

MP80-08: ADOPTION OF AUA FOLLOW UP GUIDELINES AFTER PARTIAL NEPHRECTOMY ASSOCIATED WITH DECREASED OBSERVED METASTASES BUT NO IMPACT ON SURVIVAL

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Introduction

- AUA guidelines for clinically localized renal neoplasms were updated in April 2013 with risk-adjusted recommendations for follow up after partial nephrectomy, allowing less frequent surveillance imaging in low-risk patients (pT1, N0)
- At this point our institution switched from a physician preference, non-standardized follow up practice to strict guidelines adherence.
- We sought to evaluate the impact of this practice change on oncological and survival outcomes.

Methods

- We identified 3320 patients who underwent PN between January 2000 and March 2017.
- Patients with missing pathologic or incomplete staging data were excluded, leaving 3261 patients for analysis.
- Kaplan-Meier method was used to estimate MFS, CSS, and OS. A multivariable Cox proportional hazard regression was used for each outcome, with whether patients were followed up after guideline implementation as the predictor, adjusted for dichotomized risk (low vs. mod-high) and tumor size on pathology.

	PN Before April 2013 (N=2295; 70%)	PN After April 2013 (N=966; 30%)
Age at Surgery	60 (52, 69)	60 (52, 68)
Male	1450 (63%)	607 (63%)
Race		
White	2056 (90%)	776 (80%)
Black	113 (4.9%)	62 (6.4%)
Asian	71 (3.1%)	52 (5.4%)
Other	21 (0.9%)	11 (1.1%)
Unknown	34 (1.5%)	65 (6.7%)
Surgery Type		
Open	1804 (79%)	574 (59%)
Robotic	218 (9.5%)	317 (33%)
Laparoscopic	273 (12%)	75 (7.8%)
Surgical Side		
Left	1146 (50%)	442 (46%)
Right	1149 (50%)	524 (54%)
Tumor Stage on Pathology		
PT0	217 (9.5%)	84 (8.7%)
PT1	1807 (79%)	774 (80%)
PT2	37 (1.6%)	16 (1.7%)
PT3	234 (10%)	92 (10%)
Tumor Size (cm) on Pathology	2.9 (2.0, 4.0)	2.9 (2.0, 4.0)
Estimate Blood Loss (mL) (N=3214)	250 (150, 500)	150 (100, 300)
Positive Surgical Margin		
Unknown	35 (1.5%)	12 (1.2%)
Ischemia	2050 (89%)	930 (96%)
Unknown	8 (0.3%)	9 (0.9%)
Ischemia Time (min) (N=2793)	33 (24, 43)	24 (18, 31)
Preop eGFR (mL/min/1.73 m ²) (N=3161)	68.8 (57.6, 82.8)	85.3 (70.0, 97.1)
Post-Op 6 months eGFR (mL/min/1.73 m ²) (N=2204)	64.4 (52.5, 78.2)	76.3 (62.0, 90.1)
Post-Op 12 months eGFR (mL/min/1.73 m ²) (N=1659)	66.3 (54.0, 79.7)	76.1 (61.7, 91.3)

Table 1 – Patient characteristics (N=3261). All values are median (IQR) or frequency (proportion)

