

# Cancer and End-Stage Kidney Disease: Death Sentence?



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## BACKGROUND AND OBJECTIVES

End-stage kidney disease (ESKD) is associated with a known burden in morbidity and mortality, an aspect also observed with malignant diseases. Hence, patients (pts) with cancer and ESKD have the cumulative effect of 2 severe diseases, thereby frequently raising the question of whether dialysis (as opposed to comfort measures) should be implemented. Thoughtful decision-making requires acquaintance with the behavior and evolution of this particular population.

The primary goal of this study was to characterize a group of oncologic pts on chronic hemodialysis program. We also describe a group on non-oncologic pts undergoing dialysis in the same center.

## METHODS

Retrospective analysis of oncologic and non-oncologic pts on chronic dialysis between January 1991 and September 2014.

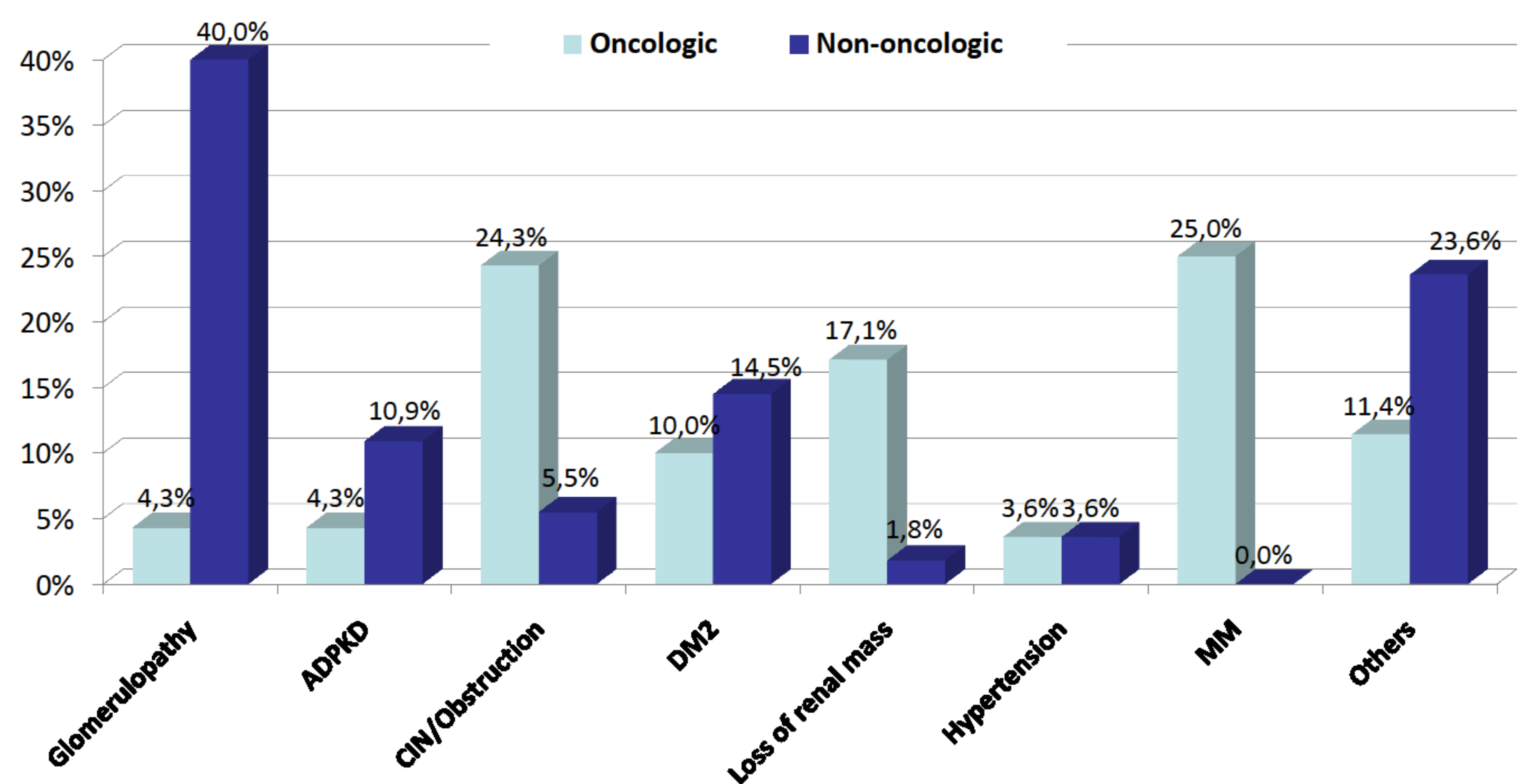
## RESULTS

195 pts were treated during this period, 140 of whom with locally advanced or metastatic malignancies.

