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INTRODUCTION

- In 2020¹
 - ❖431 288 new cases of kidney cancer
 - ❖179 368 deaths due to kidney cancer
- 15% of RCC are diagnosed as metastatic²
- 5% of localized RCC patients have sarcomatoid features, while 20% of metastatic RCC (mRCC) patients have sarcomatoid features³
 - ❖Contain features such as spindle cells, high cellularity and cellular atypia
 - ❖Aggressive form of RCC and associated with poor prognosis

OBJECTIVE

- Evaluate and compare the outcomes of localized RCC patients with and without sarcomatoid features and the impact of the percentage of sarcomatoid component has on cancer recurrence using real-world data

METHODS

- The Canadian Kidney Cancer information system (CKCis) database was used to identify patients diagnosed with localized RCC between January 2011 and April 2022
- Criteria of selection (all criteria must have been met to be included)
 - ❖Patients with a PT1-T3 stage that had nephrectomy
 - ❖Documentation of sarcomatoid presence/absence
- Included patients were separated in 2 groups
 - ❖Presence of sarcomatoid features
 - Subgroups based on sarcomatoid percentage (the median sarcomatoid percentage in the cohort is 10%)
 - ❖Absence of sarcomatoid features
- Inverse probability of treatment weighting (IPTW) using propensity scores was used to balance the groups (sarcomatoid vs non-sarcomatoid and subgroups based on sarcomatoid percentage) for:
 - ❖Sex
 - ❖Age
 - ❖Charlson comorbidity score
 - ❖Clear cell histology
 - ❖Pathological Stage
 - ❖Grade and size of the tumor
- Cox proportional hazards models were used to assess the impact of sarcomatoid status and sarcomatoid percentage on Recurrence Free Survival (RFS) and Overall Survival (OS)

