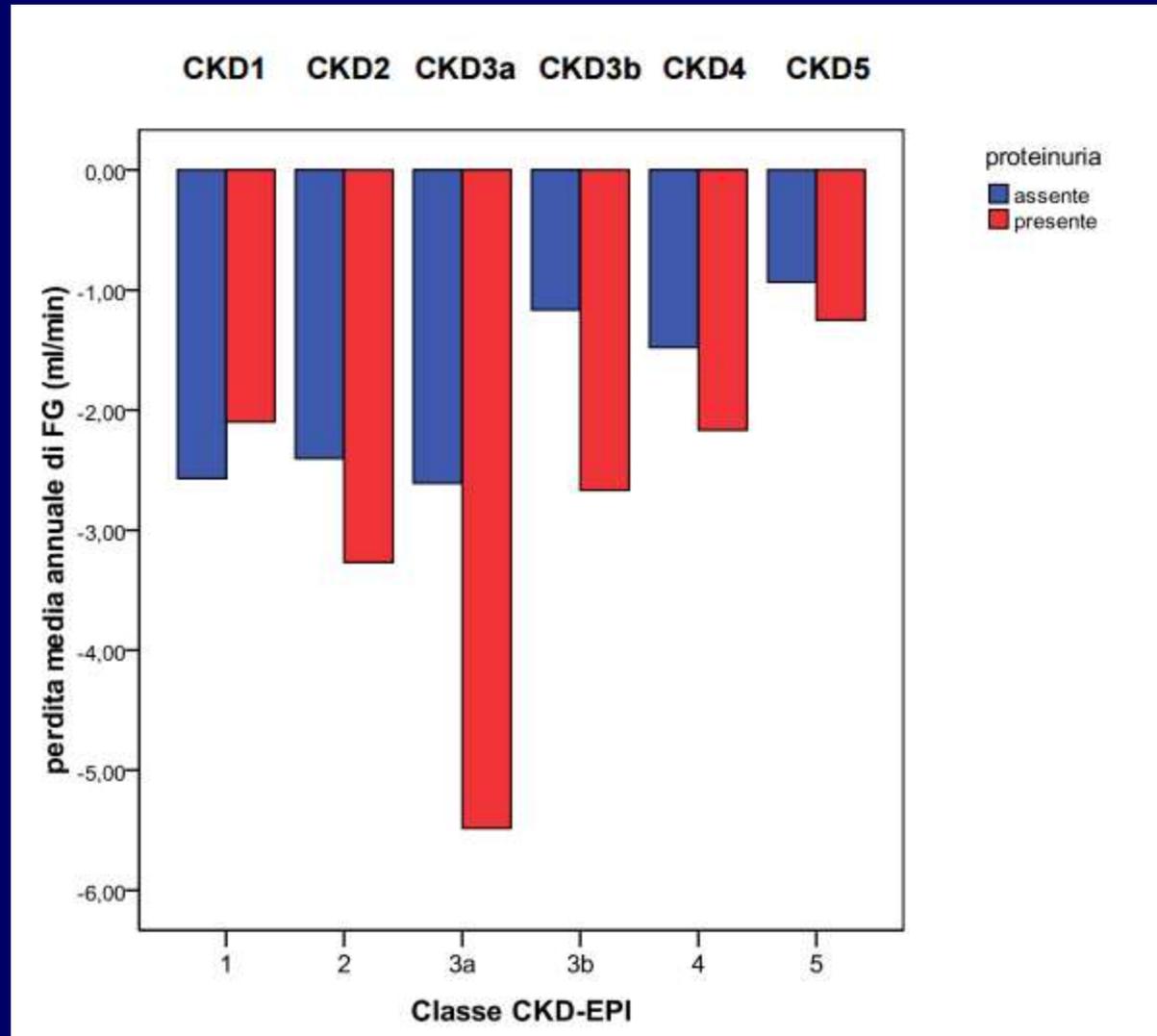


Diagnosi nefropatia all'ingresso PIRP, n=18.109

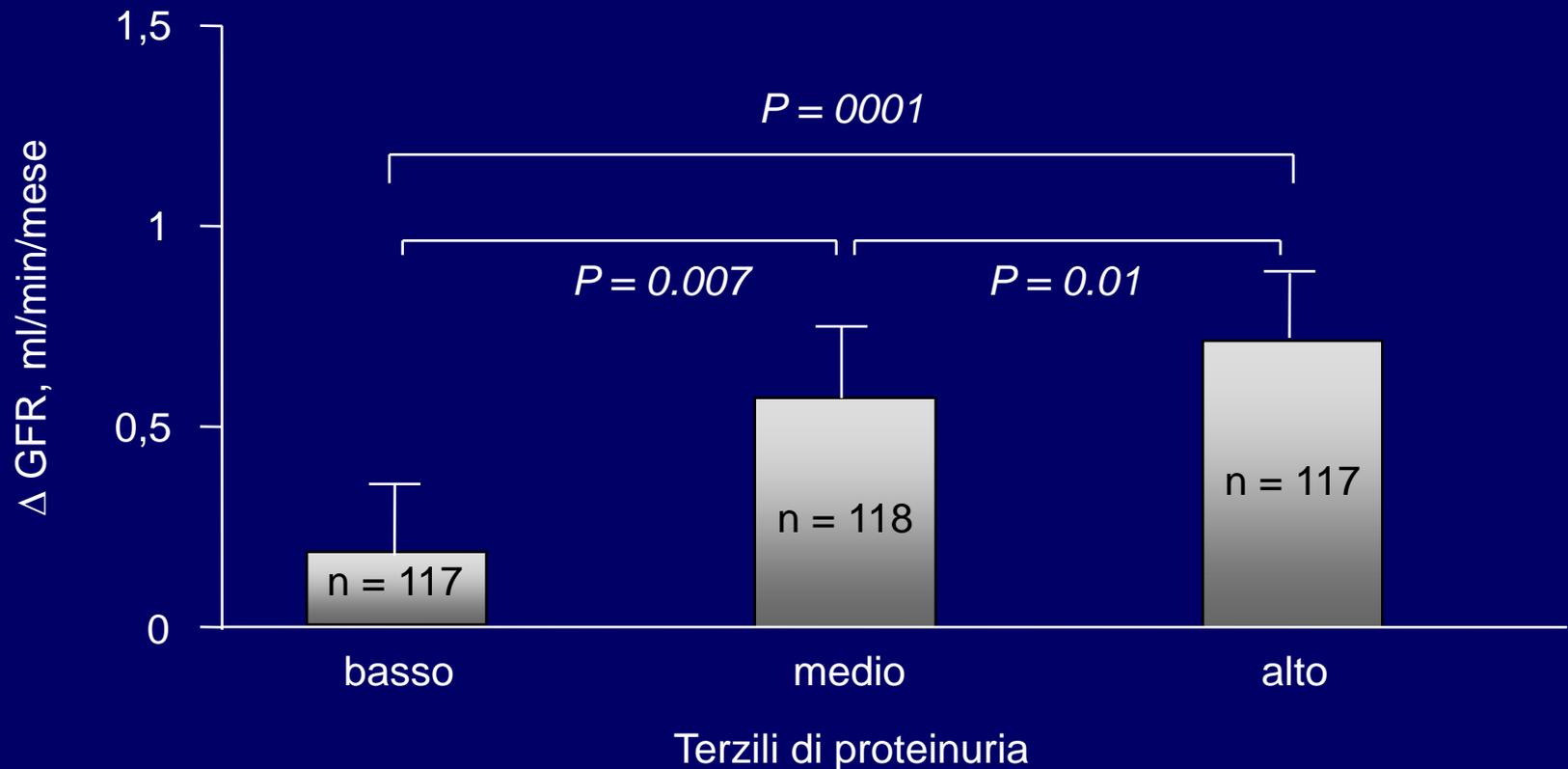
CLASSIFICATION TREE ANALYSIS: SUBGROUPS WITH