



Long-term Follicular Cancer

ENDORAMA

2/21/2014

HPI

- 66 year old male
- 1970's - Left thyroid lobectomy for benign disease
- 2003 – Right completion lobectomy and central neck dissection for follicular thyroid carcinoma
- Treated twice with RAI (12/03, 8/04)
- Neck Ultrasound showed a right-sided neck node in the thyroid bed
 - Ethanol ablation

HPI

- October 2013 – new palpable cervical node
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- Neck ultrasound – node around the location of the isthmus

PMHx

- HTN
- Arthritis
- Gout
- Hyperlipidemia

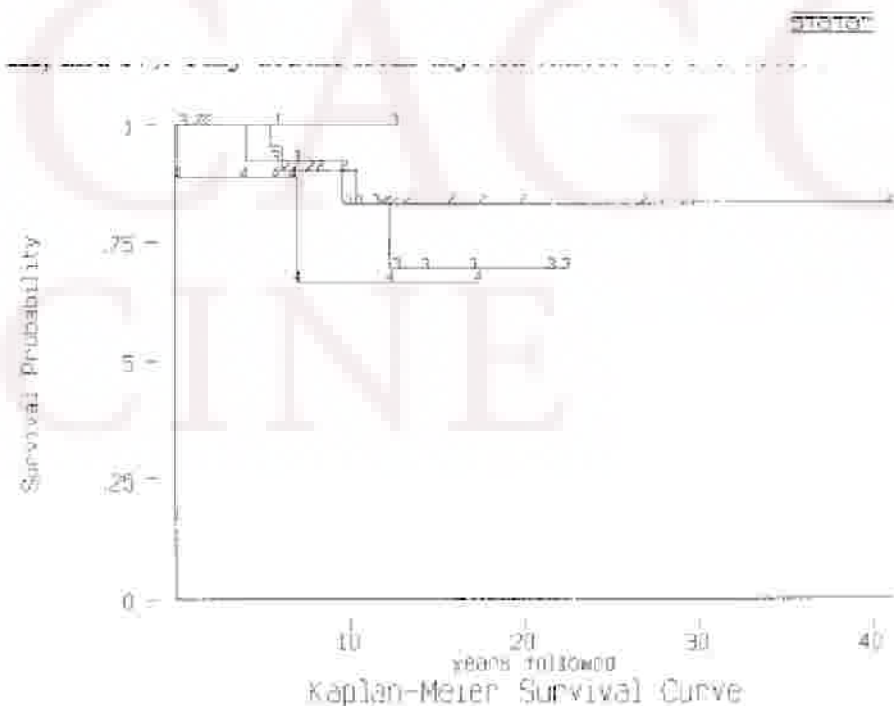
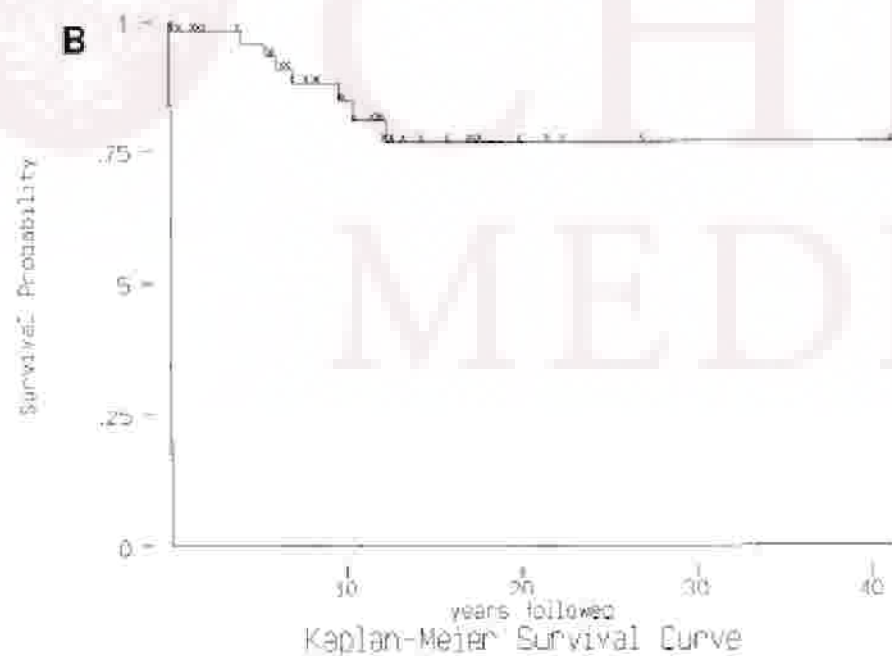
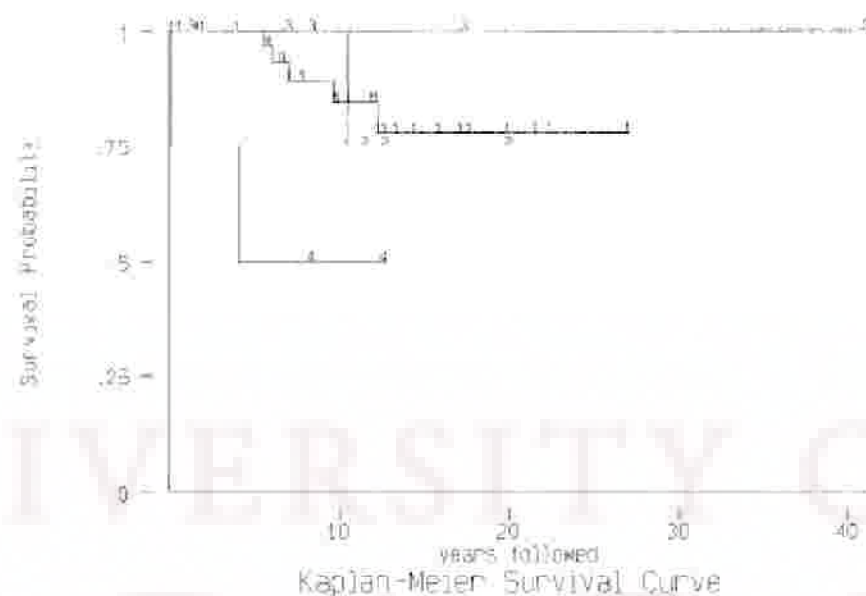
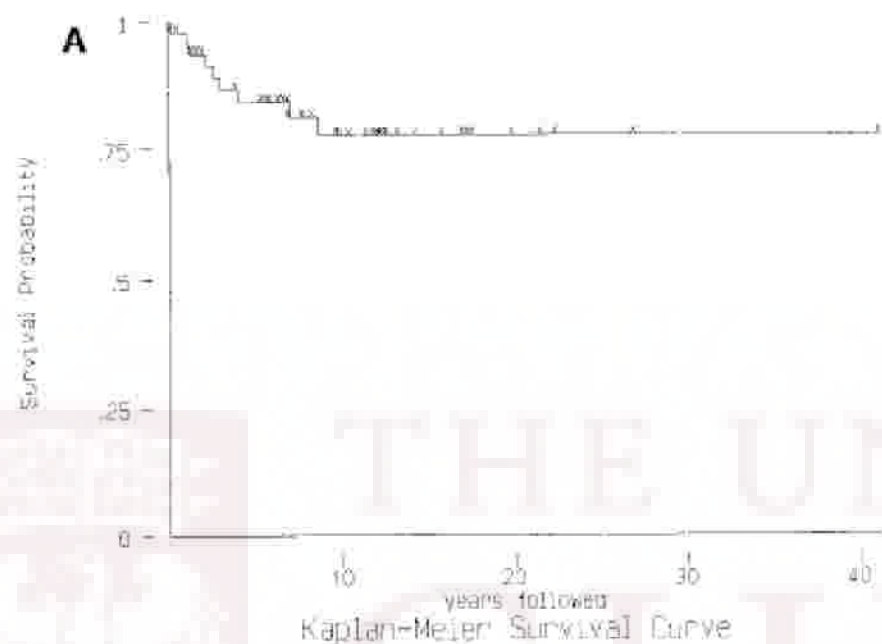
PSurgHx

