

The changing face of cancer: progress and emerging trends

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ASCO–NCPF workshop: Advancing high-quality cancer care
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Data sources



NATIONAL CANCER INSTITUTE

Surveillance, Epidemiology, and End Results Program



North American Association of Central Cancer Registries





**Centers for Disease
Control and Prevention**
National Center for
Health Statistics



I have no conflicts of interest to disclose.



Estimated new cancer cases in the US in 2023

Male					Female		
Prostate	288,300	29%			Breast	297,790	31%
Lung & bronchus	117,550	12%			Lung & bronchus	120,790	13%
Colon & rectum	81,860	8%			Colon & rectum	71,160	8%
Urinary bladder	62,420	6%			Uterine corpus	66,200	7%
Melanoma of the skin	58,120	6%			Melanoma of the skin	39,490	4%
Kidney & renal pelvis	52,360	5%			Non-Hodgkin lymphoma	35,670	4%
Non-Hodgkin lymphoma	44,880	4%			Thyroid	31,180	3%
Oral cavity & pharynx	39,290	4%			Pancreas	30,920	3%
Leukemia	35,670	4%			Kidney & renal pelvis	29,440	3%
Pancreas	33,130	3%			Leukemia	23,940	3%
All sites	1,010,310				All sites	948,000	

- **>1.9 million** new cancer diagnoses – **20%** are $\geq 2^{\text{nd}}$ primary



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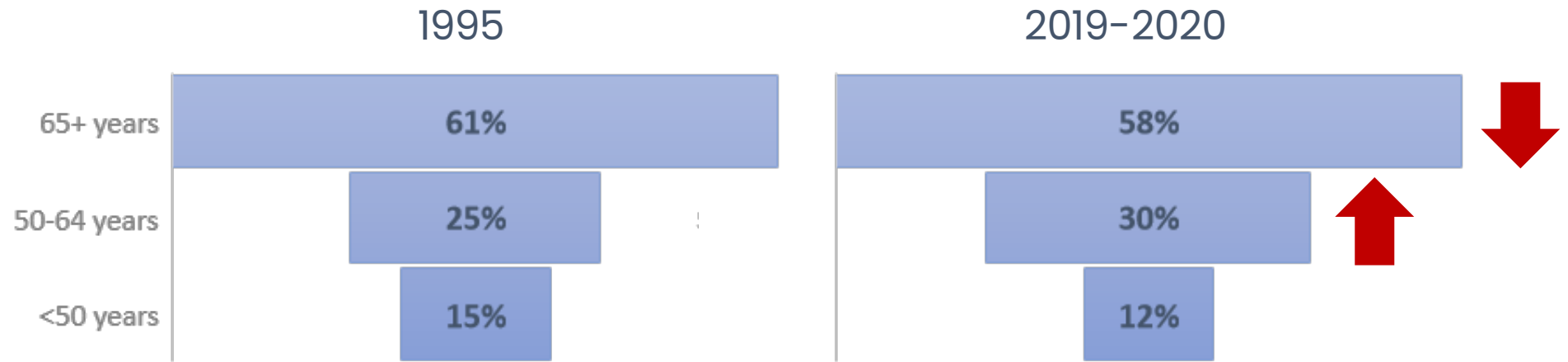
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- **>18 million** cancer survivors
- **~700,000** people living with metastatic breast, lung, prostate, colorectal, bladder cancer, or melanoma (2025)*

*Mariotto et al. Estimation of the number of individuals living with metastatic cancer in the United States. *JNCI* 2022

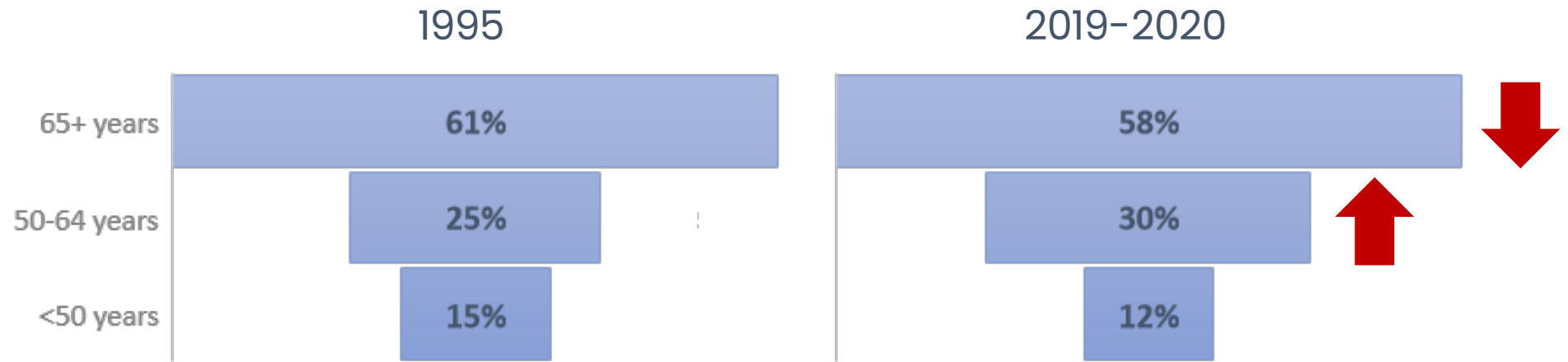
Cancer patient age distribution, 1995 vs. 2019–2020