A DIFFERENT ANNUAL DECREASE IN GFR



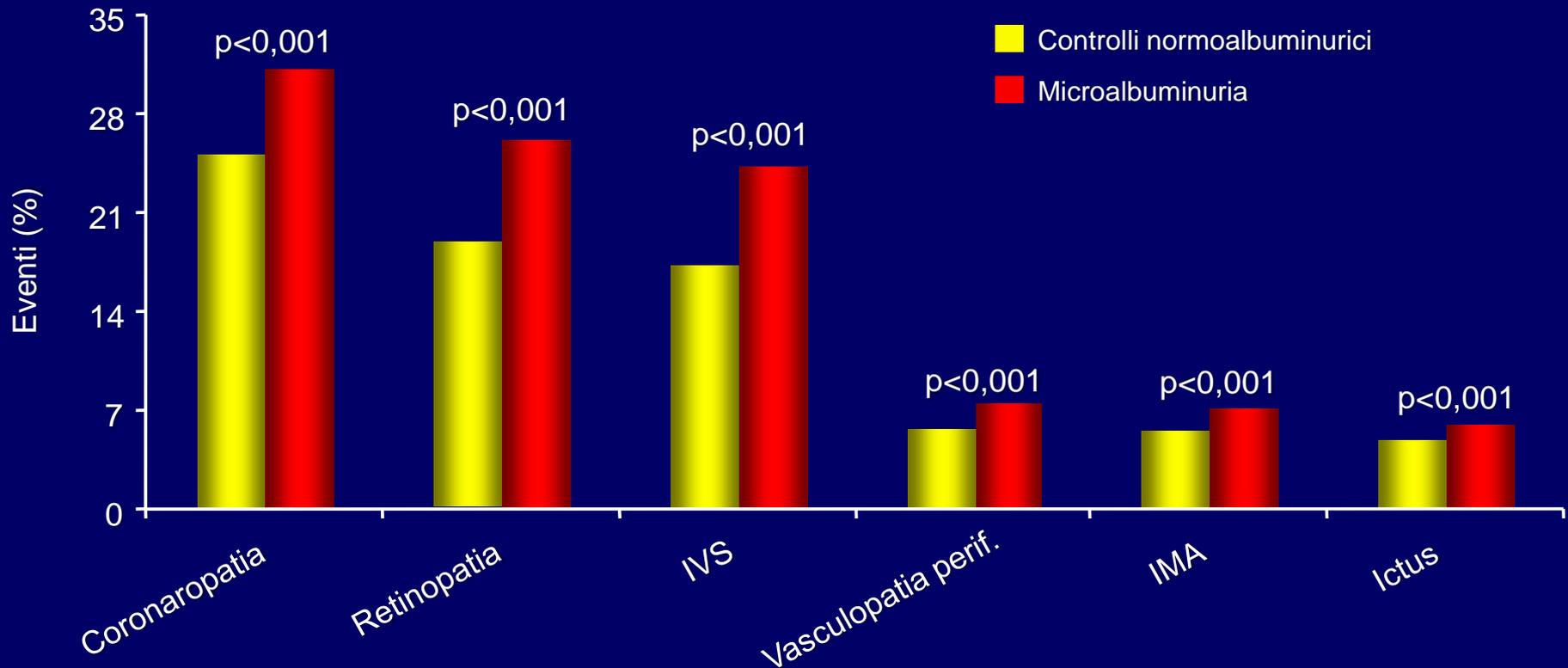
Perdita media annua di FG (ml/min) per VFG basale (classi CKD-EPI) e presenza di proteinuria



