



Memorial Sloan Kettering  
Cancer Center

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

**Presenter: Andrew Tracey, MD**

**Authors: Andrew Tracey<sup>1</sup>, Lucas Nogueira<sup>1</sup>, Amy Tin<sup>2</sup>, Ricardo Alvim<sup>1</sup>, A. Ari Hakimi<sup>1</sup>, Paul Russo<sup>1</sup>, S. Machele Donat<sup>1</sup>, Jonathan Coleman<sup>1</sup>**

<sup>1</sup> Urology Service, Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY

<sup>2</sup> Department of Epidemiology and Biostatistics, Memorial Sloan Kettering Cancer Center, New York, NY

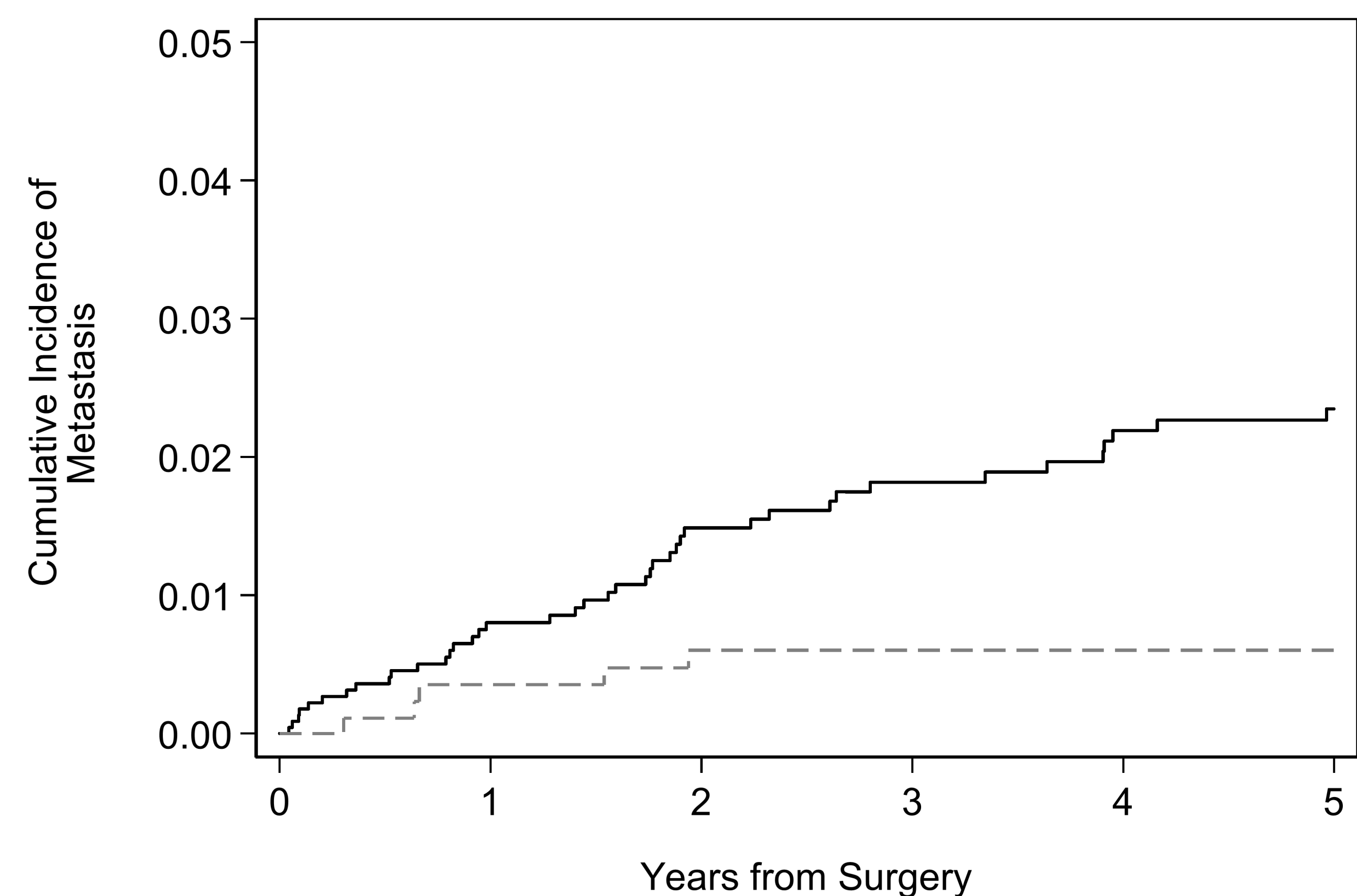
# Introduction and Methods

- In April 2013, updated AUA guidelines published for clinically localized renal neoplasms with ***risk-adjusted*** recommendations for follow up after PN
- Less frequent surveillance imaging schedule for **low-risk** patients (pT1, N0/Nx)
  - Baseline abd CT/MRI within 3-12m of surgery, and then Abd US/CT/MRI annually for 3 years with CXR
- More intensive regimen reserved for **moderate-** and **high-risk** patients (pT2-4, N0/Nx or any N+)
  - Baseline Chest and Abd CT/MRI within 3-6m of surgery, and then US/CT/MRI/CXR q6m for 3 years and annually thereafter to 5yrs
- After formally adopting this surveillance strategy across all kidney surgeons at MSK, we sought to evaluate the impact of this practice change on patient outcomes