RESULTS

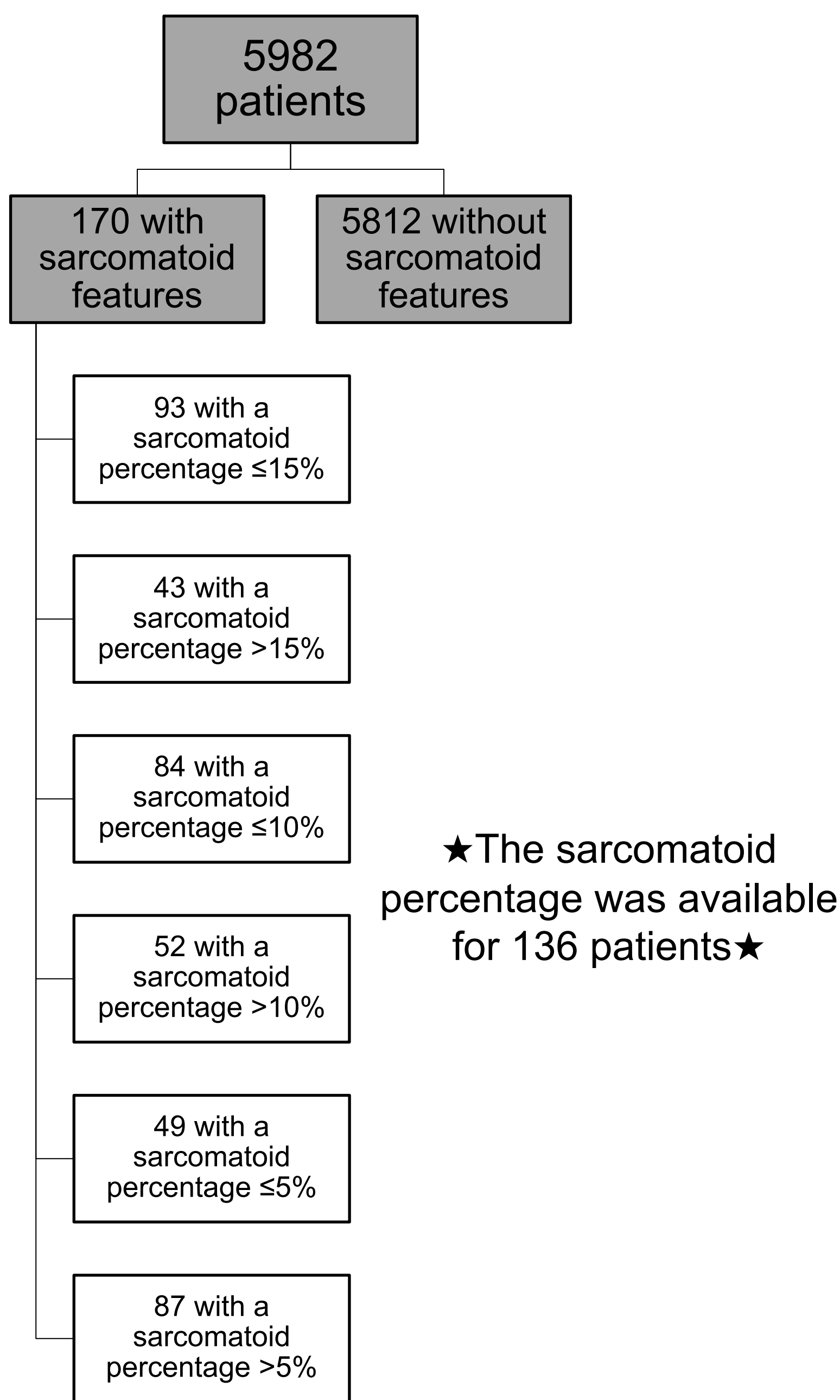


Figure 1. Number of included patients

Table 1. Weighted cohort baseline characteristics for all patients

Variables	With sarcomatoid	Without sarcomatoid	ASD
Charlson comorbidity; more than 1 (%)	42	48	0.11
Sex; men (%)	51	67	0.33
Age; 65 and older (%)	46	40	0.12
Stage T3; yes (%)	33	28	0.13
Grade 3-4; yes (%)	52	48	0.11
Size ; > 5 cm (%)	48	41	0.17
Clear cell histology; yes (%)	78	72	0.14

ASD: Absolute Standardized Difference

RESULTS (Continuation)

Table 2. Risk of Recurrence and Median Recurrence Free Survival

Assessments	Hazard Ratio	95% Confidence Interval	
All patients			
With sarcomatoid features vs without sarcomatoid features	2.35	1.74-3.17	NR
Patients with sarcomatoid features (+/-15%)			
>15% vs ≤15%	1.58	0.95-1.62	36 vs 24 months in favor of ≤15%
Patients with sarcomatoid features (+/-10%)			
>10% vs ≤10%	1.84	1.13-3.01	36 vs 24 months in favor of ≤10%
Patients with sarcomatoid features (+/-5%)			
>5% vs ≤5%	1.62	0.98-2.69	48 vs 24 months in favor of ≤5%

Table 3. Risk of Death and Median Overall Survival

Assessments	Hazard Ratio	95% Confidence Interval	
All patients			
With sarcomatoid features vs without sarcomatoid features	2.69	1.90-3.81	NR
Patients with sarcomatoid features (+/-15%)			
>15% vs ≤15%	1.54	0.82-2.89	NR vs 72 months in favor of ≤15%
Patients with sarcomatoid features (+/-10%)			
>10% vs ≤10%	1.92	1.02-3.60	NR vs 72 months in favor of ≤10%
Patients with sarcomatoid features (+/-5%)			
>5% vs ≤5%	1.53	0.79-2.97	48 vs 24 months in favor of ≤5%