Cancer
patients

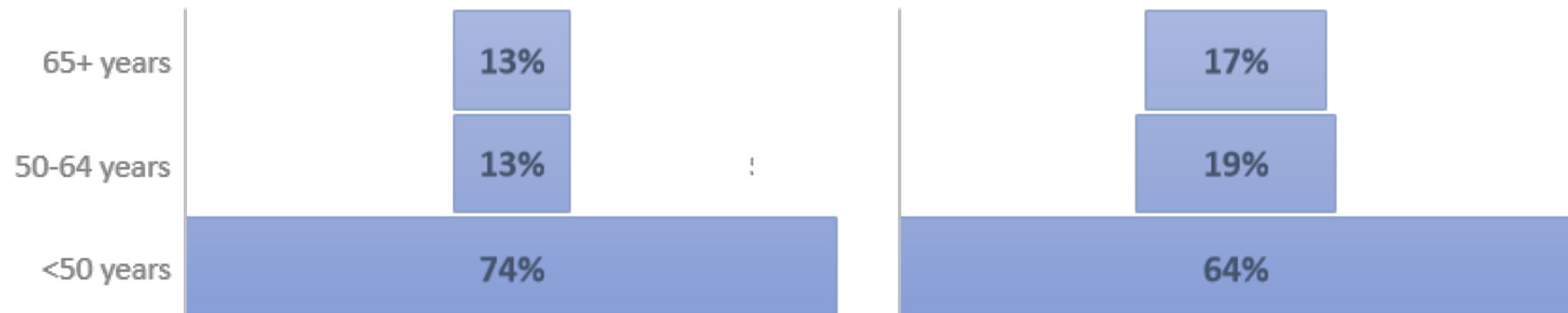


Cancer patient age distribution, 1995 vs. 2019–2020

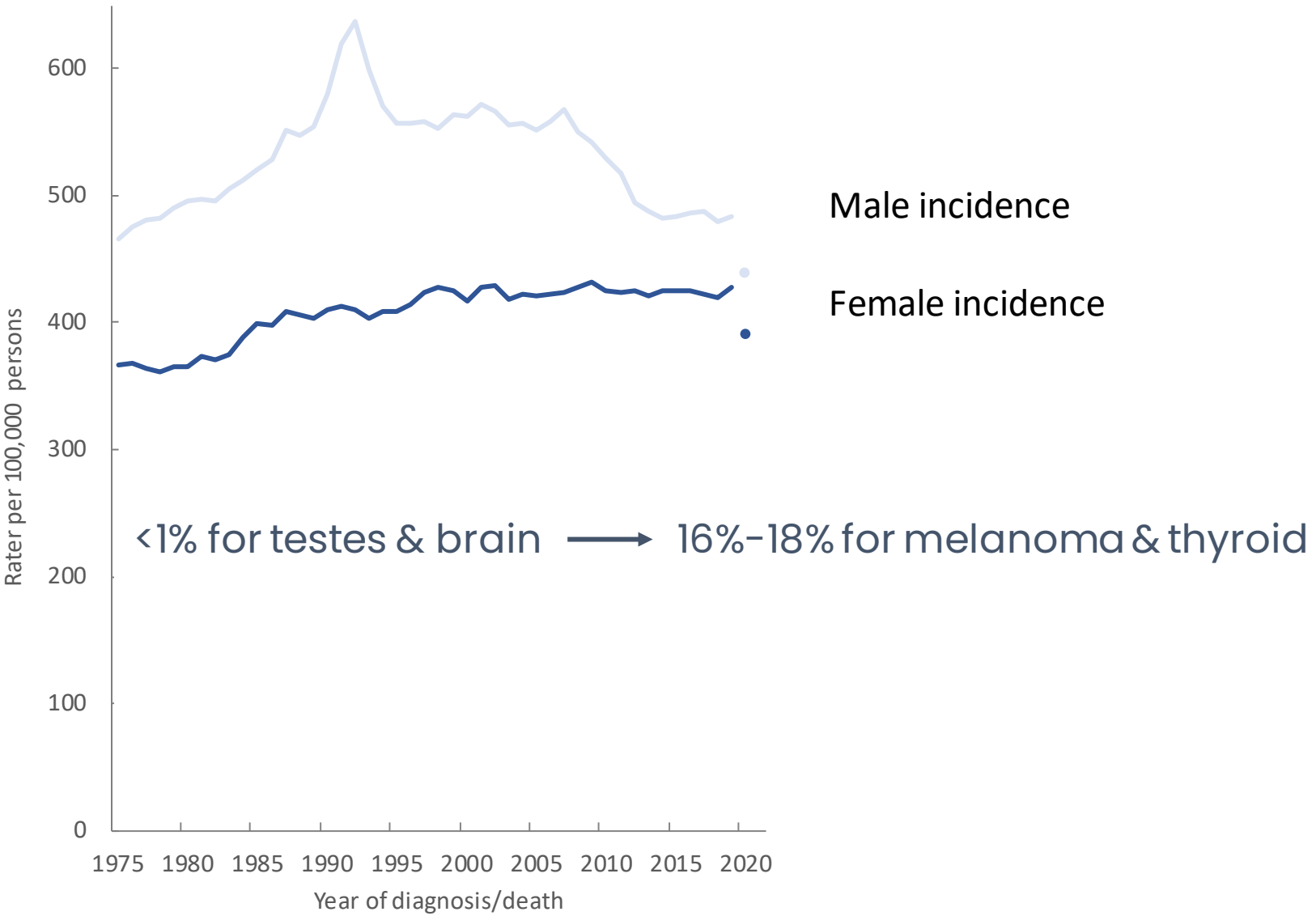
Cancer
patients



Population



Trends in cancer incidence rates, 1975–2020



Stage differences in observed/expected cancer cases in 2020

Received: 24 March 2023 | Revised: 14 July 2023 | Accepted: 11 August 2023
DOI: 10.1002/cncr.35026

ORIGINAL ARTICLE

Annual Report to the Nation on the Status of Cancer, part 2: Early assessment of the COVID-19 pandemic's impact on cancer diagnosis

Serban Negoita MD, DrPH¹ | Huann-Sheng Chen PhD¹ |
Pamela V. Sanchez MPH, CTR¹ | Recinda L. Sherman MPH, PhD, CTR² |
S. Jane Henley MSPH³ | Rebecca L. Siegel MPH⁴ | Hyuna Sung PhD⁴ |
Susan Scott MPH¹ | Vicki B. Benard PhD³ | Betsy A. Kohler MPH² |
Ahmedin Jemal DVM, PhD⁴ | Kathleen A. Cronin PhD, MPH¹