|  | PN Before April 2013<br>(N=2295; 70%) | PN After April 2013<br>(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 <sup>2</sup> ) (N=3161)            | 68.8 (57.6, 82.8)                     | 85.3 (70.0, 97.1)                   |
| Post-Op 6 months eGFR (mL/min/1.73 m <sup>2</sup> ) (N=2204) | 64.4 (52.5, 78.2)                     | 76.3 (62.0, 90.1)                   |

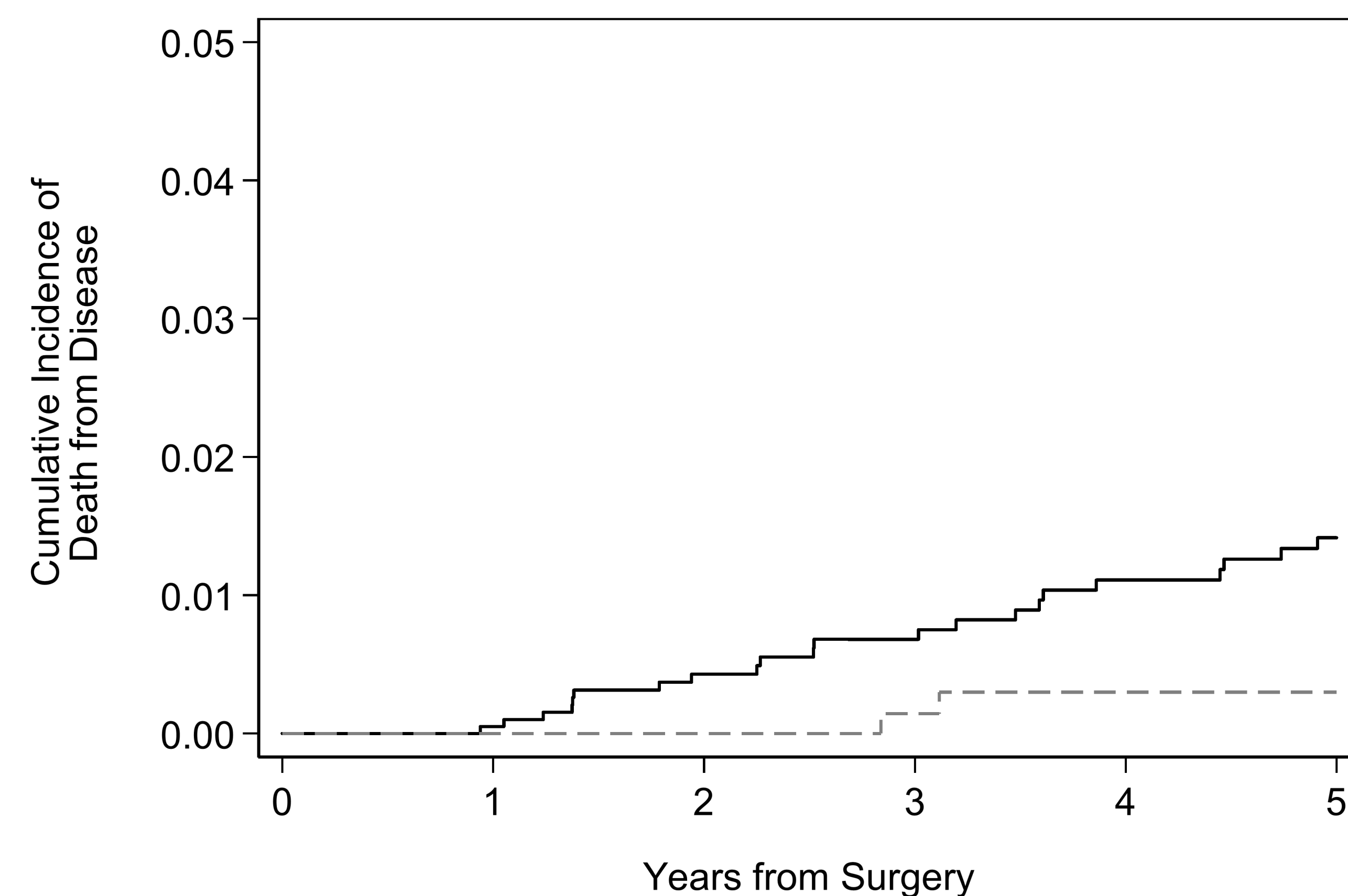
# Results and Conclusions

**Metastasis**



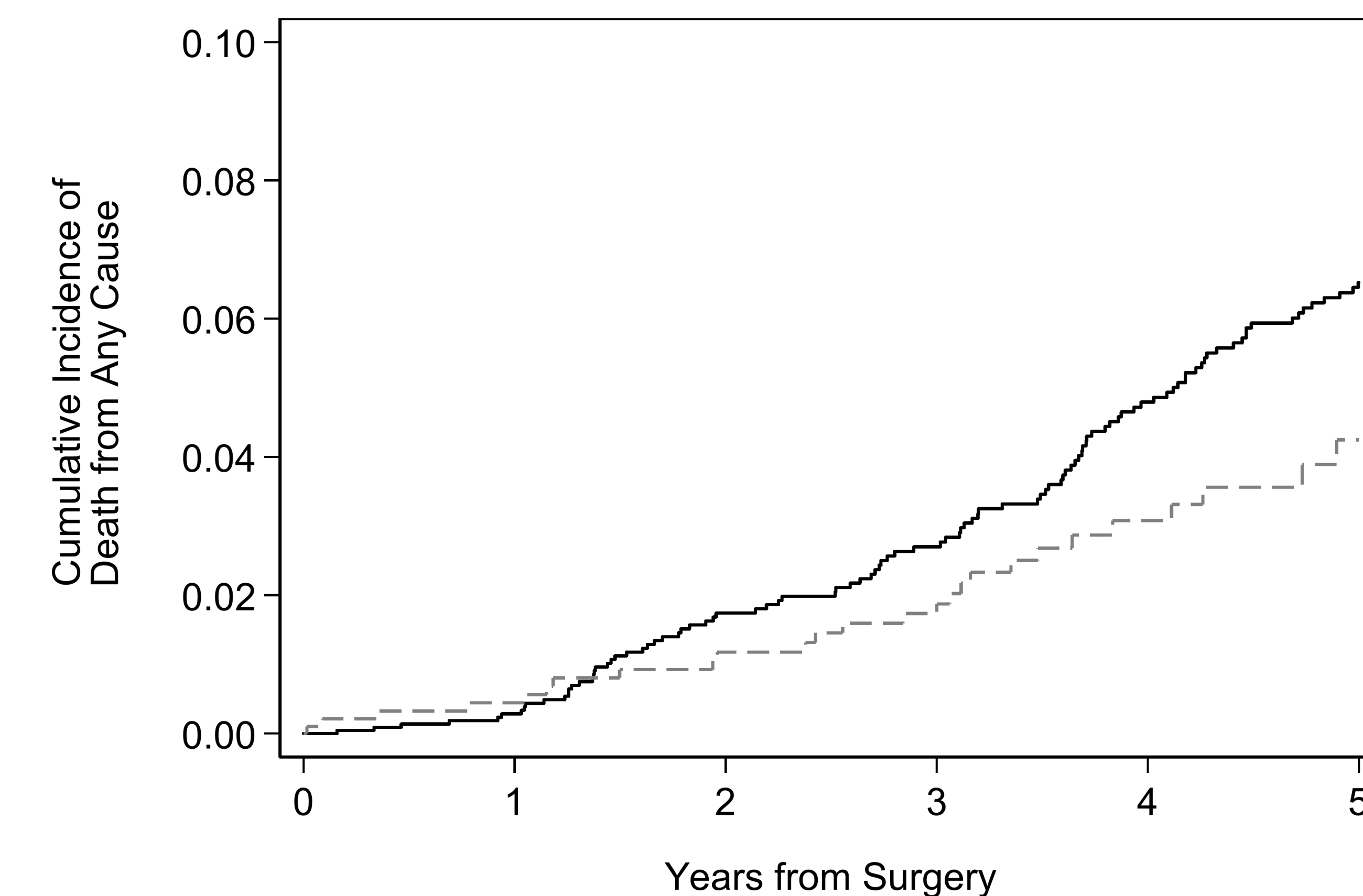
| Number at risk |      | 0    | 1    | 2    | 3    | 4    | 5 |
|----------------|------|------|------|------|------|------|---|
| Before         | 2295 | 1946 | 1642 | 1359 | 1294 | 1217 |   |
| After          | 966  | 854  | 763  | 692  | 434  | 240  |   |

**Death from Disease**



| Number at risk |      | 0    | 1    | 2    | 3    | 4    | 5 |
|----------------|------|------|------|------|------|------|---|
| Before         | 2295 | 1984 | 1689 | 1421 | 1347 | 1261 |   |
| After          | 966  | 860  | 767  | 700  | 439  | 243  |   |

**All-Cause Death**



| Number at risk |      | 0    | 1    | 2    | 3    | 4    | 5 |
|----------------|------|------|------|------|------|------|---|
| Before         | 2295 | 1984 | 1689 | 1421 | 1347 | 1261 |   |
| After          | 966  | 860  | 767  | 700  | 439  | 243  |   |

**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 ( $p=0.085$ ).

- Detection of metastases appeared to be **less** following our institution's formal adoption of AUA guidelines, but this did **not** adversely impact survival
- Risk-based surveillance after partial nephrectomy is a safe and effective means of following RCC patients