- As above

Surgery

- Pretracheal LN was superficial and adjacent to the strap muscles
 - Confirmed by frozen section to be thyroid cancer
- Complete right central lymph node dissection
 - Thyroid remnant with scar tissue overlying right RLN

- 82 patients for review
 - 49 patients from original study
 - 33 patients found in our pathology bank
- Original study followed patients for average of 10.7 years
 - 18% recurrence rate (disease in neck or distant more than 12 months from original surgery)
 - 16% thyroid specific mortality
 - 8/9 patients with recurrence died of thyroid specific complications
 - Recurrence was not seen past 13 years



STATISTICAL

STATISTICAL

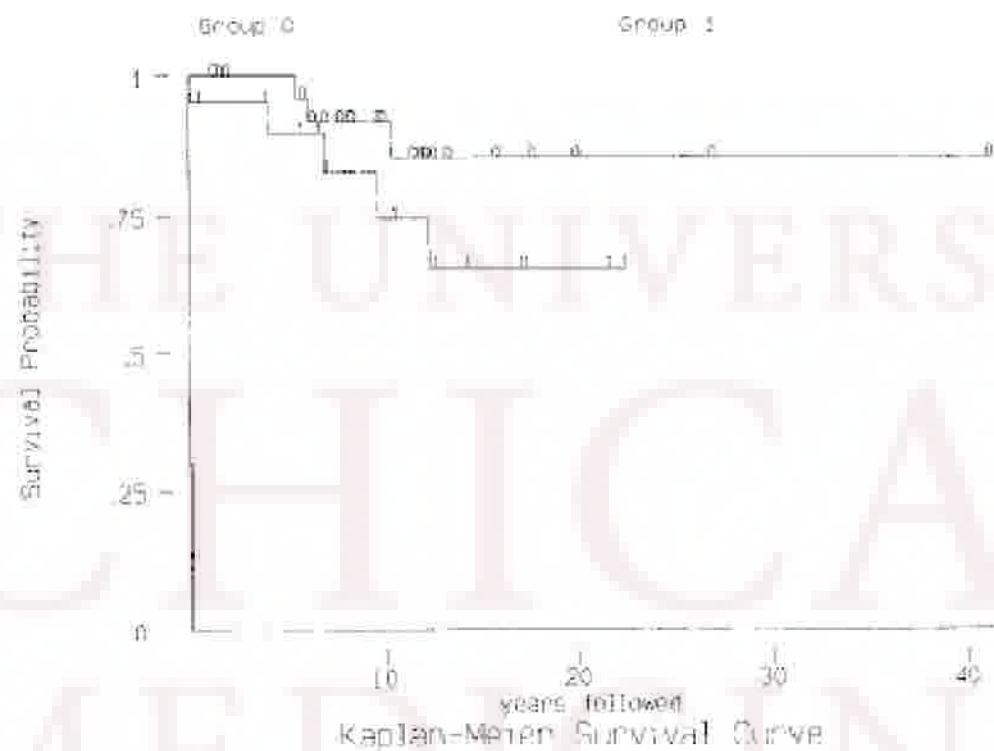
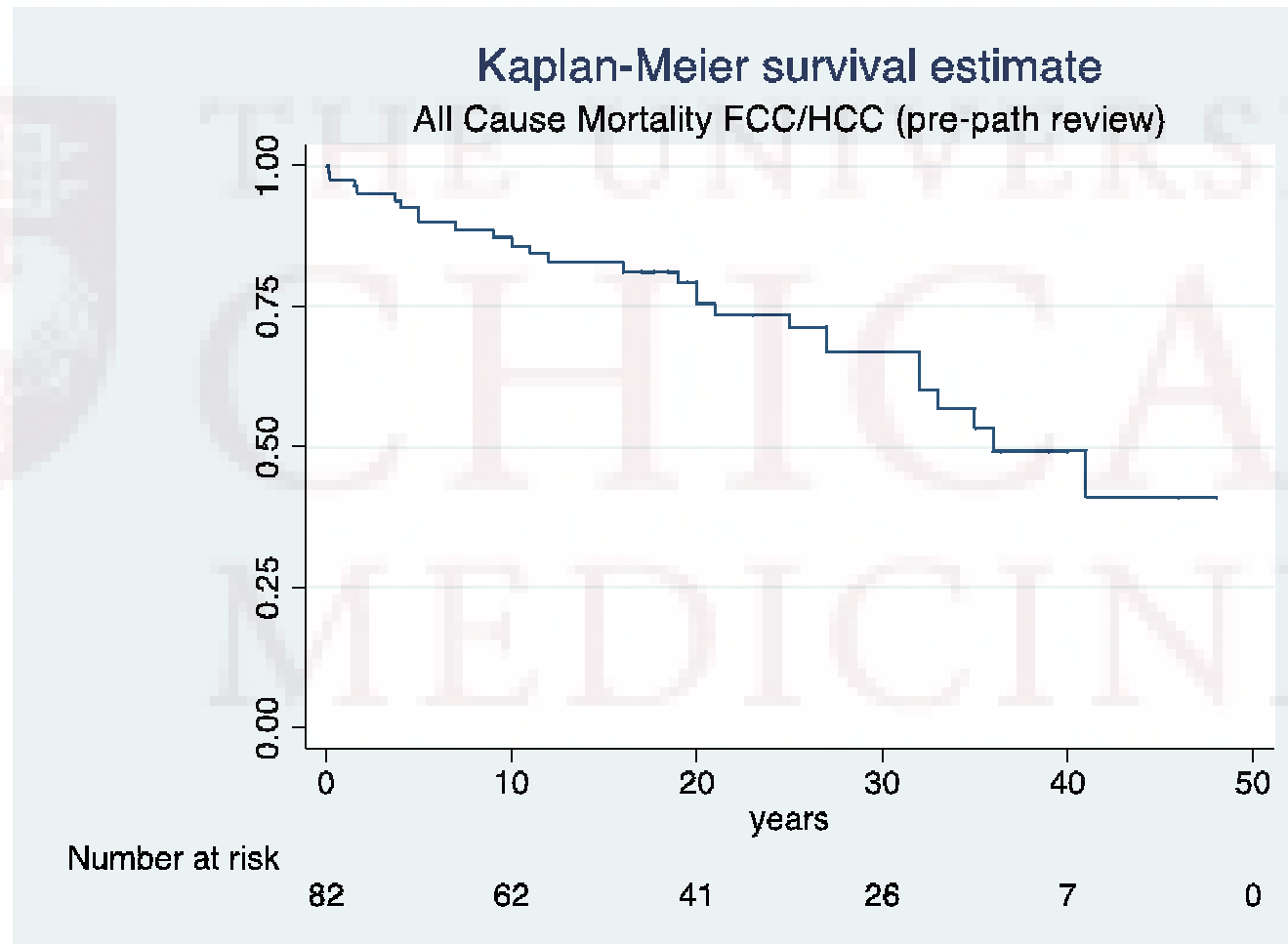


FIG. 5. Survival is shown for patients under age 45 yr (0) or over age 45 yr (1).