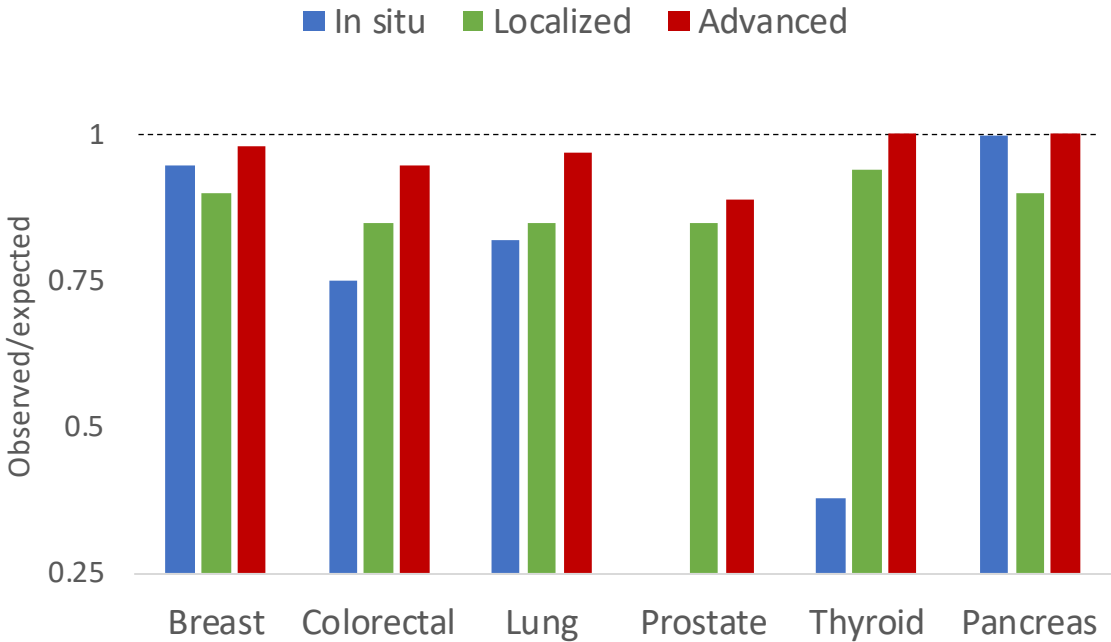
- Expected based on 2015–2019 projection
- Deficit mostly confined to March–May 2020
- Largest for Asians/Pacific Islanders



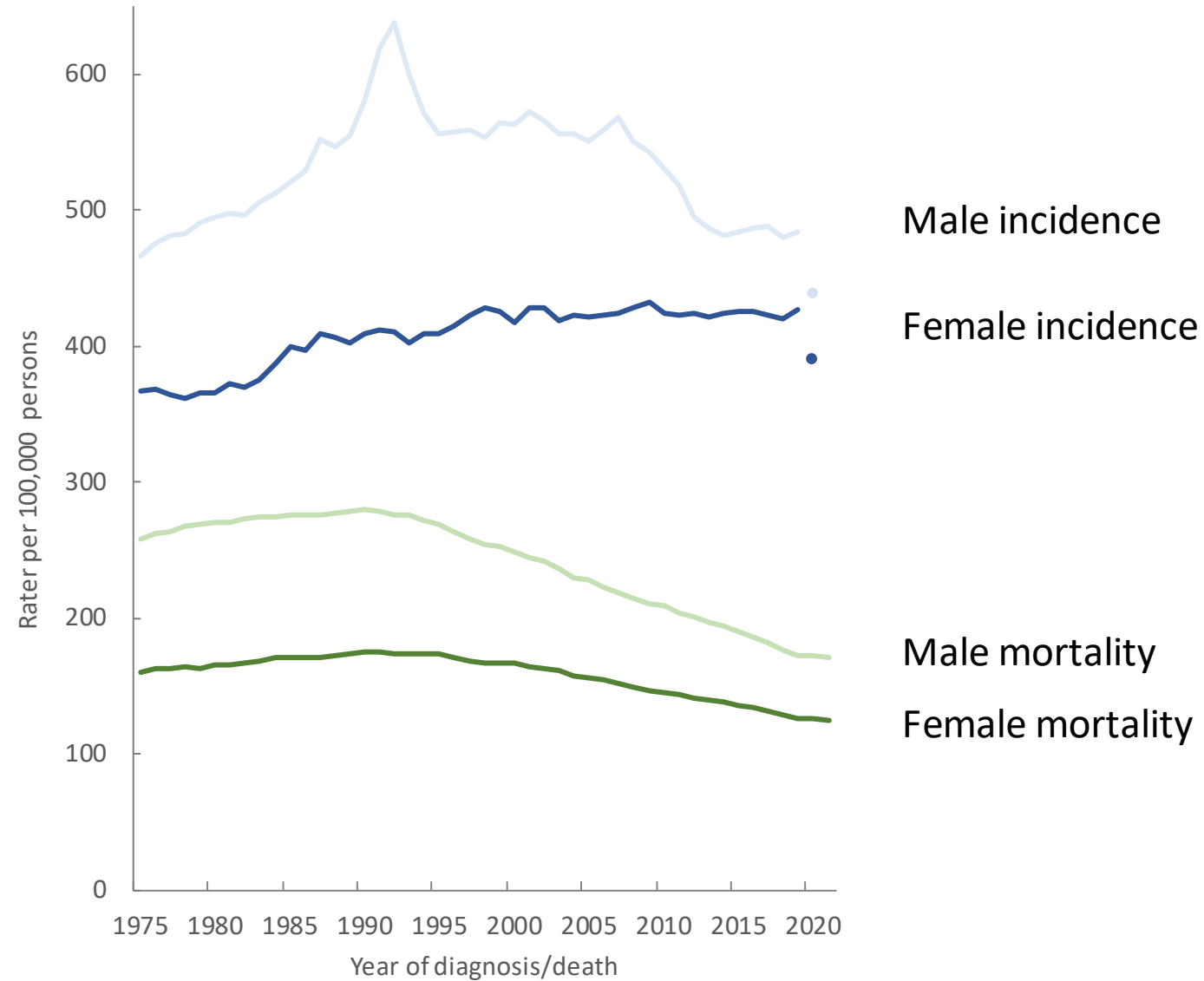
JNCI: Journal of the National Cancer Institute, 2023, 00(0), 1–3
<https://doi.org/10.1093/jnci/djad086>
Advance Access Publication Date: May 23, 2023
Brief Communications

Interpreting cancer incidence trends: challenges due to the COVID-19 pandemic

Angela B. Mariotto , PhD,* Eric J. Feuer , PhD, Nadia Howlader , PhD, Huann-Sheng Chen , PhD, Serban Negoita , PhD, Kathleen A. Cronin , PhD