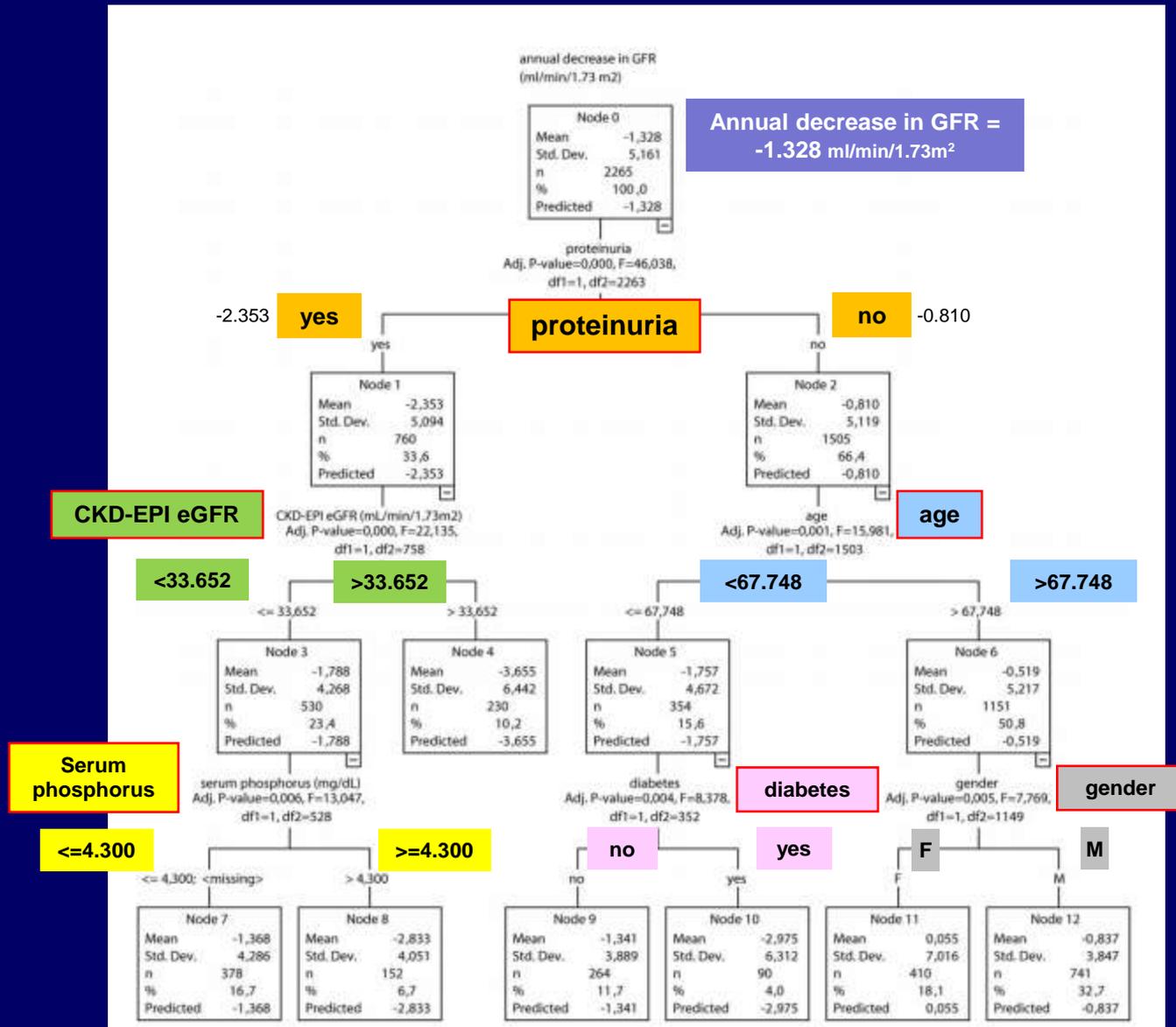
La proteinuria è il migliore predittore di nefropatia terminale (ESRD)



LA PRESENZA/ASSENZA DI MICROALBUMINURIA CONDIZIONA SIGNIFICATIVAMENTE LA COMPARSA DI COMPLICANZE CARDIOVASCOLARI NEI PAZIENTI IPERTESI



CLASSIFICATION TREE ANALYSIS: SUBGROUPS WITH A DIFFERENT ANNUAL DECREASE IN GFR



CLASSIFICAZIONE DEI PAZIENTI SECONDO IL CTA

(Rucci et al. 2014 NDT)

Pazienti in studio n=2265

Follow-up m. 3.6 aa, età m. 71.1 aa, diabete 36%

Perdita annua di GFR = -1.328 ml/min/1.73m²

%pz. Δ GFR/annuo

no P, età≤67.7, no D	264	11.7	-1.341
P, GFR≤33.6, PO4>4.3	152	6.7	-2.833
no P, età≤67.7, D	90	4.0	-2.975
P, GFR>33.6	230	10.2	-3.655
P, GFR≤33.6, PO4 ≤4.3	378	16.7	-1.368
no P, età>67.7, F	410	18.1	-0.055
no P, età>67.7, M	741	32.7	-0.837