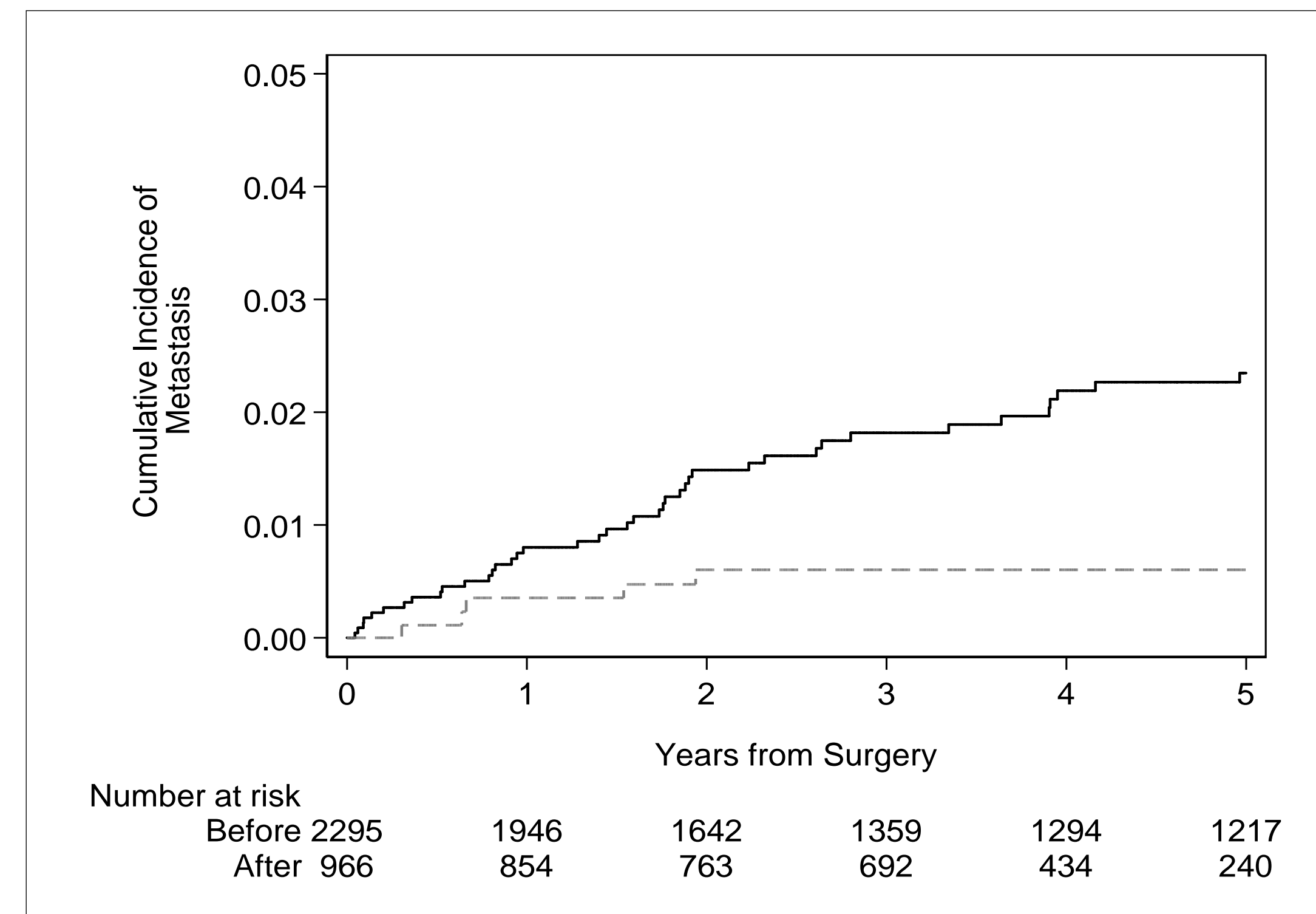


Figure 1. Cumulative incidence of metastasis for patients followed up before (solid black lines) and after (dashed gray line) release of guidelines (p=0.006).