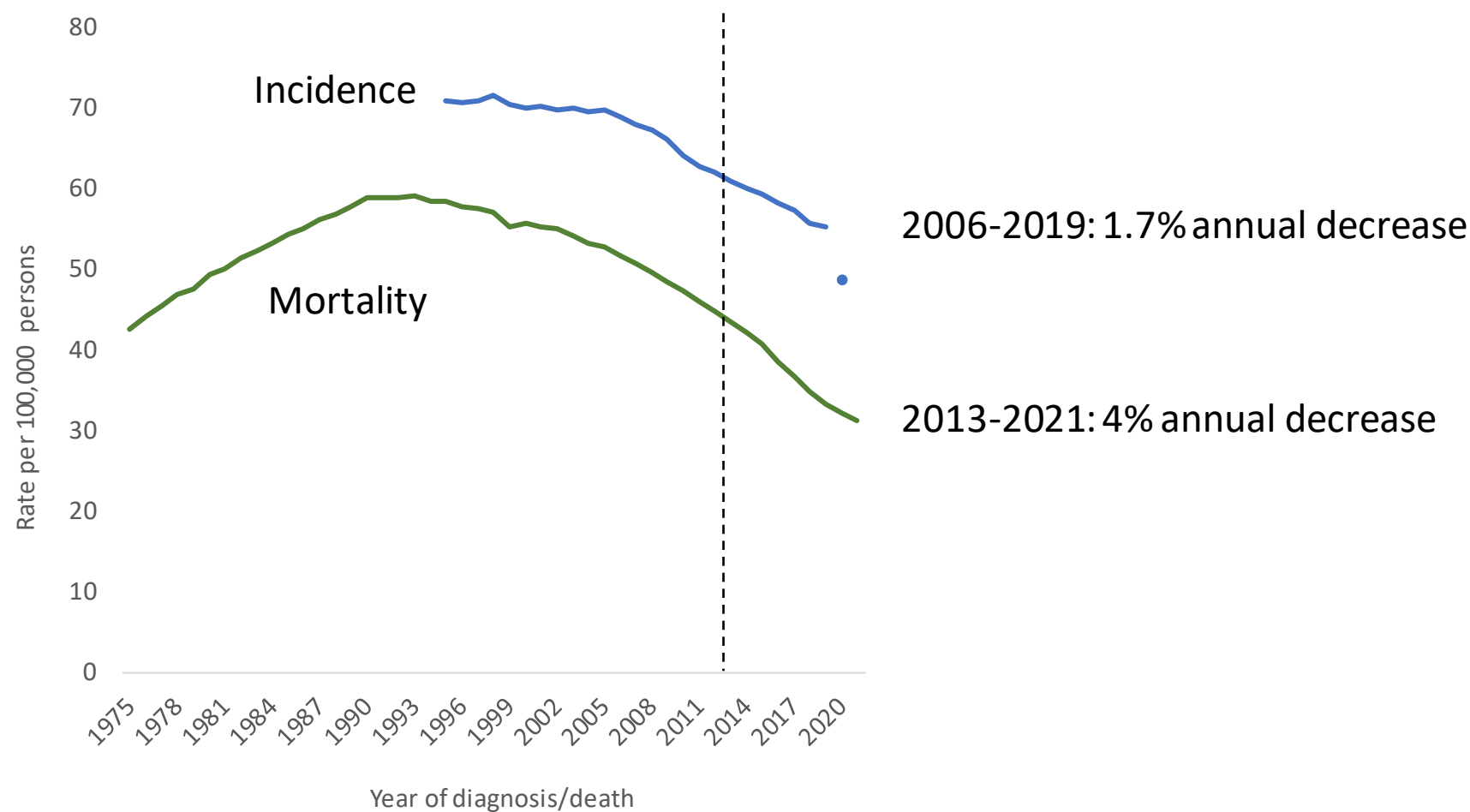
Trends in cancer incidence & mortality rates, 1975–2020



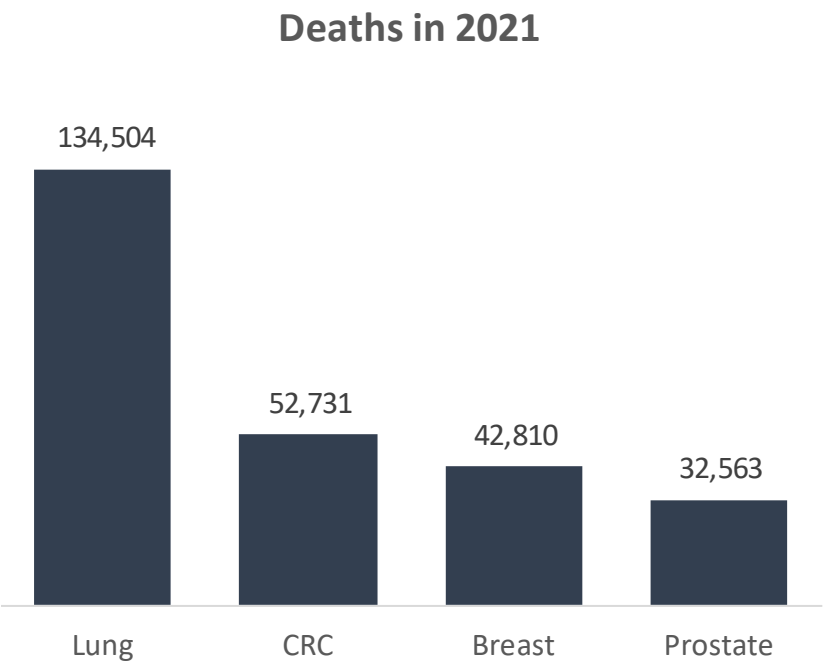
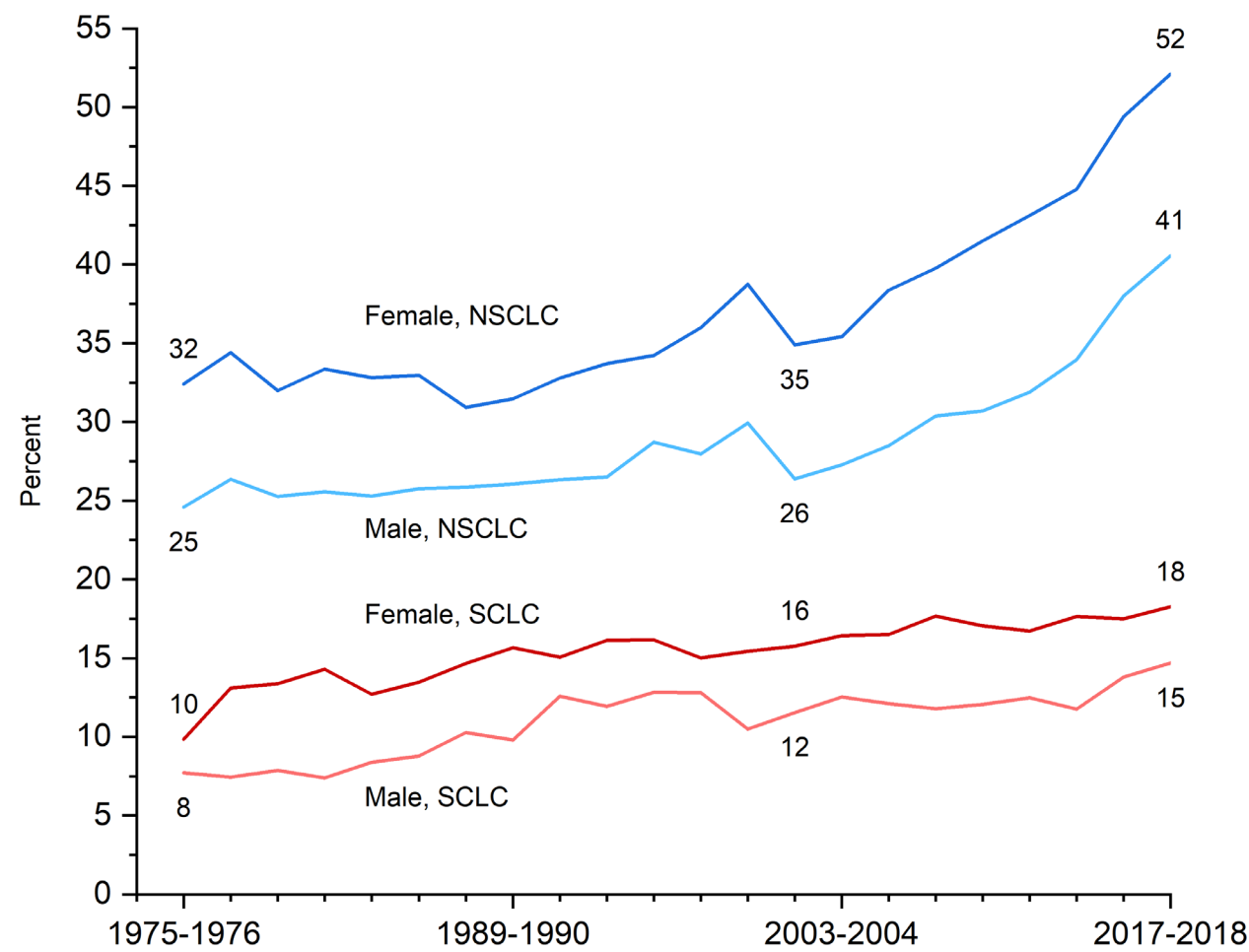
33% ↓