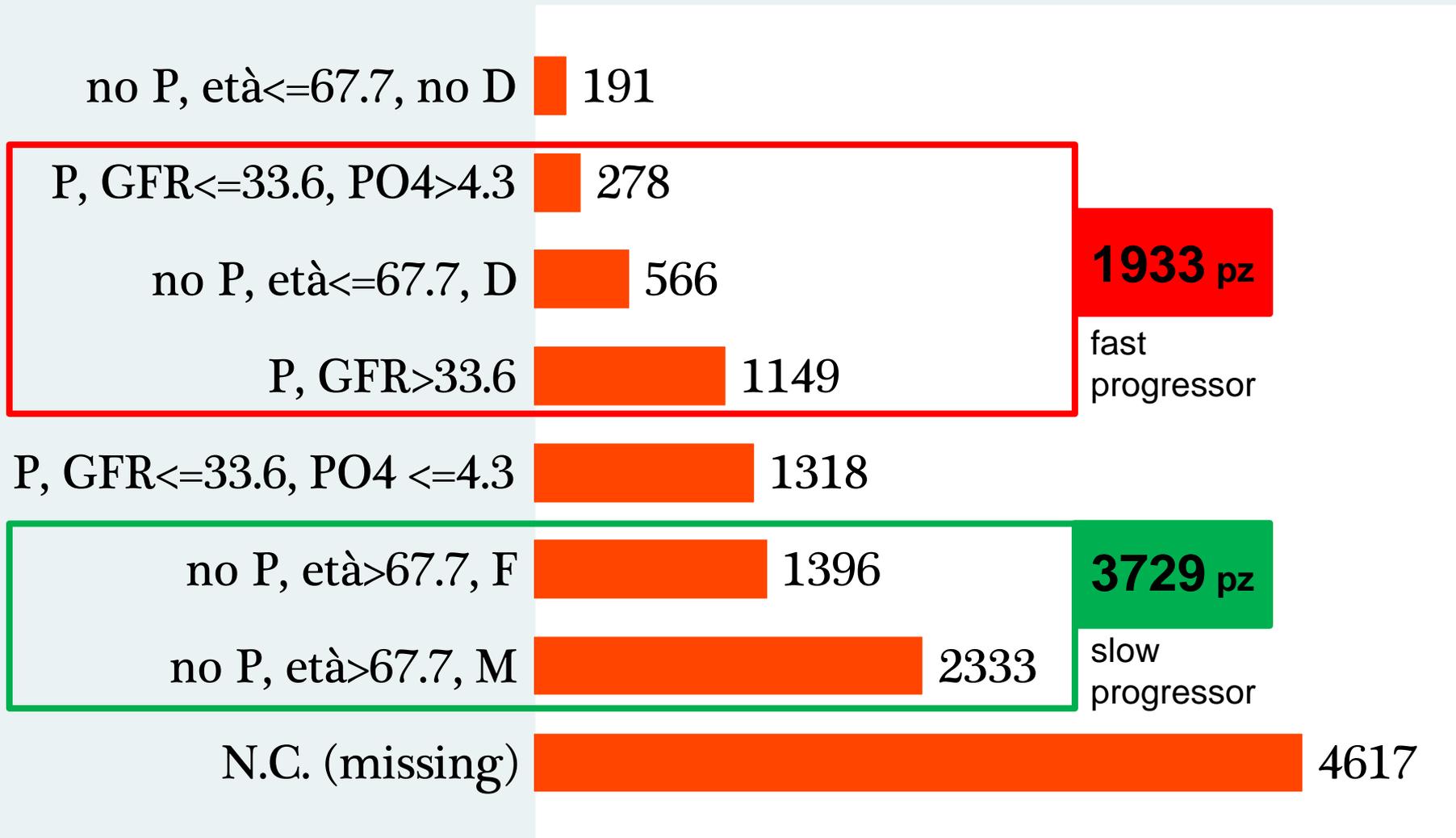
P=proteinuria, D=diabete, F=femmine, M=maschi

Δ GFR=ml/min/1.73m²

CLASSIFICAZIONE DEI PAZIENTI SECONDO IL CTA

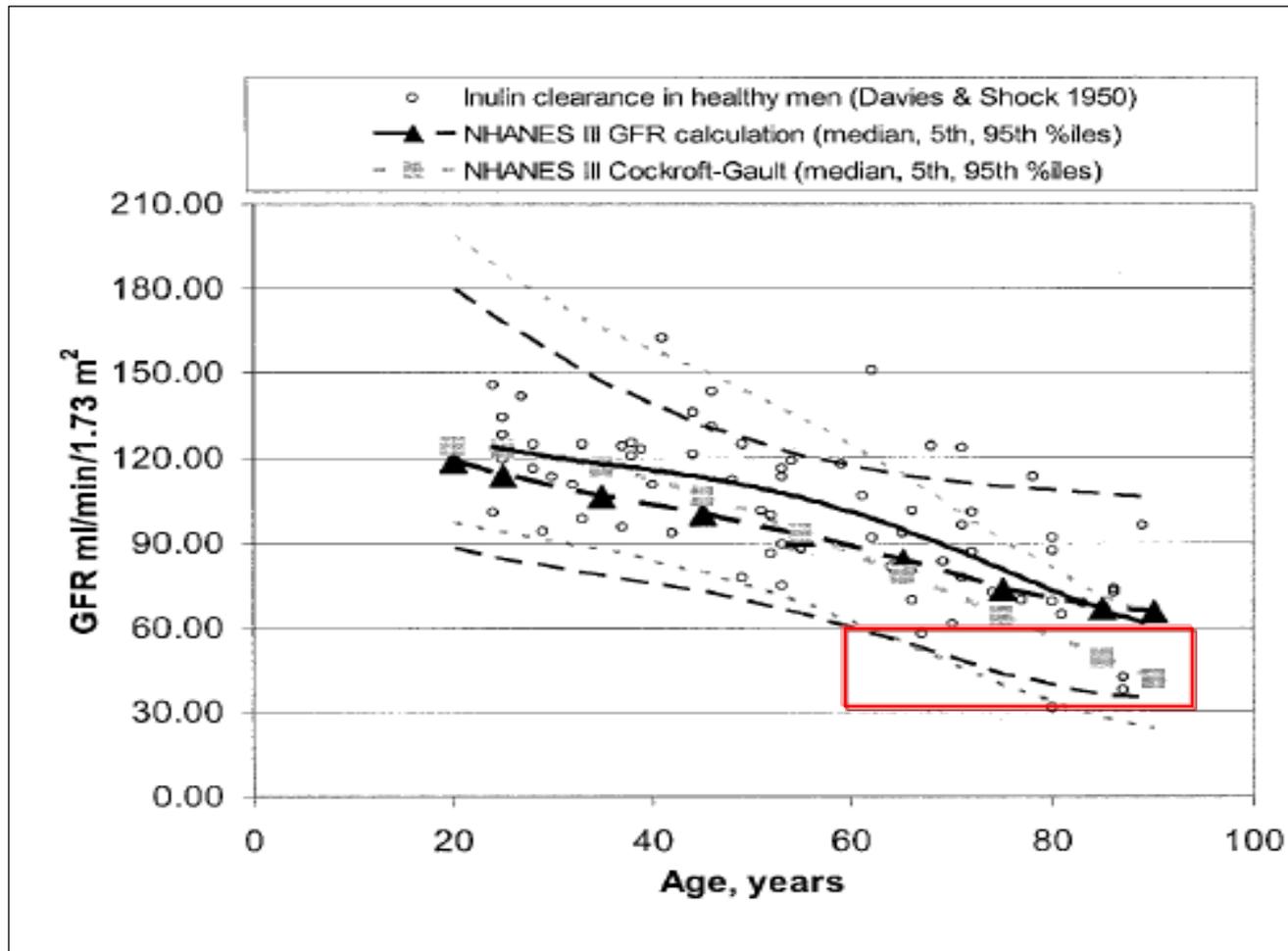
(Rucci et al. 2014 NDT)