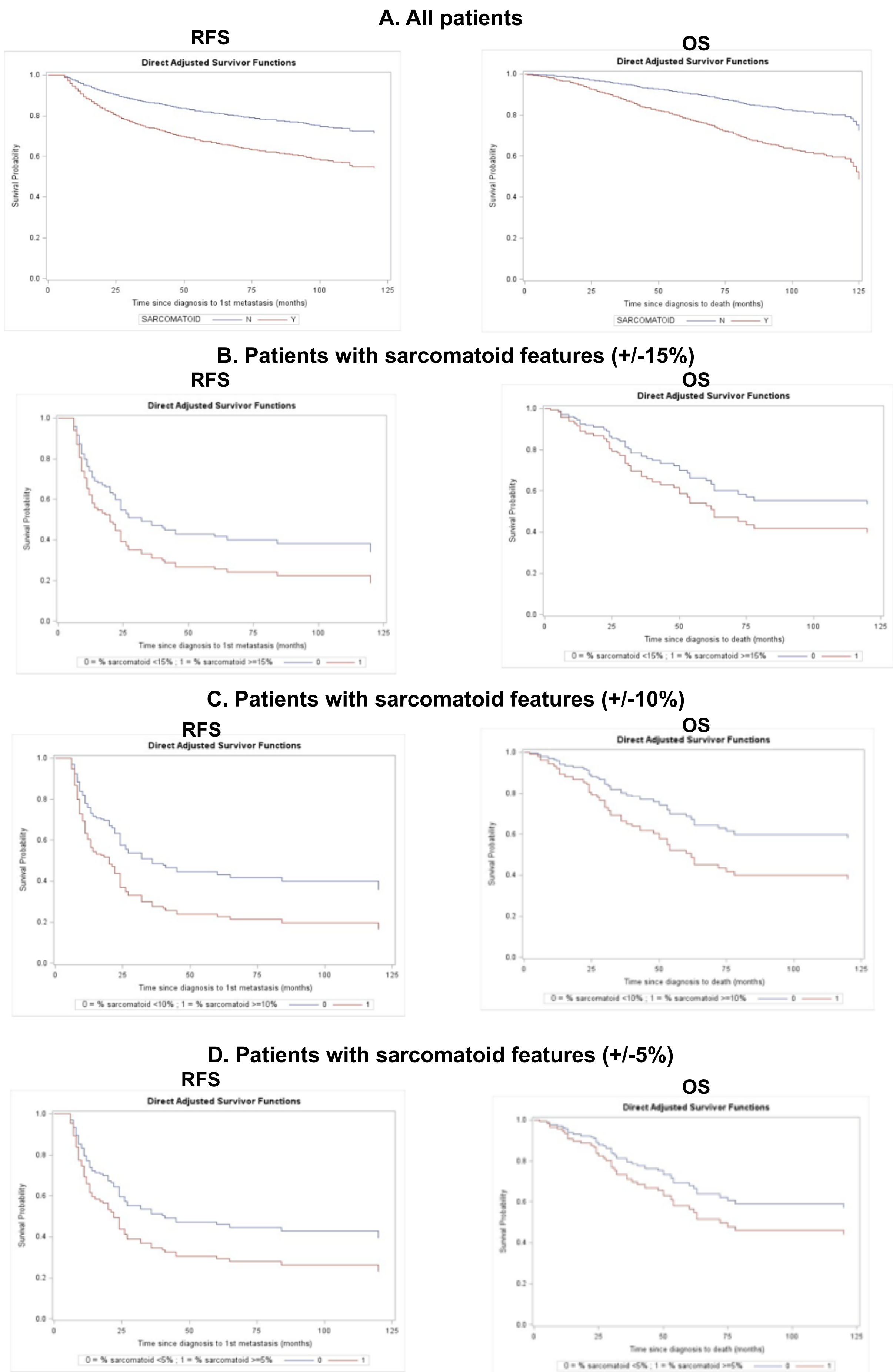


Figure 2 (A-D). Direct Adjusted Survival Curves in the weighted cohorts

CONCLUSION

- The study comprises one of the **largest cohorts of patients** with localized sarcomatoid RCC in the literature to date
- Patients with sarcomatoid status **have an increased risk of recurrence and mortality** compared to non-sarcomatoid patients
- Patients with a sarcomatoid percentage >10% **have an increased risk of recurrence and mortality** compared to patients with a sarcomatoid percentage ≤10%

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POTENTIAL CONFLICTS OF INTEREST

The authors have no potential conflicts of interest