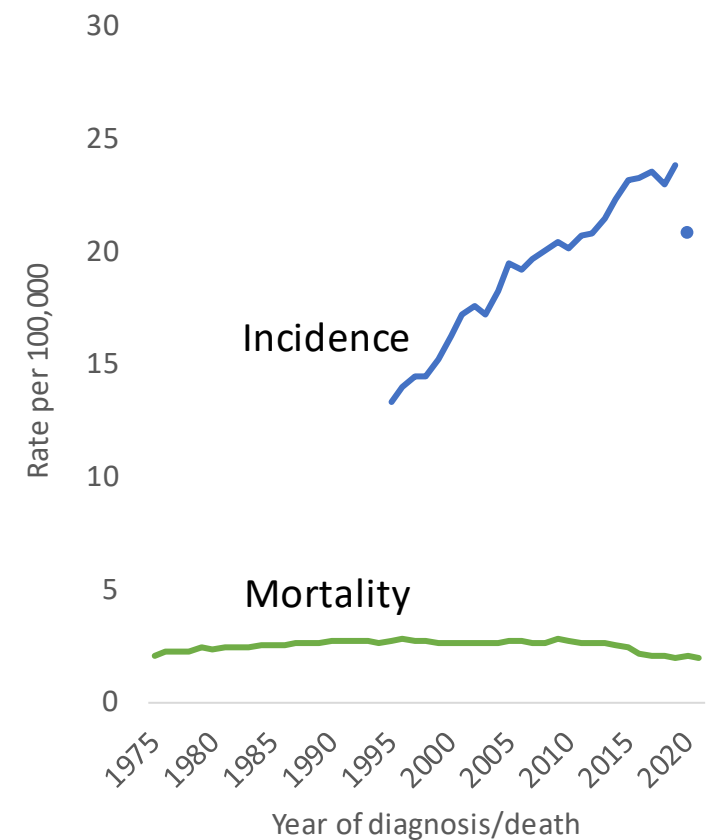
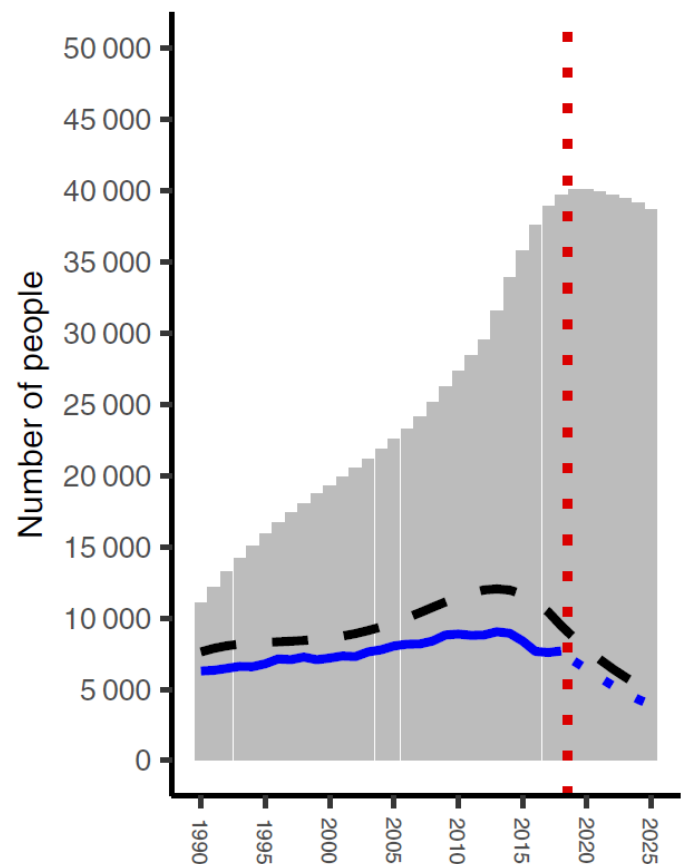
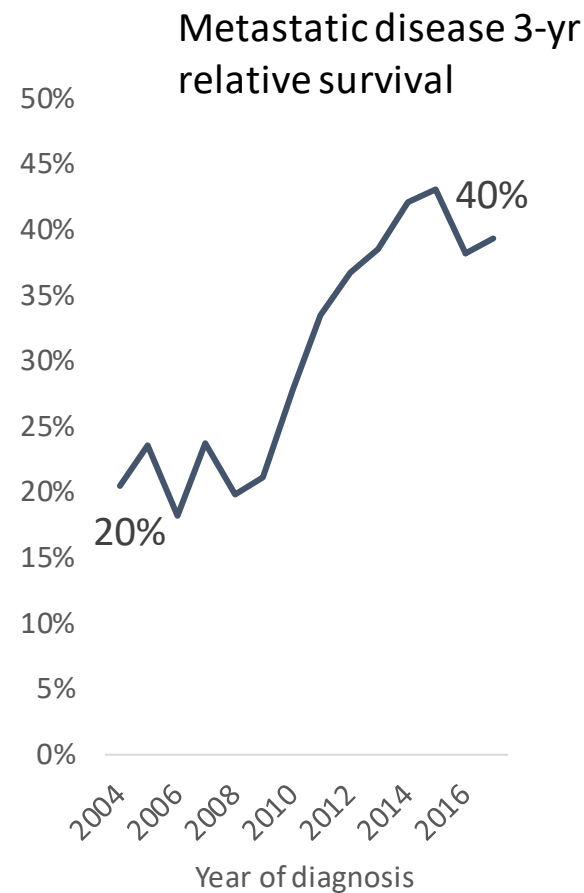
Lung cancer: accelerated decline in mortality