Pazienti prevalenti al 31.12.2014 (n=11848)



P=proteinuria, D=Diabete, F=Femmine, M=Maschi

Prevalence of chronic kidney disease and decreased kidney function in the adult US population: Third National Health and Nutrition Examination Survey (NHANES III)



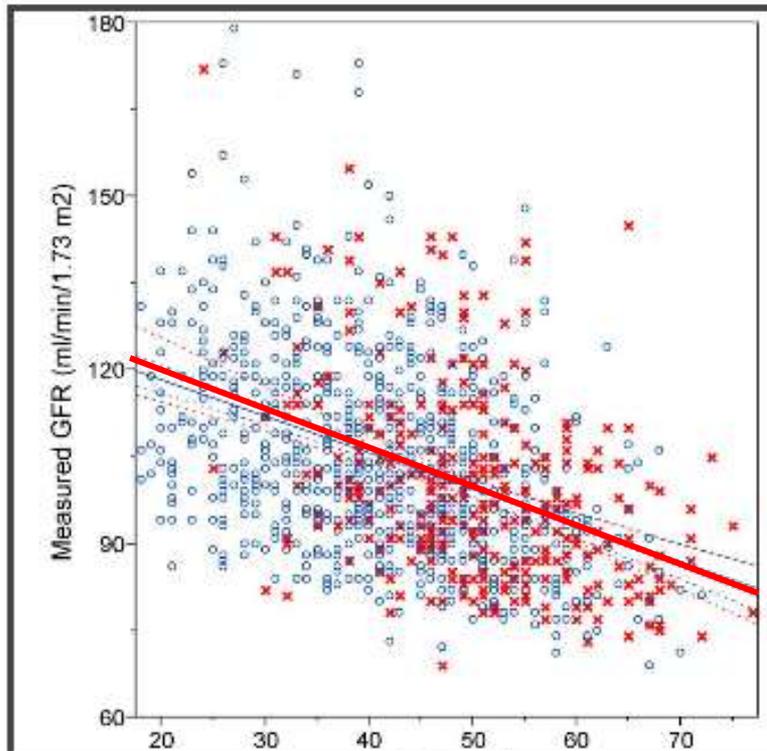
Chores J et al. Am.J.of Kidney Disease 2003

The association between age and nephrosclerosis on renal biopsy among health adults.

AD Rule et al. Ann.Int.Med.2010

Table 2: Prevalence of nephrosclerosis by age group among 1203 living kidney donors at the Mayo Clinic

Age group	Crude prevalence % (95% CI)	Crude prevalence after excluding person on therapy for hypertension % (95% CI)
18-29 y	2.7% (1.1% to 6.7%)	2.7% (1.1% to 6.7%)
30-39 y	16% (12% to 20%)	15% (12% to 20%)
40-49 y	28% (24% to 32%)	26% (22% to 31%)
50-59 y	44% (38% to 50%)	42% (36% to 49%)
60-69 y	58% (47% to 67%)	55% (44% to 66%)
70-79 y	73% (43% to 90%)	75% (41% to 93%)