Characteristics	Oncologic (N=140)	Non Oncologic (N=55)	P value	Patients <sup>a</sup> (N=195)
Age at beginning of dialysis, median, in years (p25-p75)	69 (58-76)	62 (45-74)	0.002	68 (56-75)
<b>Age groups</b>				
<=56	28 (20.0)	25 (45.5)	0.005	53 (27.2)
57-68	36 (25.7)	9 (16.4)		45 (23.1)
69-75	40 (28.6)	11 (20.0)		51 (26.2)
>=76	36 (25.7)	10 (18.2)		46 (23.6)
<b>Gender</b>				
Females	74 (52.9)	29 (52.7)	0.987	103 (52.8)
Males	66 (47.1)	26 (47.3)		92 (47.2)
<b>Hypertension</b>				
No	134 (95.7)	52 (96.3)	0.855	186 (95.9)
Yes	6 (4.3)	2 (3.7)		8 (4.1)
<b>Diabetes Mellitus 2 (DM2)</b>				
No	125 (89.3)	47 (85.5)	0.455	172 (88.2)
Yes	15 (10.7)	8 (14.5)		23 (11.8)
Time on hemodialysis, median, in months (p25-p75)	23.0 (9.0-49.0)	23 (13.0-59.0)	0.388	23.0 (10.0-51.0)

**Table 1.** Baseline characteristics among pts with and without tumor  
<sup>a</sup> Numbers in parentheses refers to N (%), unless otherwise specified

## RESULTS



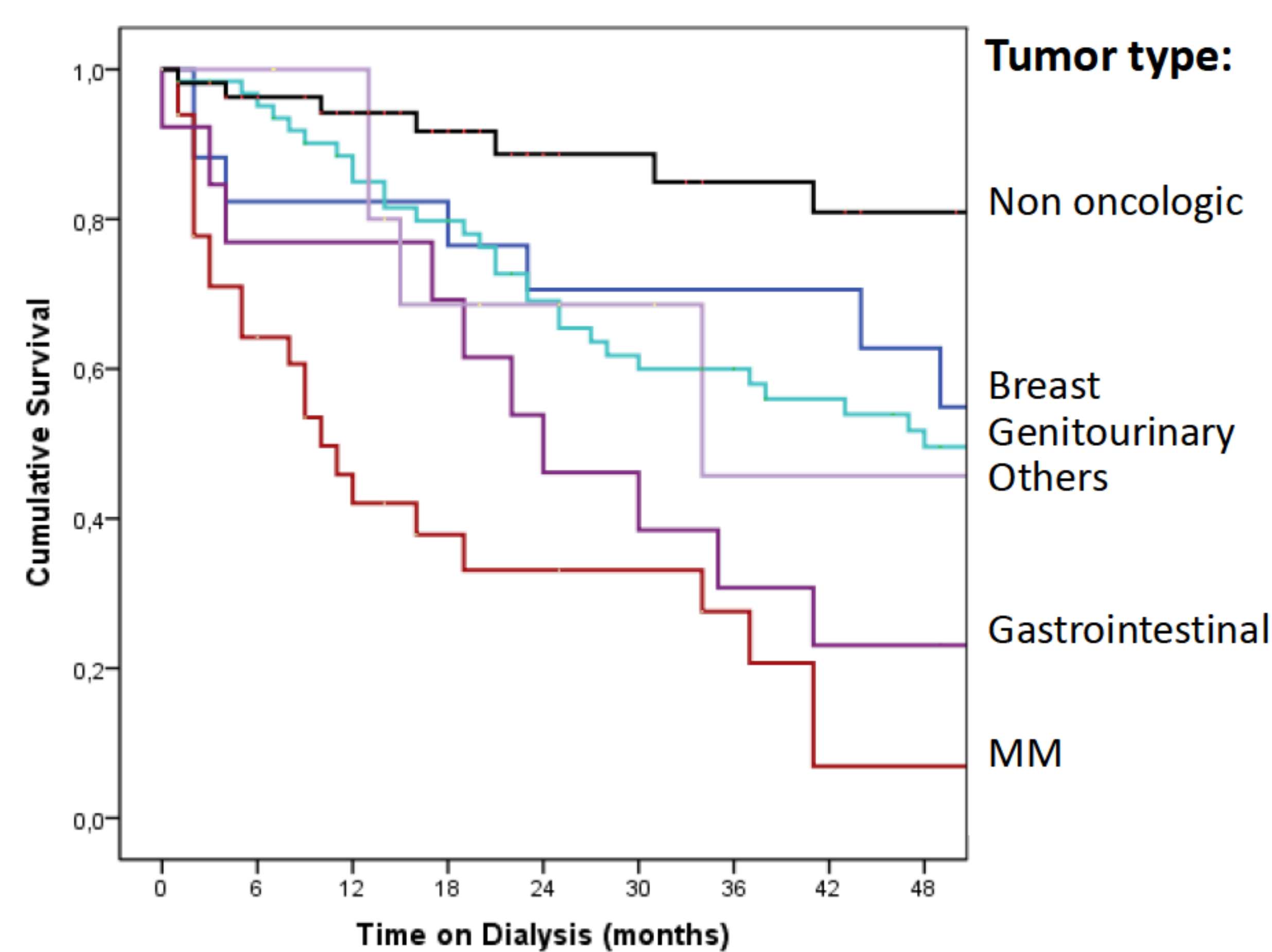
**Fig. 1** Etiology of Chronic Kidney Disease