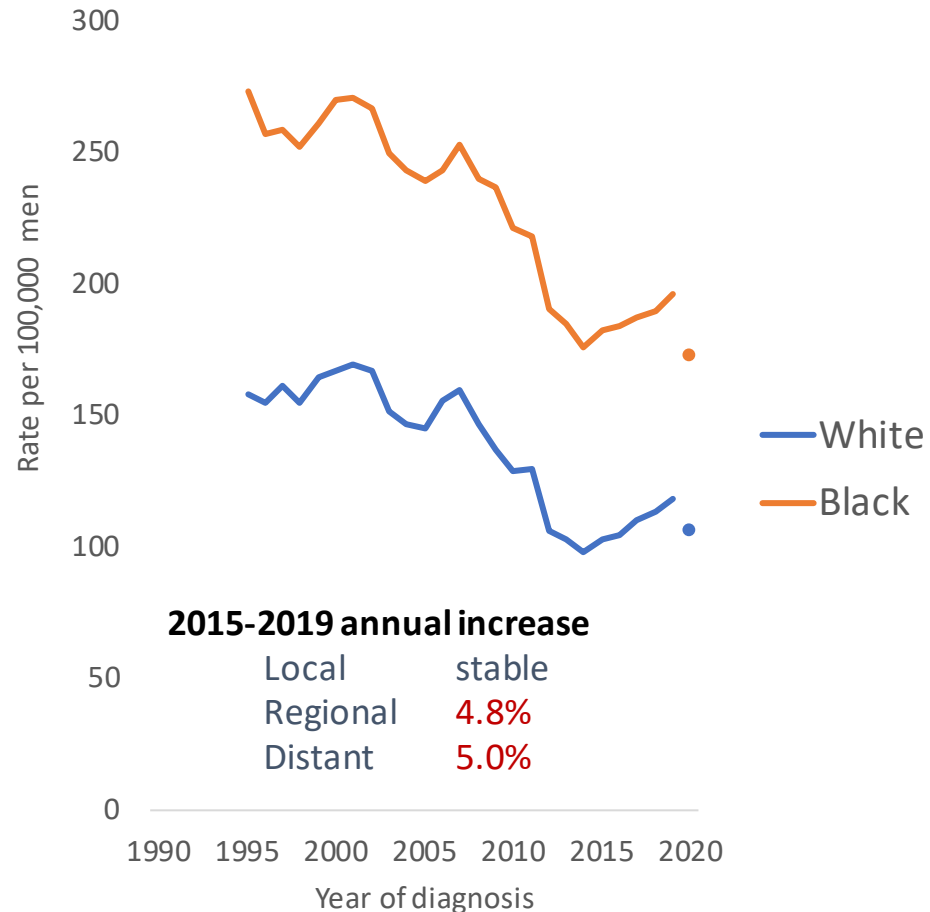
Lung cancer: gains in 2-yr survival by subtype