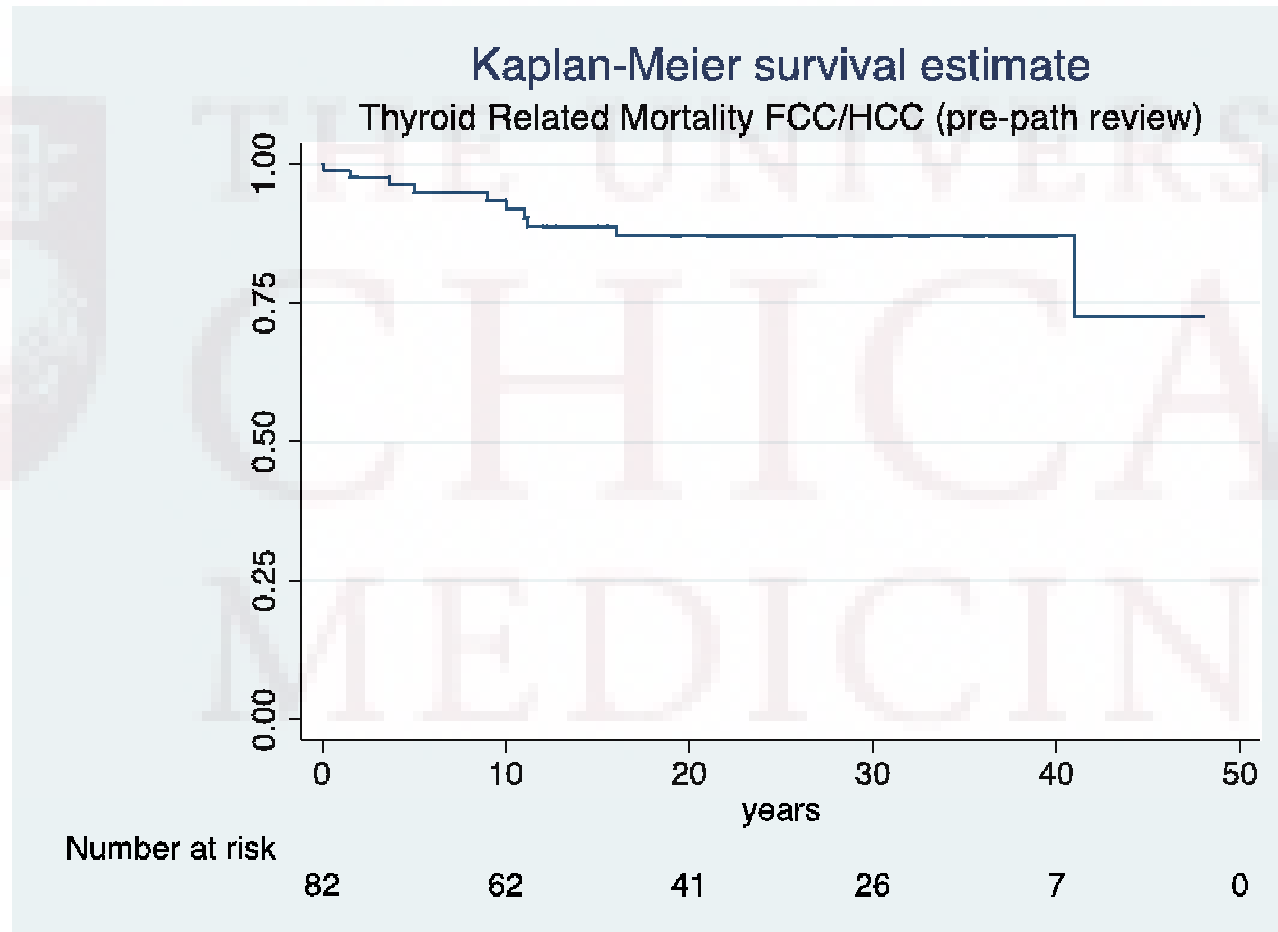
Demographics	Mean (years)	Range (years)
Average Age at Dx	41 ± 16	14-79
Average Age at Death	69 ± 17	32-94
Years of Death followup	20.8 ± 13.1	0.1-48
Years of Recurrence followup	19.6 ± 13.4	0.2-48

All Cause Mortality Pre-Path



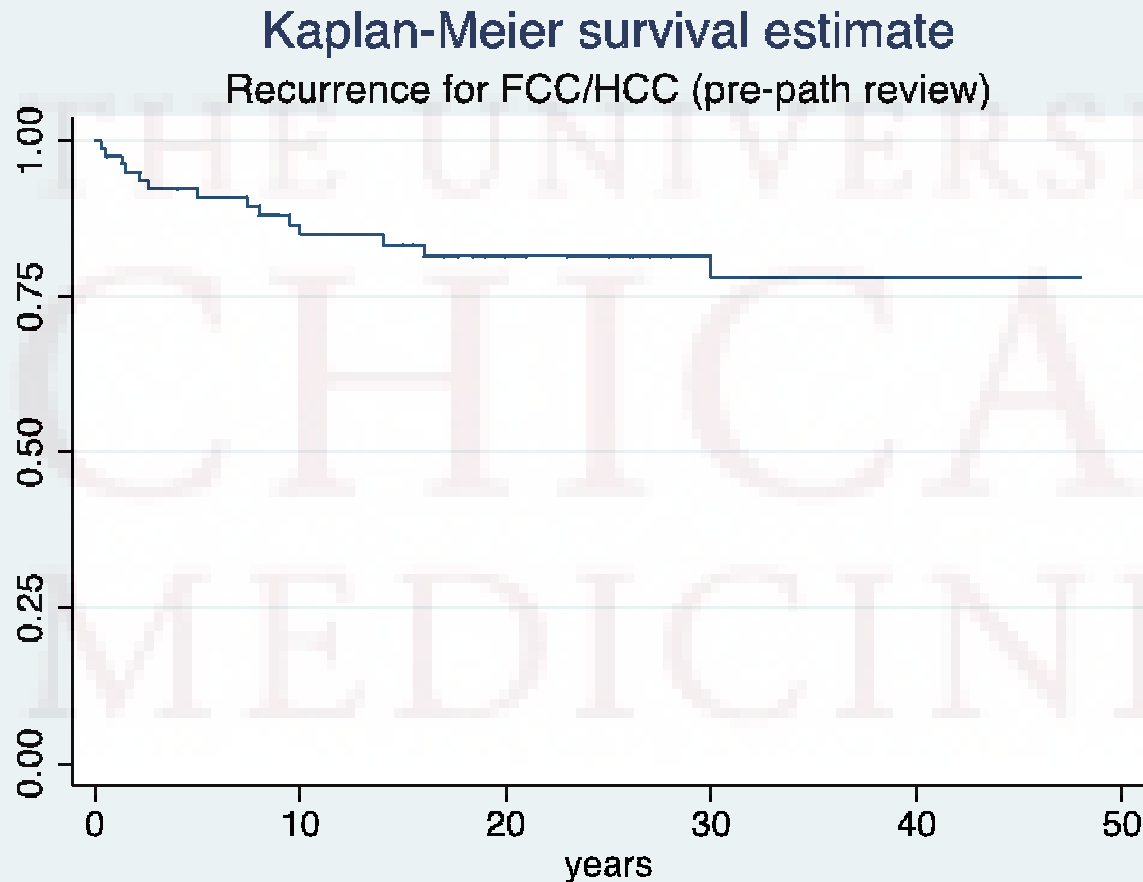
Median time to death 36 years.
39.4% survival at 48 years