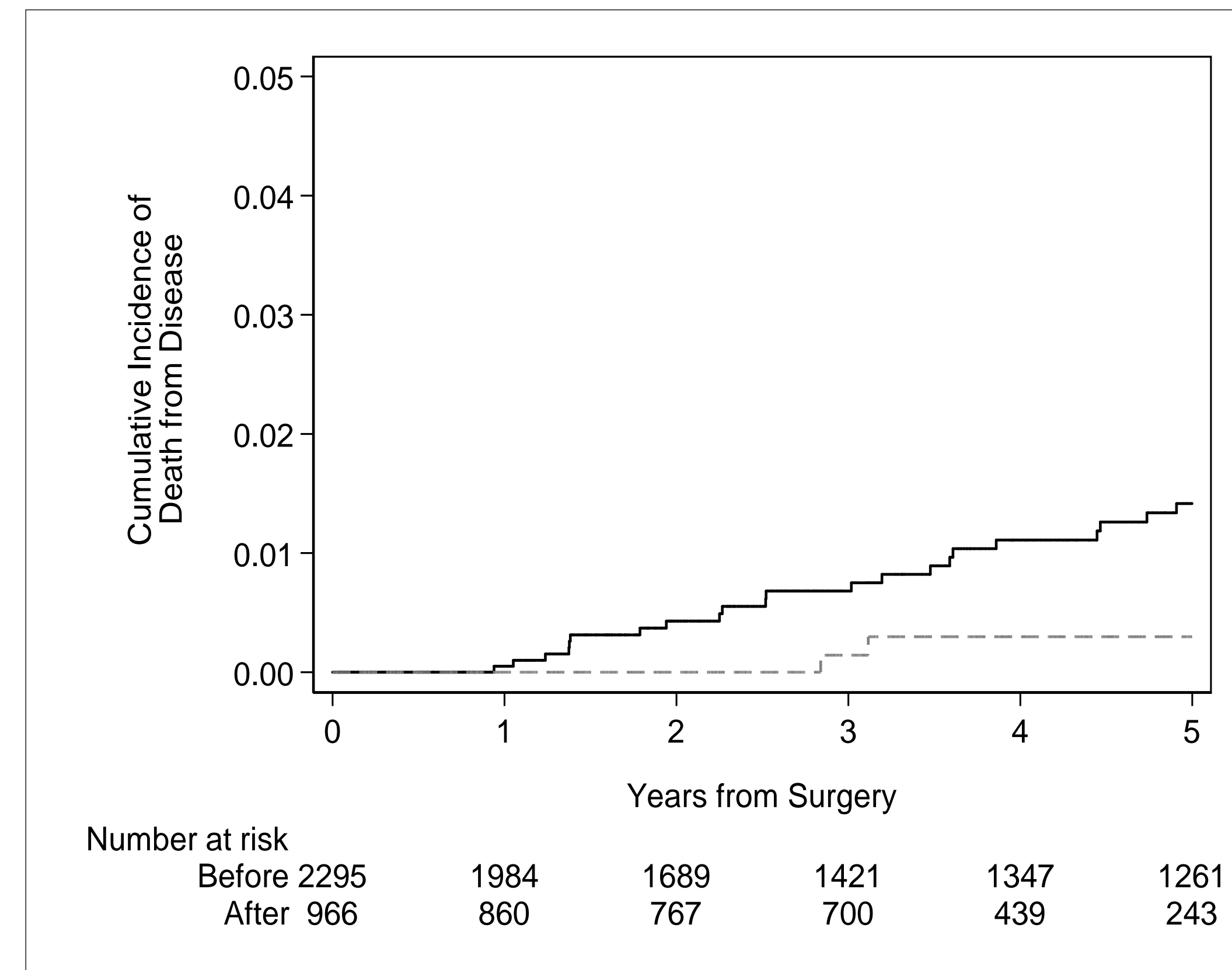


Figure 2. Cumulative incidence of death from disease for patients followed up before (solid black lines) and after (dashed gray line) release of guidelines (p=0.037).