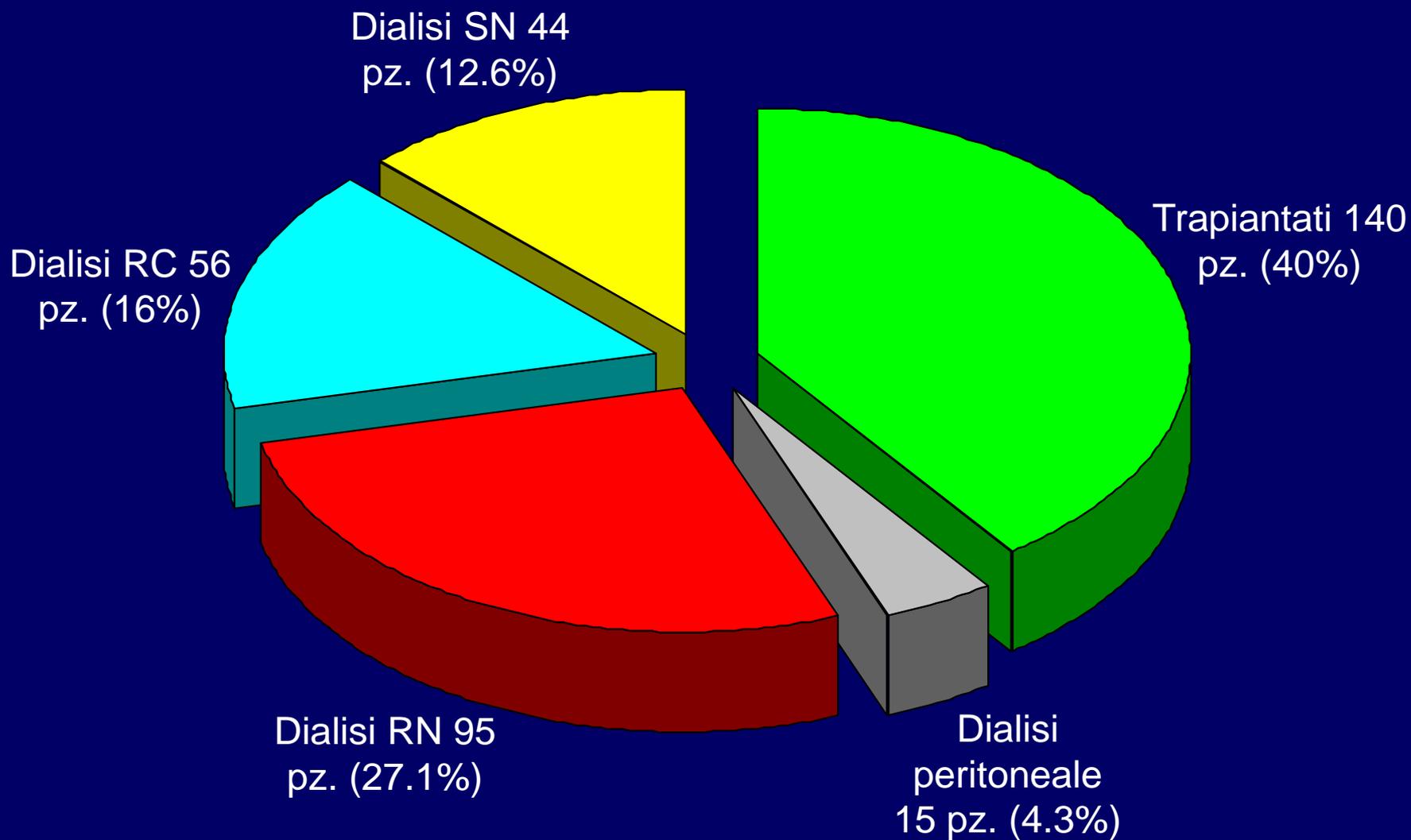


**The association
between age and
nephrosclerosis on
renal biopsy among
health adults.**

AD Rule et al.
Ann.Int.Med.2010

Fig.1: The relationship between glomerular filtration rate (GFR) and age in person with nephrosclerosis (red x) and in person without nephrosclerosis (blue o). Regression of glomerular filtration rate onto age in person with nephrosclerosis (red line).

La popolazione in trattamento sostitutivo della funzione renale nella provincia di Rimini al nov. 2015: 350 pz. (> 1:1000 ab.)



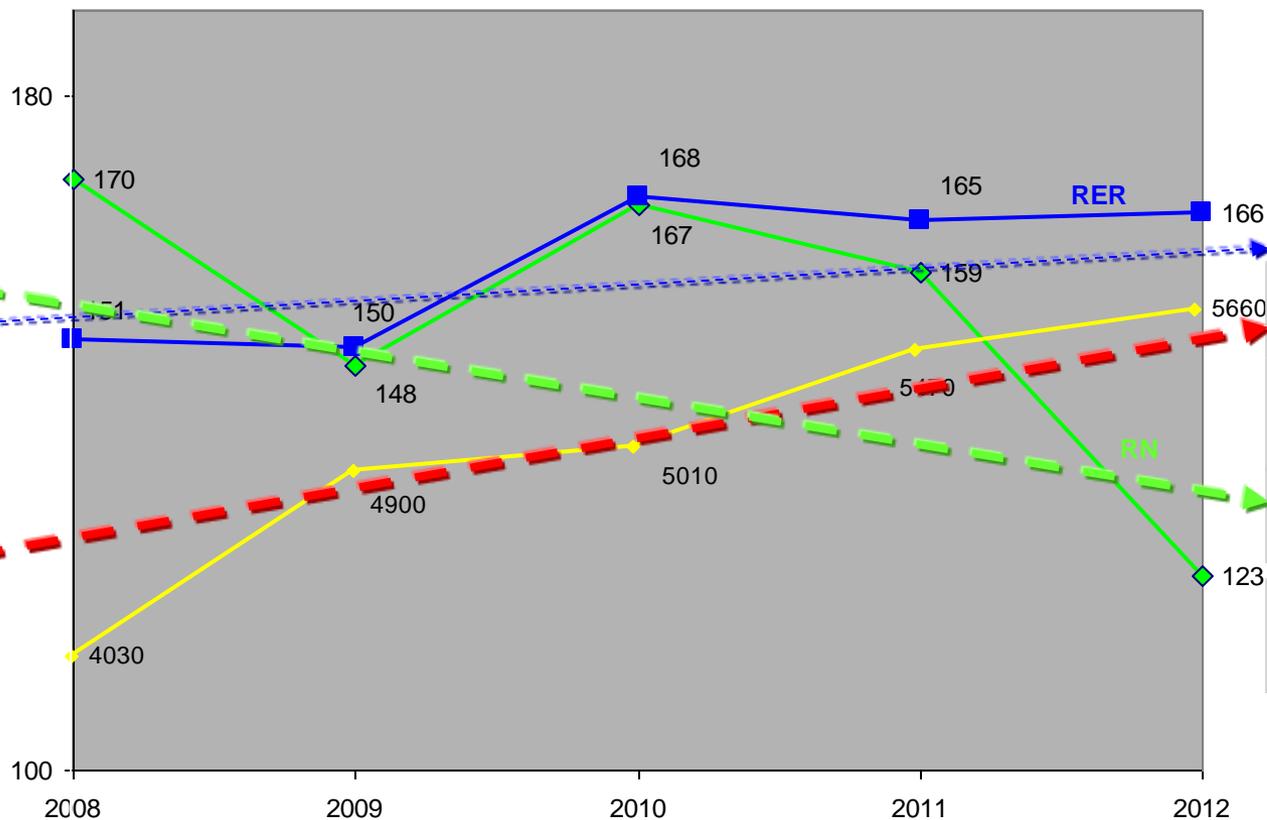
COSTI DELLA MALATTIA RENALE CRONICA

Spesa sanitaria per pz. in ESRD in tratt. sostitutivo	1.8% budget sanitario viene speso per lo 0.083 dei pz. in ESRD	
Spesa/anno per dialisi peritoneale	30.000 €/anno	
Spesa/anno per emodialisi	45.000 €/anno	
Spesa/anno per trapianto	52.000 €/1° anno	10-15.000 €/anni successivi