Thyroid-related Deaths Pre-path



FCC: 71.8%
disease-free
survival at 48
years

Recurrence Pre-Path

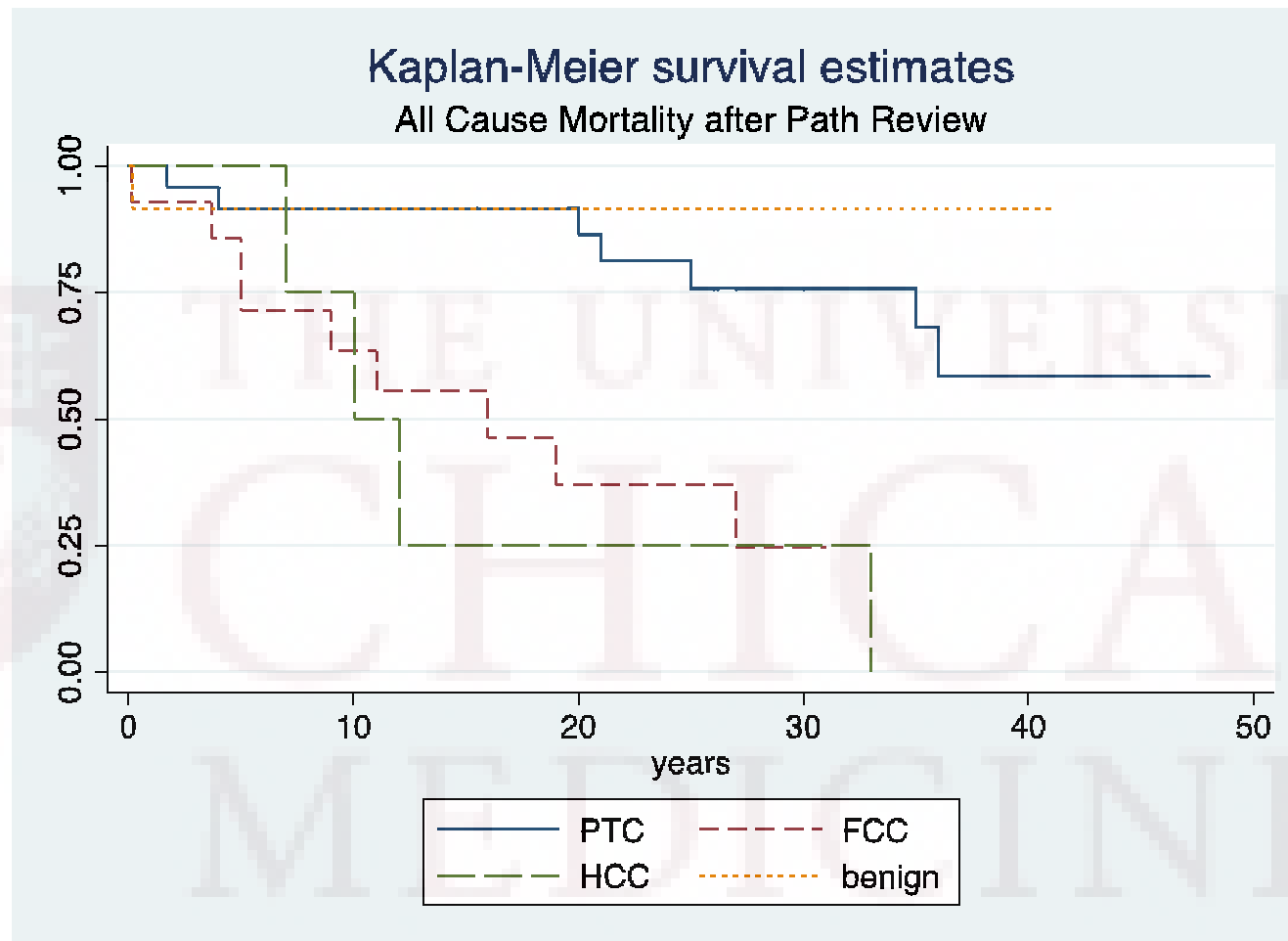


FCC: 77.9%
recurrence-free
at 48 years

Path-Review

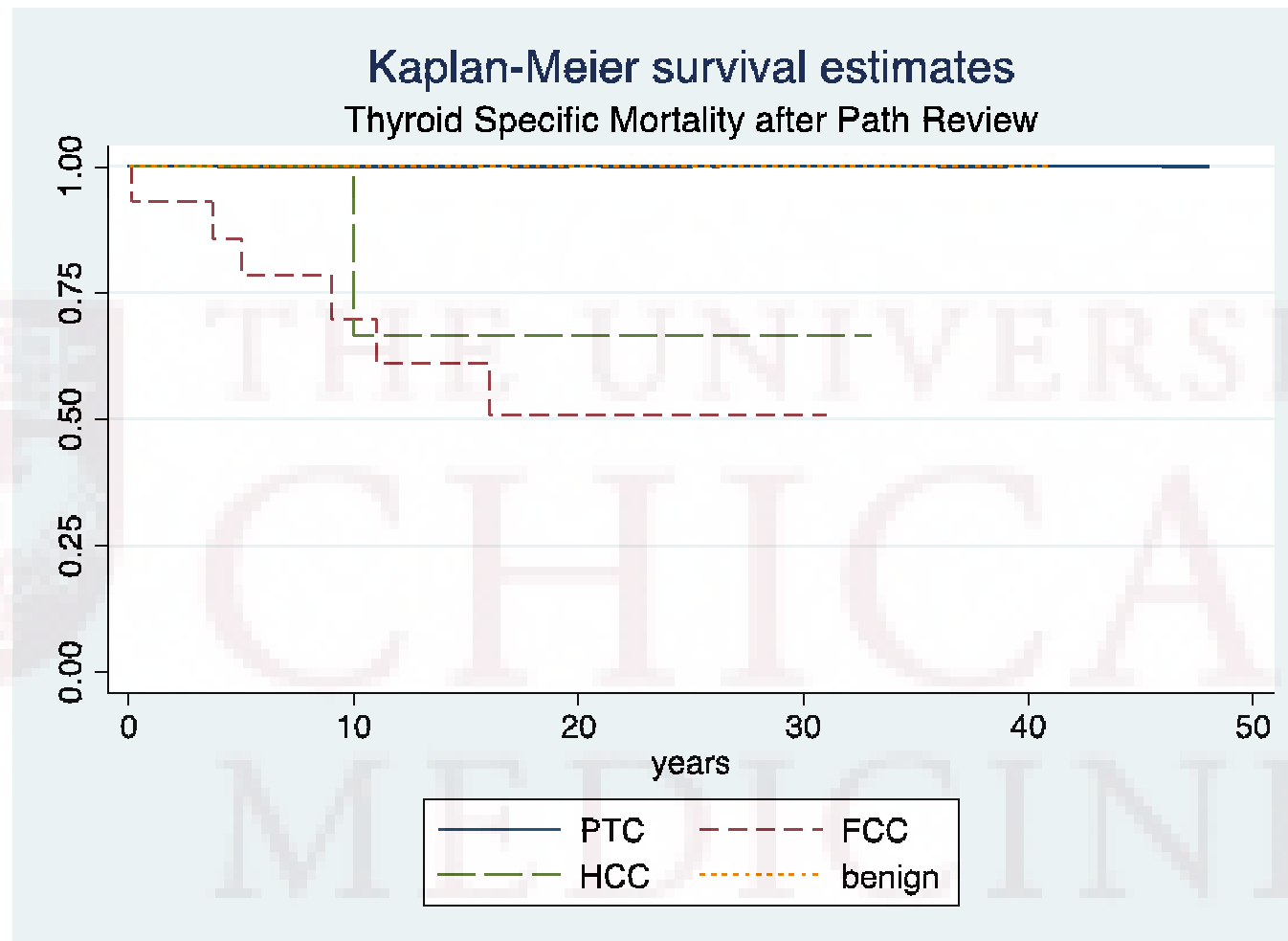
- Of the 54 specimens (out of 82) that were reviewed
 - 24 PTC/FV-PTC
 - 14 FCC (Follicular cell carcinoma)
 - 4 HCC (Hurthle cell carcinoma)
 - 12 benign (FTA, HCA, fibrosis)