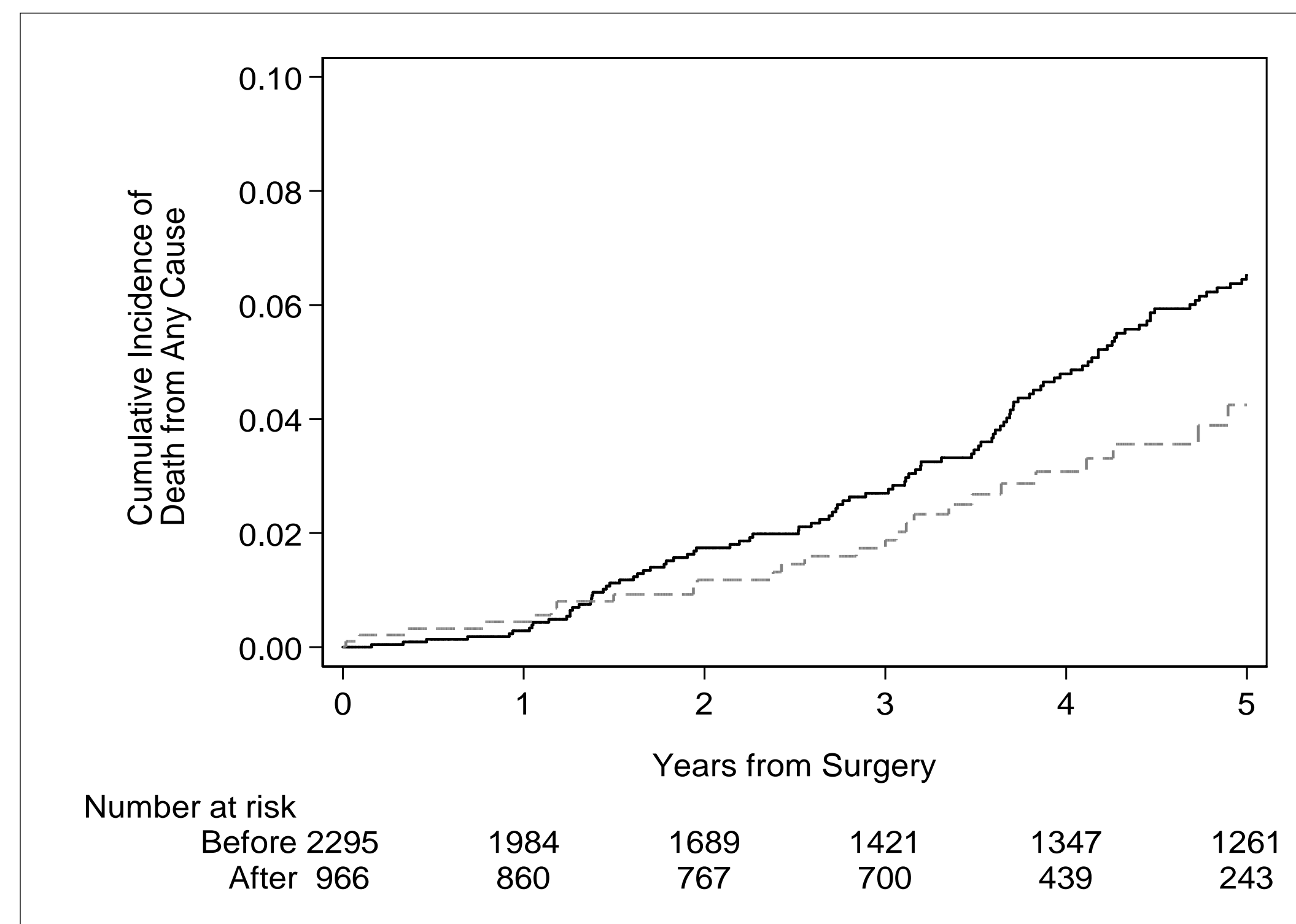


Figure 3. Cumulative incidence of death from any cause for patients followed up before (solid black lines) and after (dashed gray line) release of guidelines (p=0.085).

Results

- “Before 2013” cohort of 2295 patients and “After 2013” cohort of 966 patients showed similar overall characteristics, with the majority of tumors stage pT1 in both groups (79% and 80%, respectively).
- Similar average tumor size (2.9cm) and positive surgical margin rates (5.8% and 5.1%) in “before” and “after” cohorts.
- Two hundred and ninety-seven patients died from any cause, 33 of whom died from their kidney disease.
- Total of 46 patients had biopsy-proven metastases over the study period.
- Patients in the group followed after guidelines implementation had better MFS (HR: 0.27; 95% CI 0.11, 0.68; p =0.006), with a median follow up time among survivors of 4.5 (IQR 2.0, 7.7) years.
- The “After” guidelines group also had better CSS (HR: 0.20; 95% CI 0.05, 0.86; p = 0.030) and non-significantly better OS (HR: 0.68; 95% CI 0.45, 1.02; p = 0.060).

Conclusion

Detection of metastatic recurrence following partial nephrectomy is a rare event, regardless of follow up regimen. Although detection of metastases appeared to be less following our institution’s formal adoption of the AUA guidelines, it did not adversely impact patient survival.

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