Melanoma: gains in 3-yr survival for metastatic disease



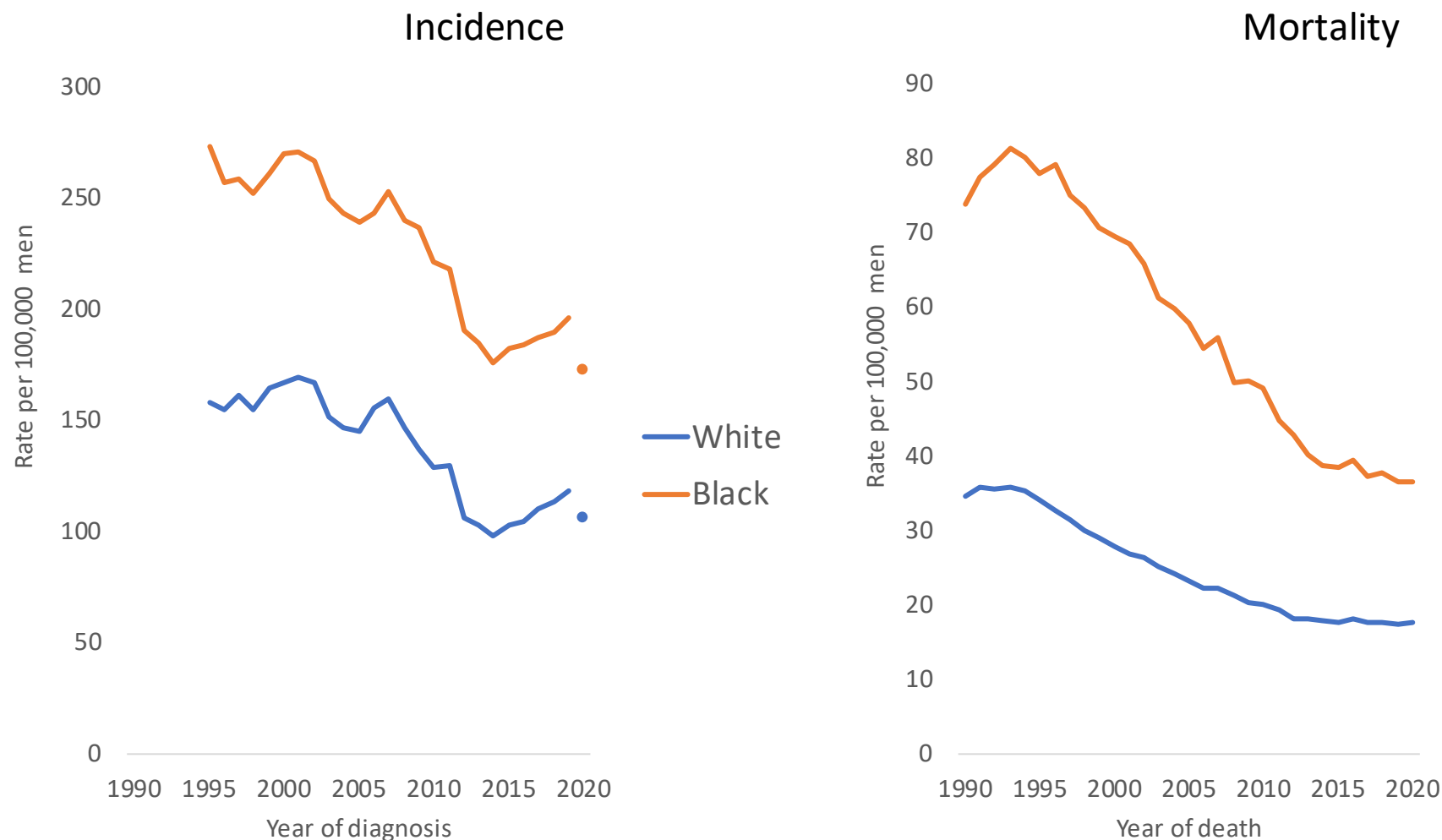
Prostate cancer: rising incidence of advanced disease



- 2017, Informed decision-making (55–69 y)
- 2021, PSA testing >50 y:
35% overall
31% in Black men