Demographics	Mean/Median (years)	Range (years)
Average age at diagnosis	43 ± 15	16-74
Average age at death	67 ± 18	32-94
Years to Death FU (median)	21	0.1-48
Years to Recurrence FU (median)	21	0.2-48



Median time to
Death from all
causes:
FCC: 16 years
HCC: 10 years
FCC: 24.5% at 32
years

Log rank $p=0.0001$

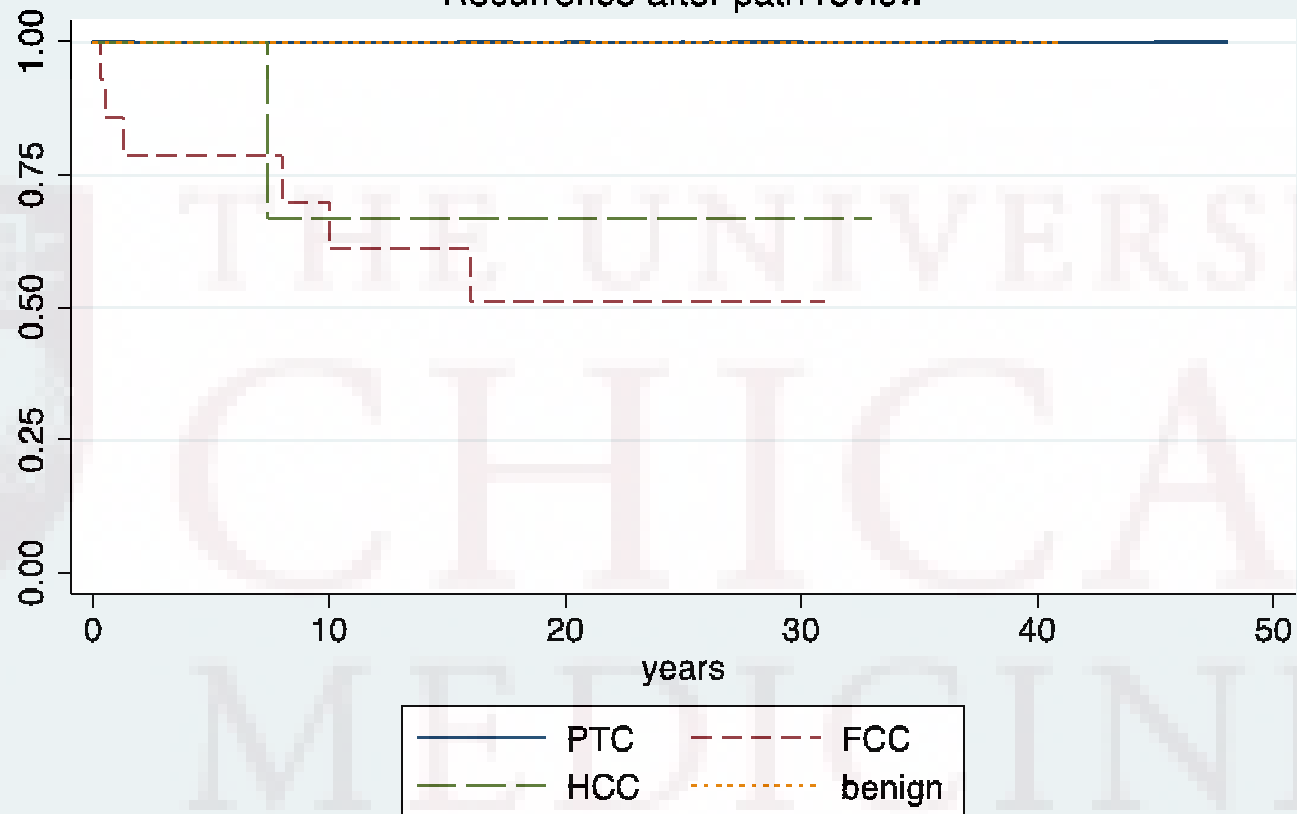


FCC: 50.2%
survival at 32
years
HCC: 66.7%
survival at 34
years

Log rank $p=0.0003$

Kaplan-Meier survival estimates

Recurrence after path review



FCC: 50.9%