CIN: chronic interstitial nephritis, MM: Multiple Myeloma, ADPKD: Autosomal Dominant Polycystic Kidney Disease

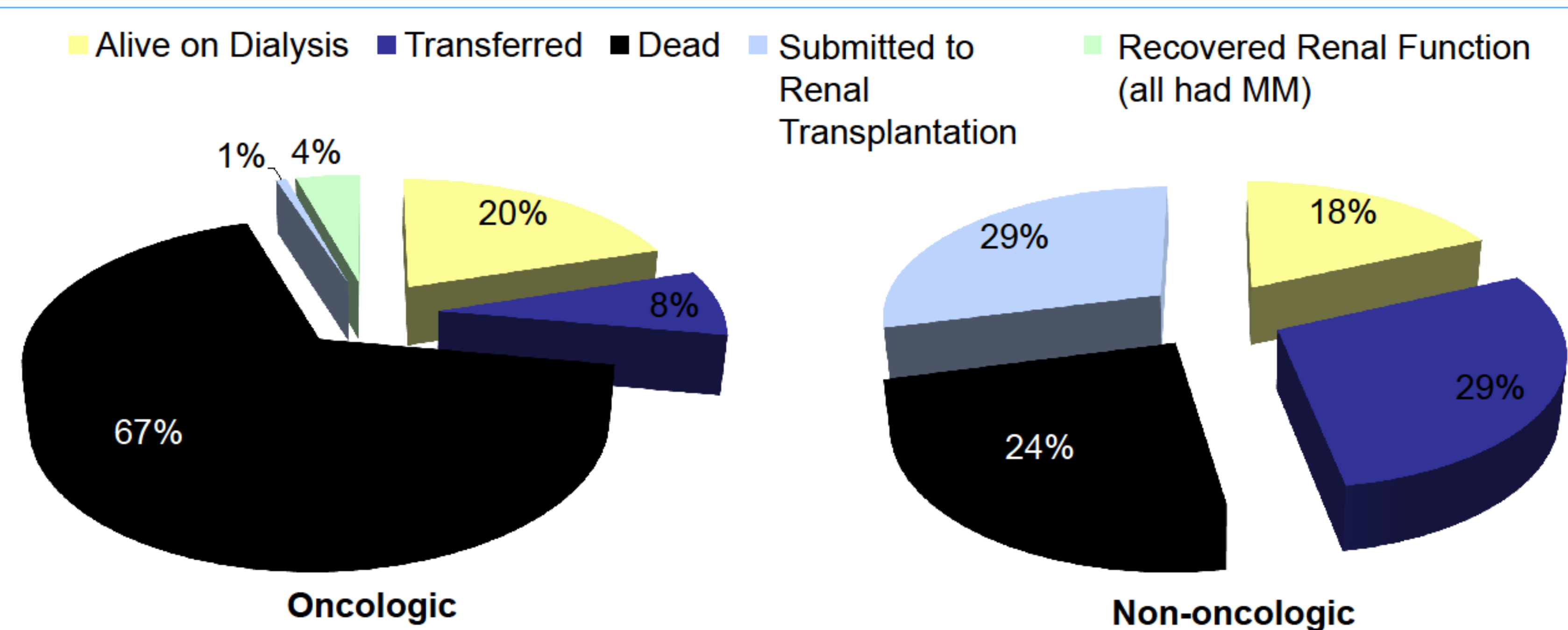
The most common tumors were genitourinary (45%), MM (25%) and gastrointestinal (9.3%). 20.7% of pts had multiple tumors. 16.2% had radiation enteritis, 88.9% of whom related to genitourinary cancers.

Among oncologic pts, **survival was 59.2% at 2 years and 33.8% at 5 years**. Estimated survival time was 37 months. Tumor type was a prognostic factor for overall survival, with MM (HR=7.974; 95% CI: 3.784-16.805) and gastrointestinal tumors (HR=2.943; 95% CI: 1.216-7.121) associated with shorter survival time.

The association of tumor type and overall survival is further illustrated in Figure 2.



**Fig. 2** Association of type of tumor and overall survival, adjusted for gender, age group, hypertension, DM2, glomerulopathy and ADPKD



**Fig. 3** Evolution of the pts on Hemodialysis

## CONCLUSIONS

The most common etiology for kidney failure among pts with advanced oncological disease on dialysis was MM. Pts with MM also had the worst prognosis, but, concurrently, were the only ones with potential renal function recovery. Overall survival was unexpectedly high at 2 years and, notably, 1/3 was still alive after 5 years. Accordingly, decision-making in patients with cancer and ESKD must be individualized, integrating clinical assessment, accurate prognostication and treatment options in each particular case.

## REFERENCES:

- [1] Launay-Vacher V. Epidemiology of chronic kidney disease in cancer patients: Lessons from the IRMA study group. *Semin Nephrol* 2010;30:548-56.
- [2] Launay-Vacher V. Impact of renal insufficiency on cancer survival: Results of the IRMA-2 study. | 2009 ASCO Annual Meeting | Abstracts | Meeting Library n.d.