**Ritardare di 5 anni la progressione della MRC e ingresso in dialisi per il 10% dei pz. allo stadio III° e IV°
→ risparmio di 2.5 miliardi di euro**

Elaborato da: Pontoriero G et al. International Study of Health Care Organization and Financing for renal replacement therapy in Italy: an evolving reality. Int. J Health Care Finance Econ 2007

PREVENZIONE NEFROLOGICA E INCIDENZA DI DIALISI PROVINCIA DI RIMINI VS. REGIONE EMILIA ROMAGNA



**Pazienti incidenti
in dialisi RER**

**Visite Amb.Nefro
Rimini**

**Δ 2008-2012
+ 28.8%**

**Pazienti incidenti
in dialisi Rimini**

**Δ 2008-2012
- 27.7%**

U.O. di Nefrologia e Dialisi - AUSL Romagna - Rimini

Offerta Servizi:

Ambulatorio Divisionale Nefrologico (1° visita e visita di controllo)
Ambulatorio PIRP (1° visita e visita di controllo)
Ambulatorio Ipertesi
Monitoraggio ambulatoriale della PA

Prenotazione
CUP

DSA insuff. renale cronica avanzata (stadio 3 B - 4)
DSA insuff. renale cronica terminale (stadio 5)
Ambulatorio infermieristico pre-dialisi
DSA follow-up portatori di trapianto renale
DSA iscrizione in lista trapianto
DSA studio del potenziale donatore per trapianto da vivente

Prenotazione
agende
interne

DH terapeutico
Ricovero Ospedaliero

Quali pazienti inviare al Nefrologo?

- Anomalie del sedimento urinario (in particolare proteinuria), specie se comorbidi (ipertensione arteriosa, diabete), anche in assenza di insufficienza renale
- Insufficienza renale (VFG < 60 ml/min/1.73m²), nei pazienti con meno di 60 anni, specialmente se progressiva, o se associata a proteinuria
- Insufficienza renale nel paziente diabetico

Quali pazienti non inviare al Nefrologo?

- Anziani (>70 anni) con insufficienza renale di grado moderato, non progressiva, senza proteinuria

TABLE 2. PROGNOSIS WITH CONSERVATIVE, NONDIALYTIC MANAGEMENT OF END-STAGE RENAL DISEASE

Reference	Conservative management group	Dialysis group	Results
Carson et al., 2009 ²¹	median age 83.0 13.8% diabetes mean age-adjusted CCI score 7.4 n = 29	median age 75.0 29.5% diabetes mean age adjusted CCI score 7.2 n = 173	median survival from first known date of GFR ≤ 10.8 ^a : 13.9 months (range 2–44) with CM 37.8 months (range 0–106) with dialysis p < 0.01
Chanda et al., 2010 ¹⁷	mean age 77.5 68.4% over age 75 35.5% diabetes 49.7% high comorbidity n = 155	mean age 58.5 11.2% over age 75 34.3% diabetes 17.3% high comorbidity n = 689	median survival from first known date of GFR < 15: 21.2 months with CM ^b 67.1 months with dialysis ^b p < 0.001
Ellam et al., 2009 ¹⁹	median age 80 38% diabetes 32% ischemic heart disease n = 69	None	median survival from first known date of GFR < 15: 21 months (range 1–100) with CM
Joly et al., 2003 ²⁰	mean age 84.1 51.4% late referral to nephrology 21.6% diabetes 48.6% ischemic heart disease 43.3% socially isolated n = 37	mean age 83.2 28.9% late referral to nephrology 6.5% diabetes 42.5% ischemic heart disease 14.7% socially isolated n = 107	median survival from first day of dialysis or decision not to perform dialysis: 8.9 months (95% CI 4–10) with CM 28.9 months (95% CI 24–38) with dialysis p < 0.0001
Murtagh et al., 2007 ¹⁸	median age 83 23.4% diabetes n = 77	median age 79.6 25.0% diabetes n = 52	median survival from first known date of GFR < 15: 18.0 months (range 0.1–73.1) with CM 19.6 months (range 2.2–84.2) with dialysis
Smith et al., 2003 ¹⁵	n = 34 ^c	n = 10 ^c	median survival from proposed date of dialysis initiation: 6.3 months (range 0–46) with CM 8.3 months (range 2–20) with dialysis
Wong et al., 2007 ¹⁶	median age 79 mean GFR 12 28% diabetes 34% ischemic heart disease n = 73	None	median survival from decision not to perform dialysis: 23.4 months with CM ^b

CCI, Charlson Comorbidity Index; GFR, glomerular filtration rate; CM, conservative management.