recurrence-free
at 32 years
HCC: 71.4%
recurrence-free
at 34 years

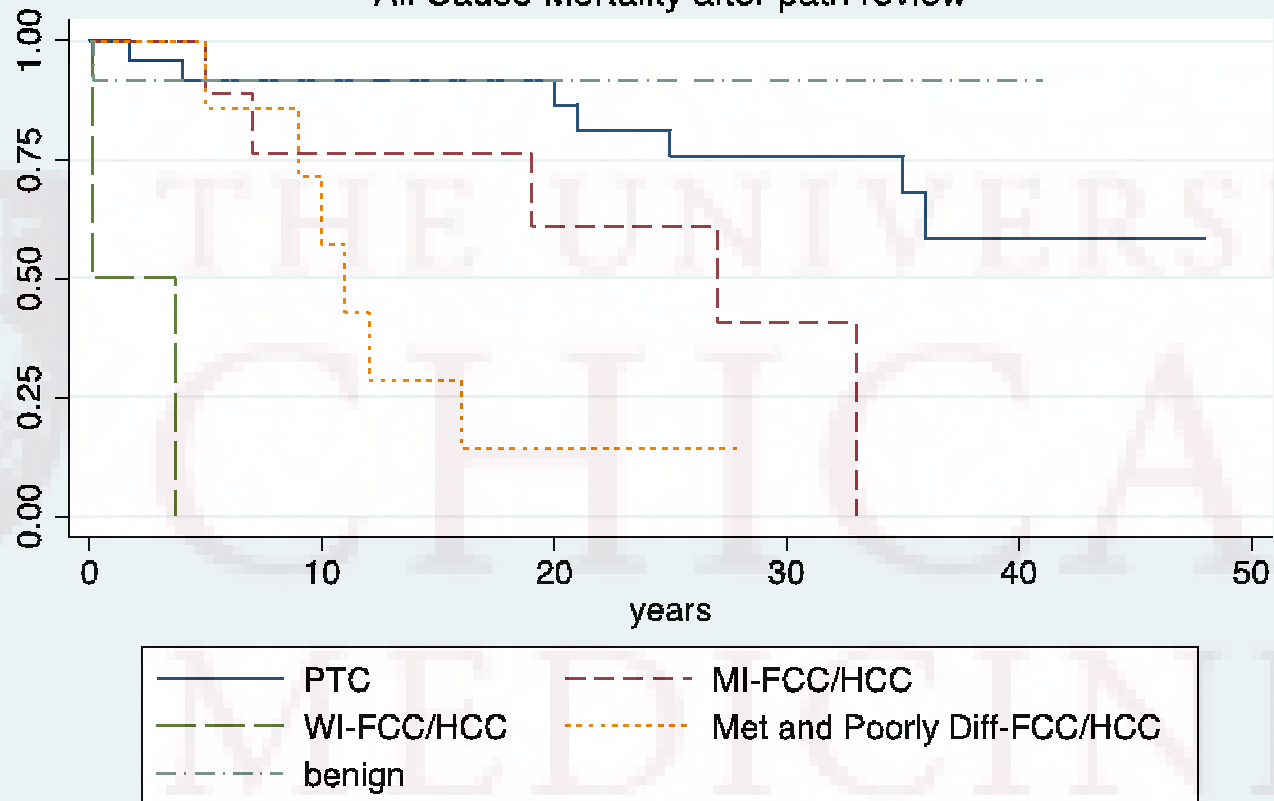
Log rank $p=0.0003$

Path Review

- 54 patients reviewed
 - 24 PTC/FV-PTC
 - 9 minimally invasive FCC/HCC
 - 2 widely invasive FCC/HCC
 - 7 metastatic or poorly differentiated FCC/HCC
 - 12 benign

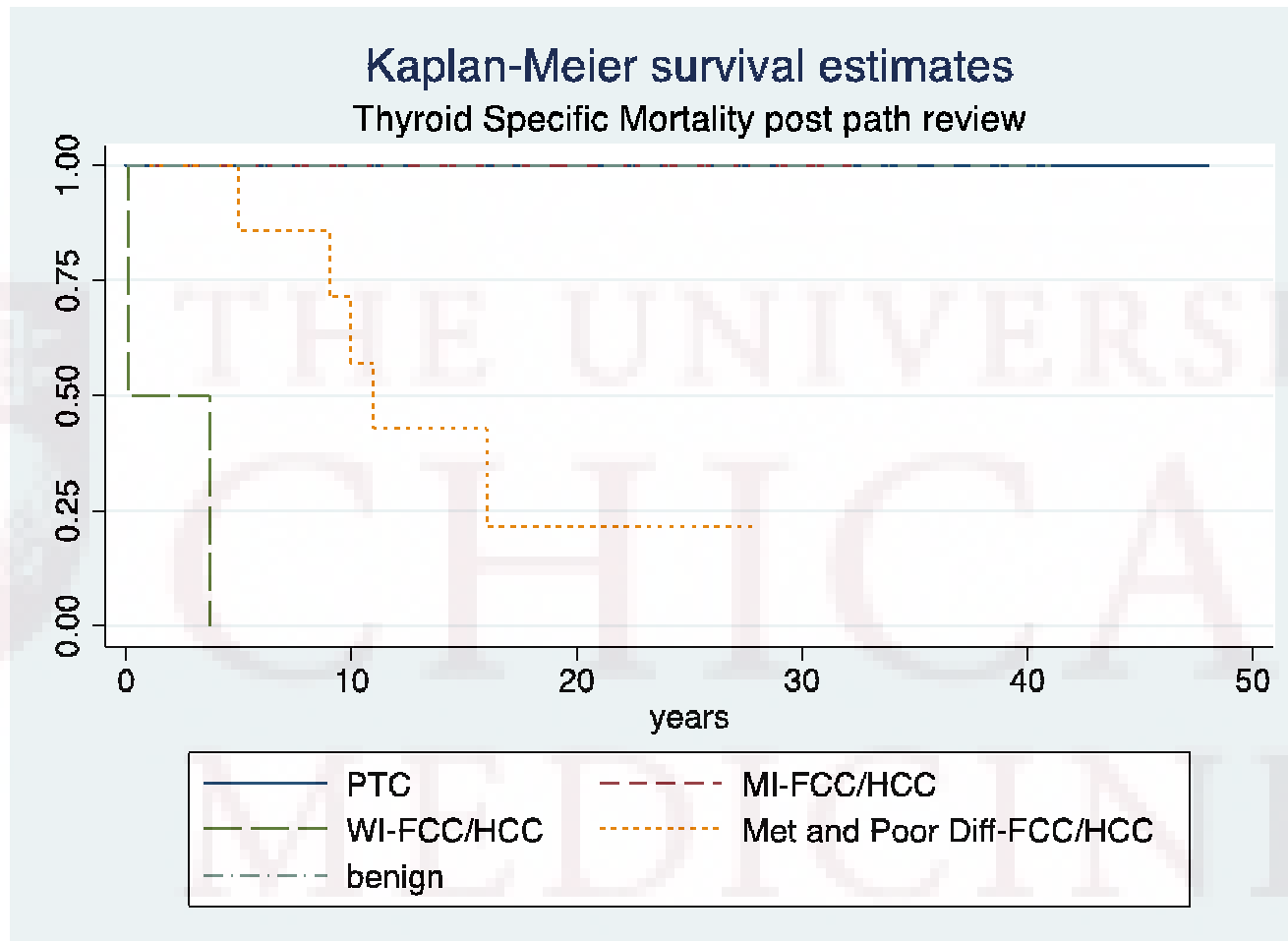
Kaplan-Meier survival estimates

All Cause Mortality after path review



Median time to
Death from all
causes:
MI: 27 years
WI: 1 month
Met/poor diff: 9
years

Log rank $p < 0.0001$

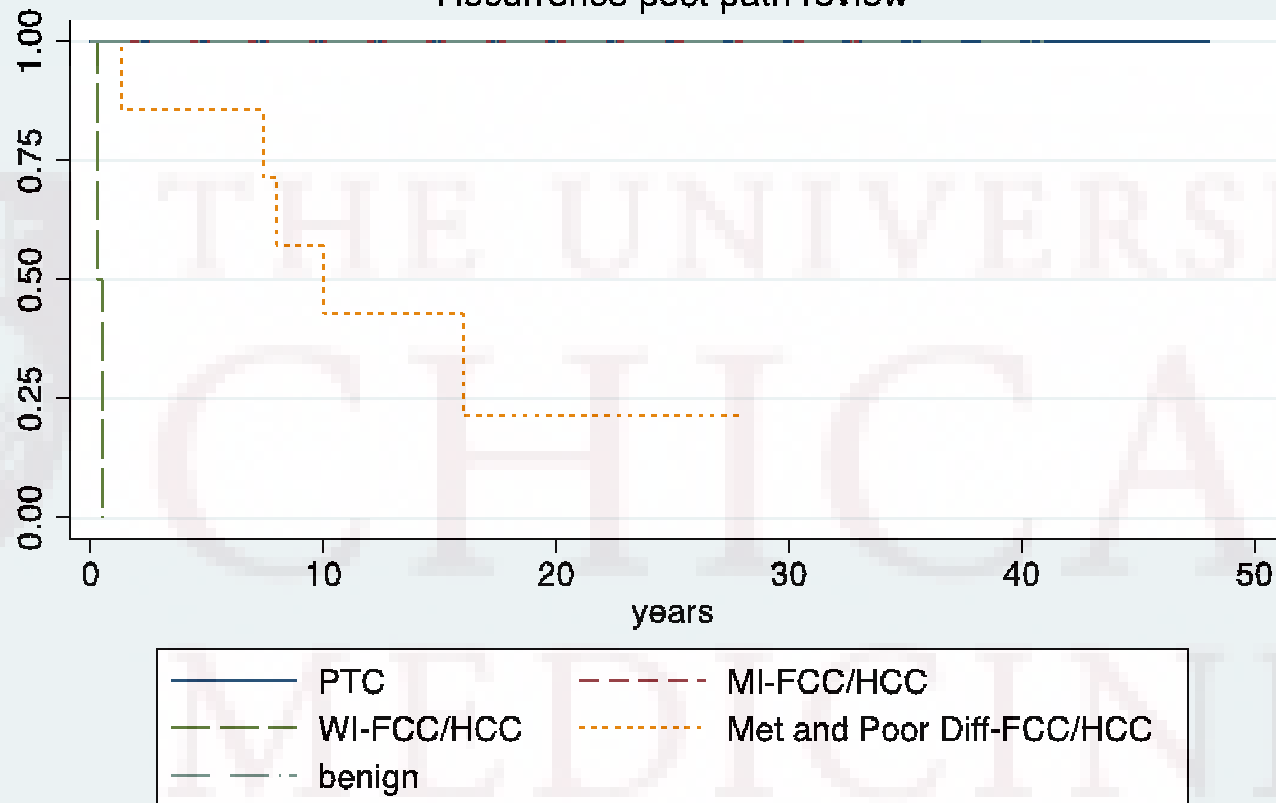


Median time to
Death from
thyroid cancer:
WI: 1 month
Met/poor diff: 11
years

Log rank $p < 0.0001$

Kaplan-Meier survival estimates

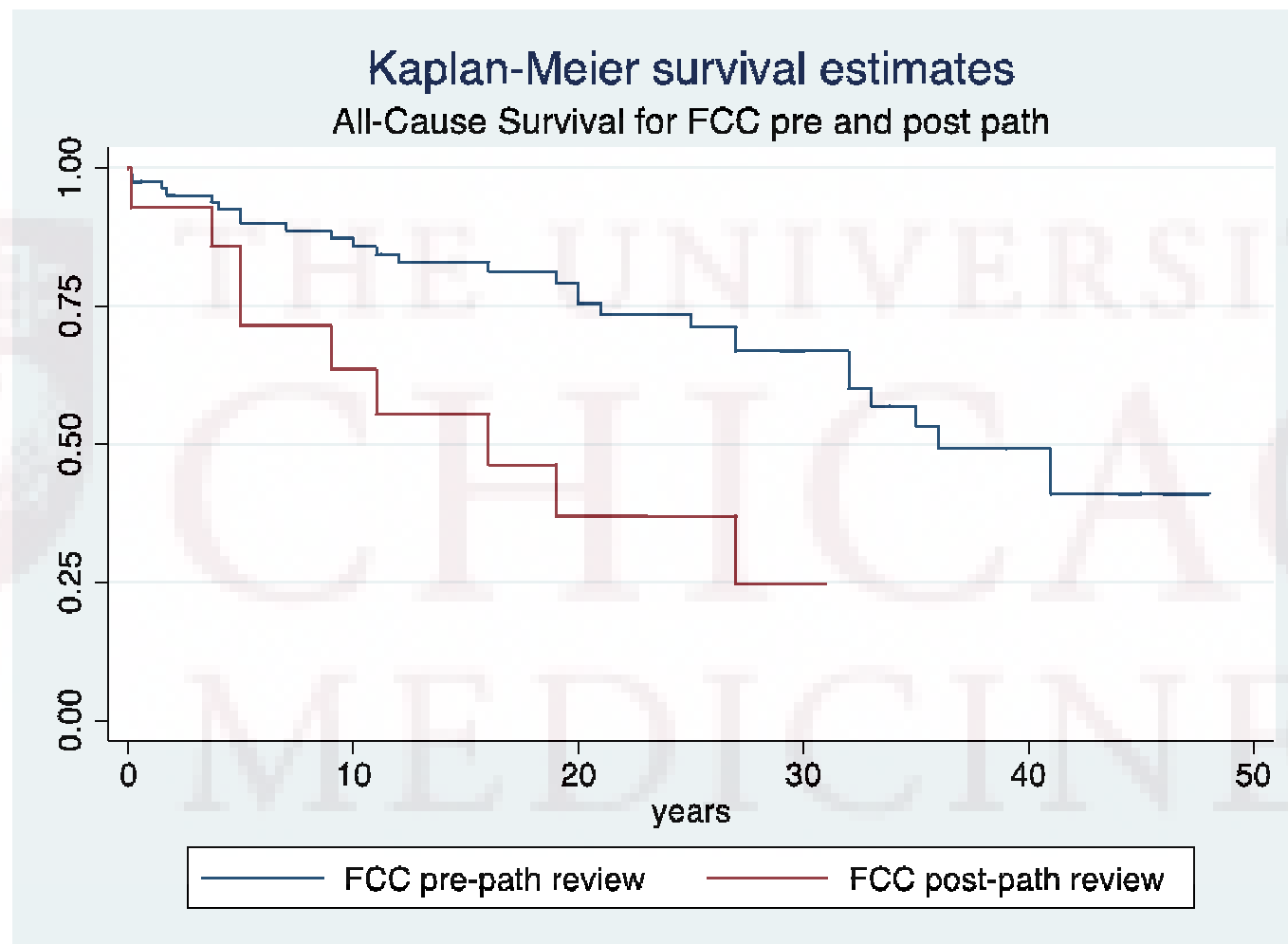
Recurrence post path review



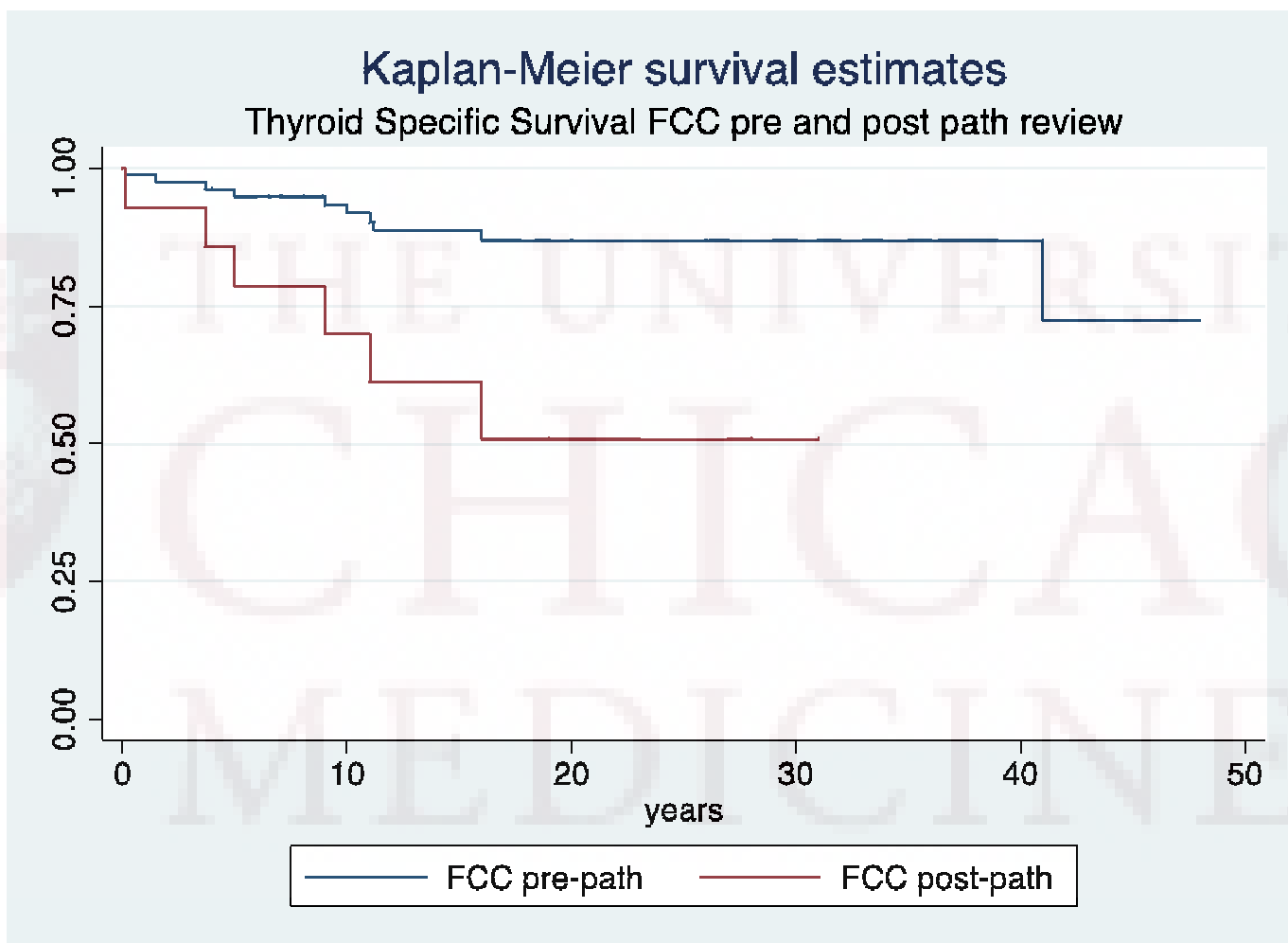
Median time to recurrence:
WI: 4 months
Met/poor diff: 10 years

Log rank $p < 0.0001$

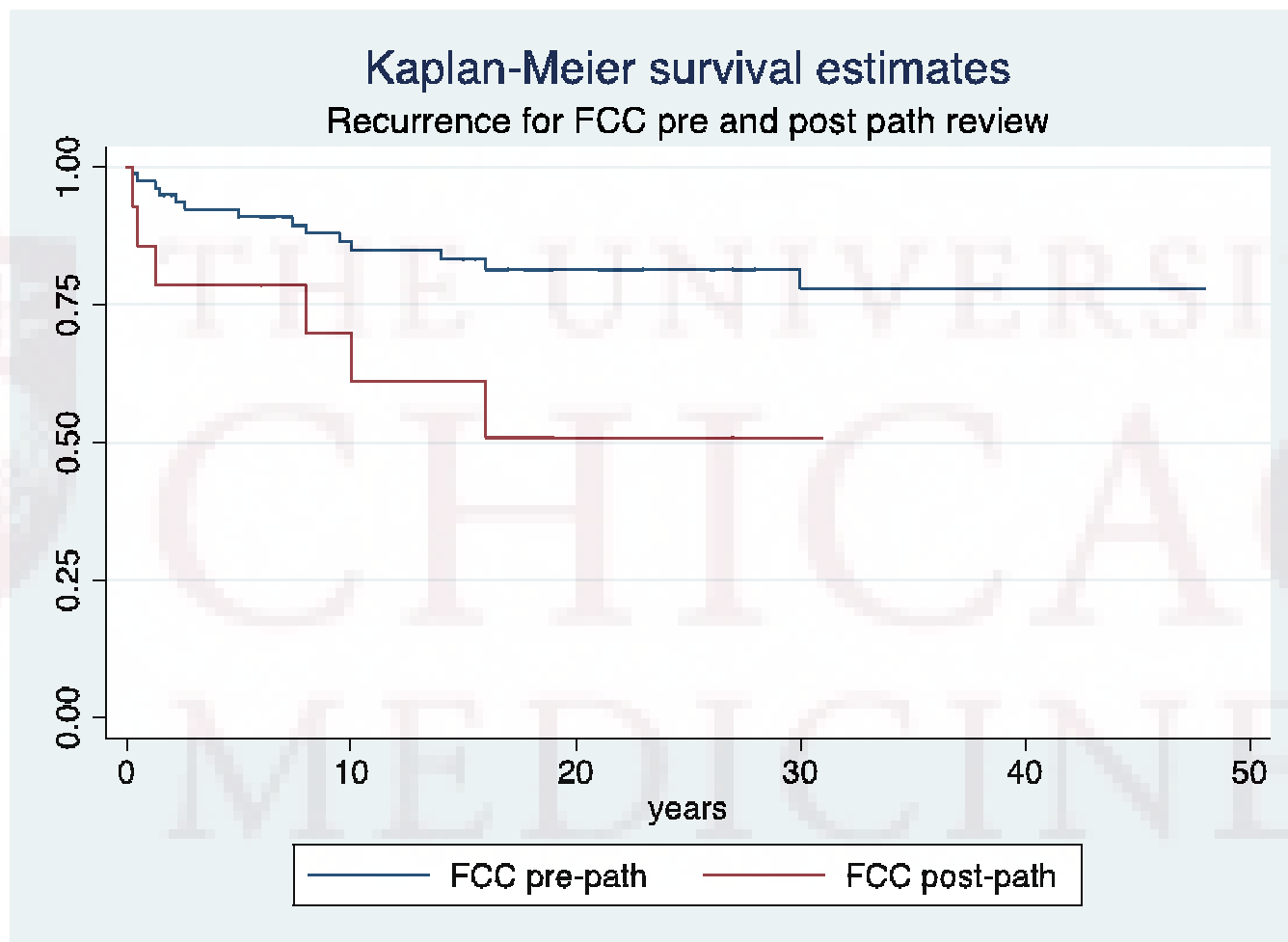
Category	Median Survival Time (years)	Survival/Recurrence-Free	Follow-up Time (years)
Pre-Path FCC All Cause Mortality	36	39.4%	48
Pre-Path FCC Thyroid Mortality		71.8%	48
Pre-Path FCC Recurrence		77.9%	48
Post-Path FCC All Cause Mortality	16	24.5%	32
Post-Path FCC Thyroid Mortality		52.2%	32
Post-Path FCC Recurrence		50.9%	32



Log rank $p=0.002$



Log rank $p=0.0016$



Log rank $p=0.0179$

FCC&HCC	Median survival at	At 48 years
All-cause survival	36 years	39%
Thyroid Specific survival		71%
Recurrence free survival		78%