Literature Survey: Survival in Elderly ESRD Patients

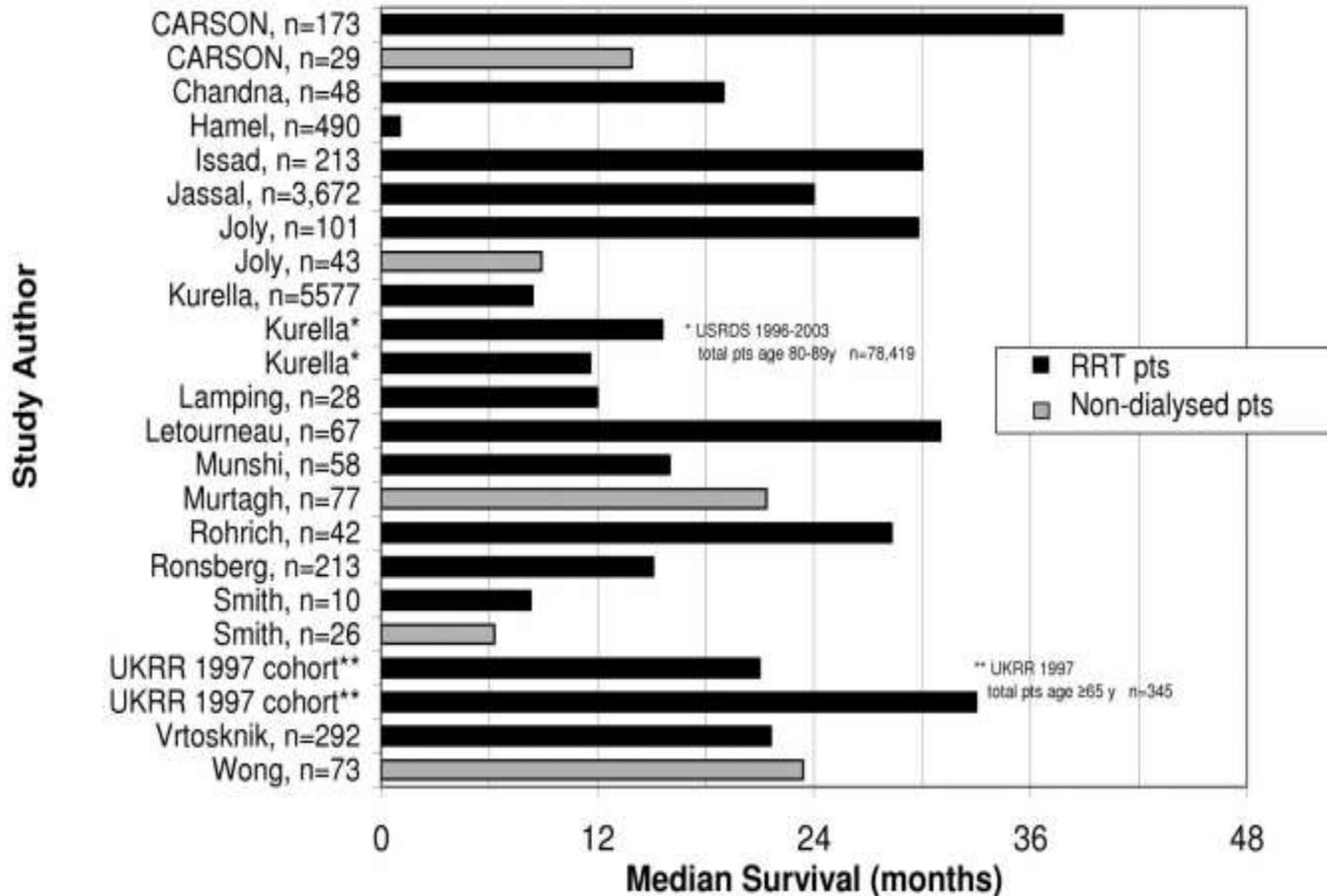
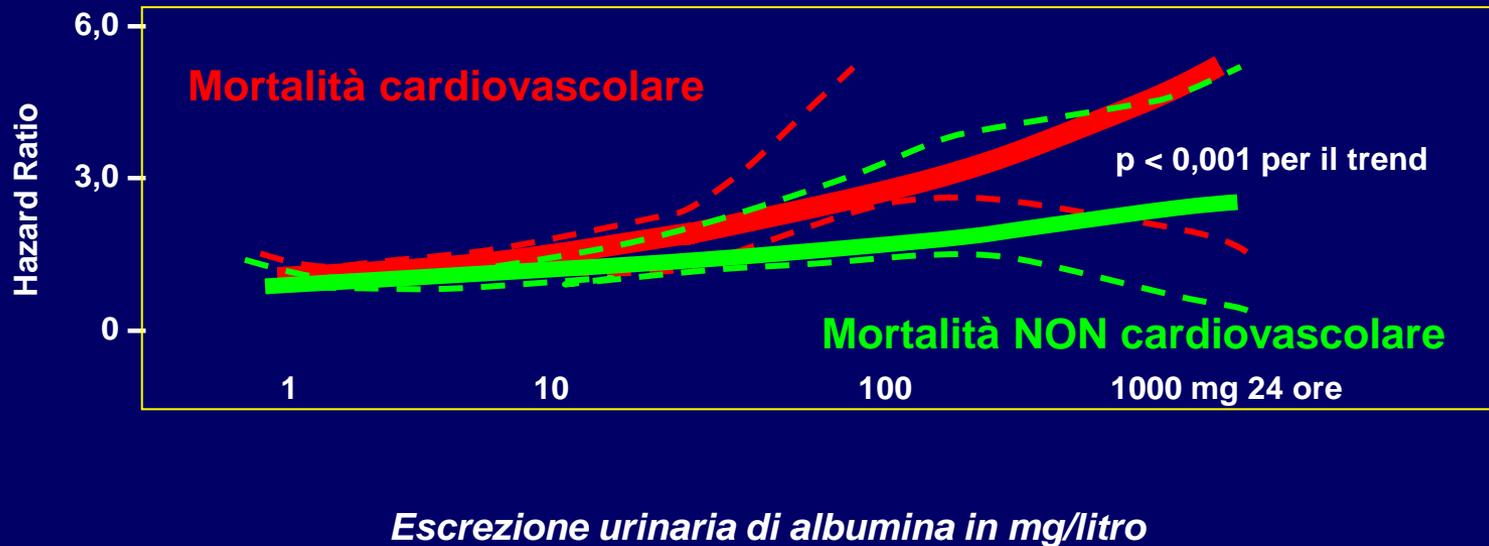


Figure 4. Literature survey: Summary graph of survival of elderly patients with ESRD in previous studies.

Mortalità e proteinuria



Hillege H.L., et al.: *Circulation*, 106 (14): 1777-82, 2002

PREVENZIONE