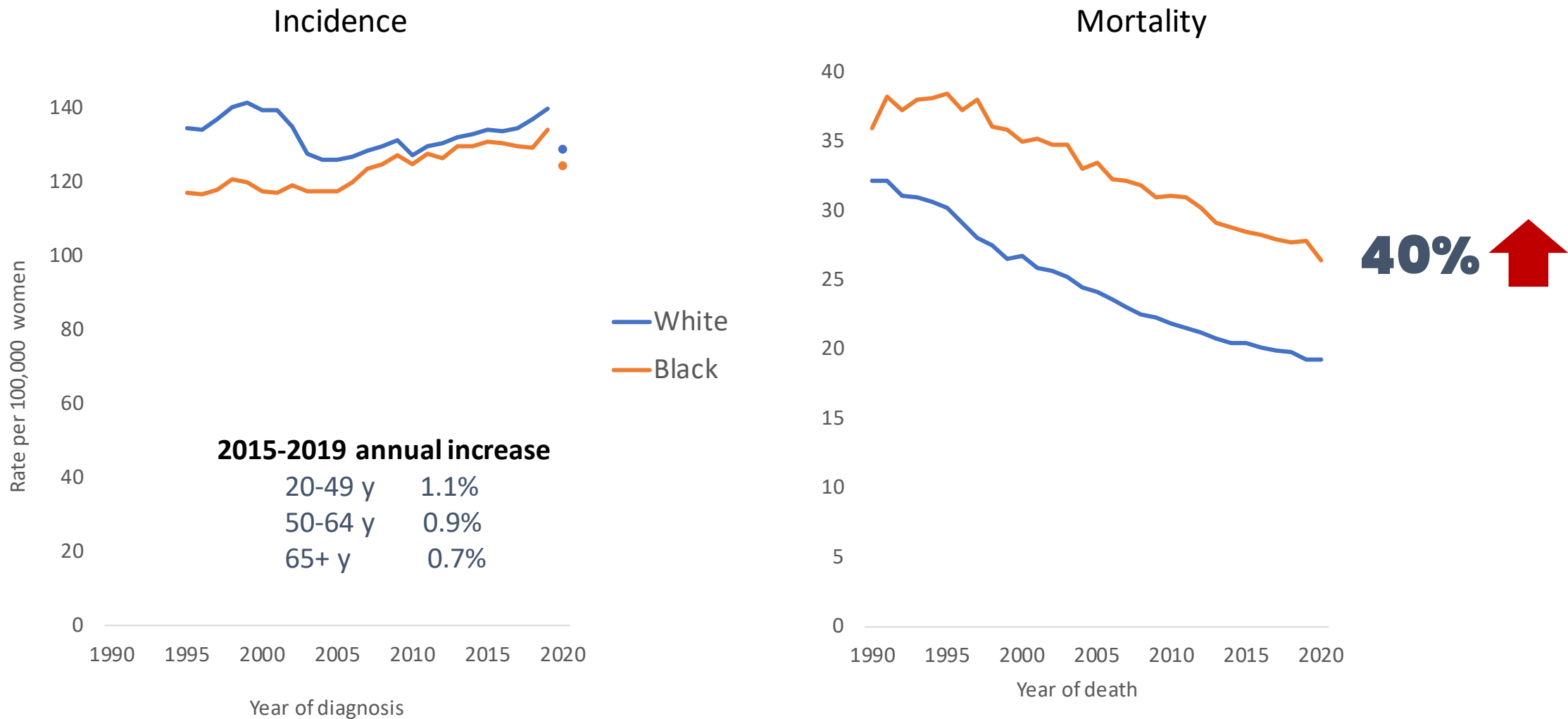


Prostate cancer: rising incidence & racial disparity

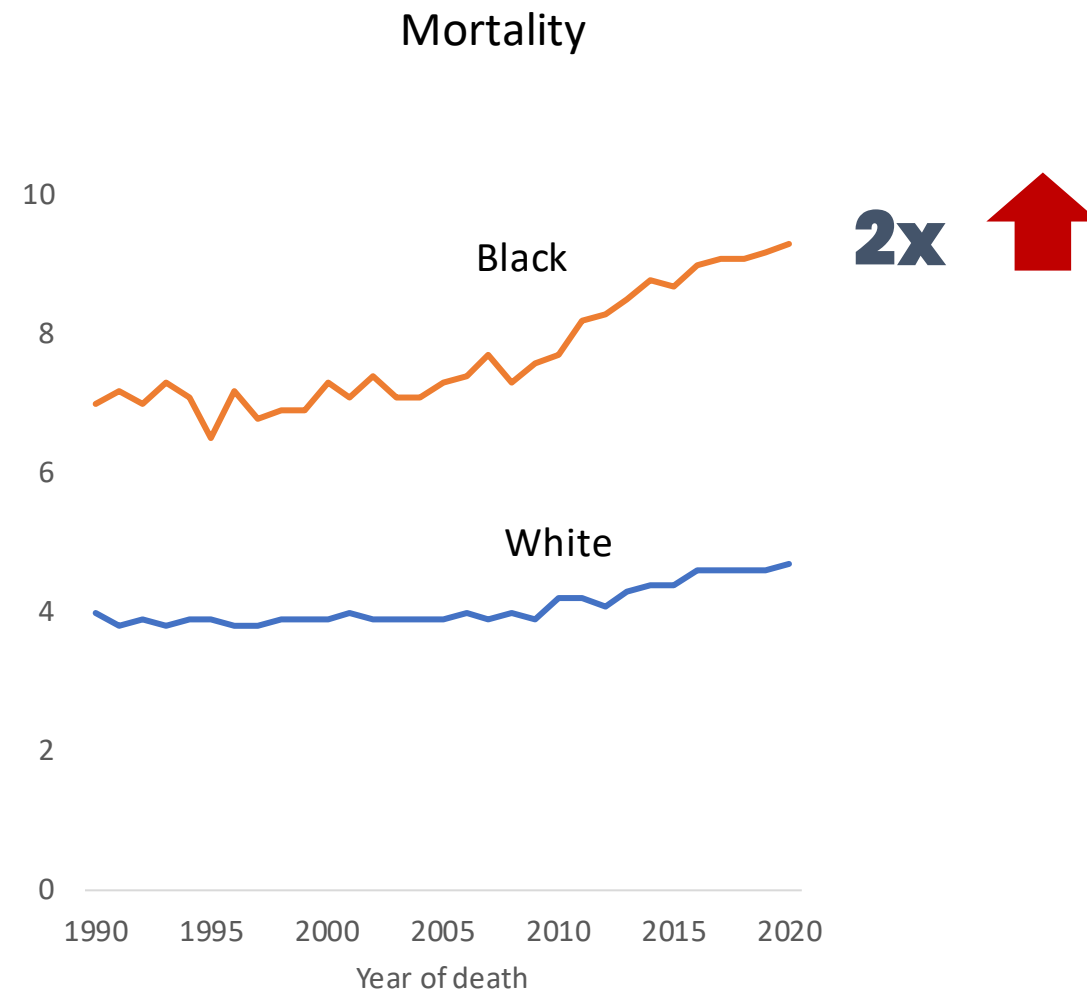
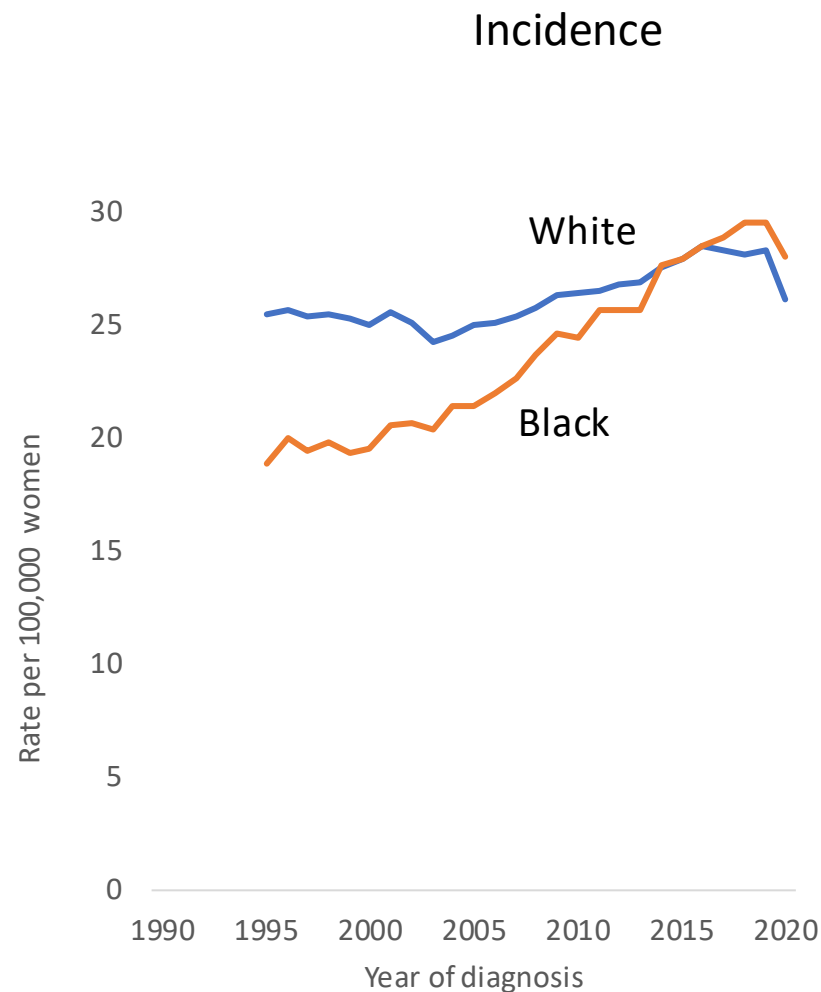


Dress et al. Assoc of Black race with prostate cancer-specific and other-cause mortality. *JAMA Onc* 2019
Cole et al. Racial diffs in tx and outcomes for prostate cancer in Massachusetts. *Cancer* 2021

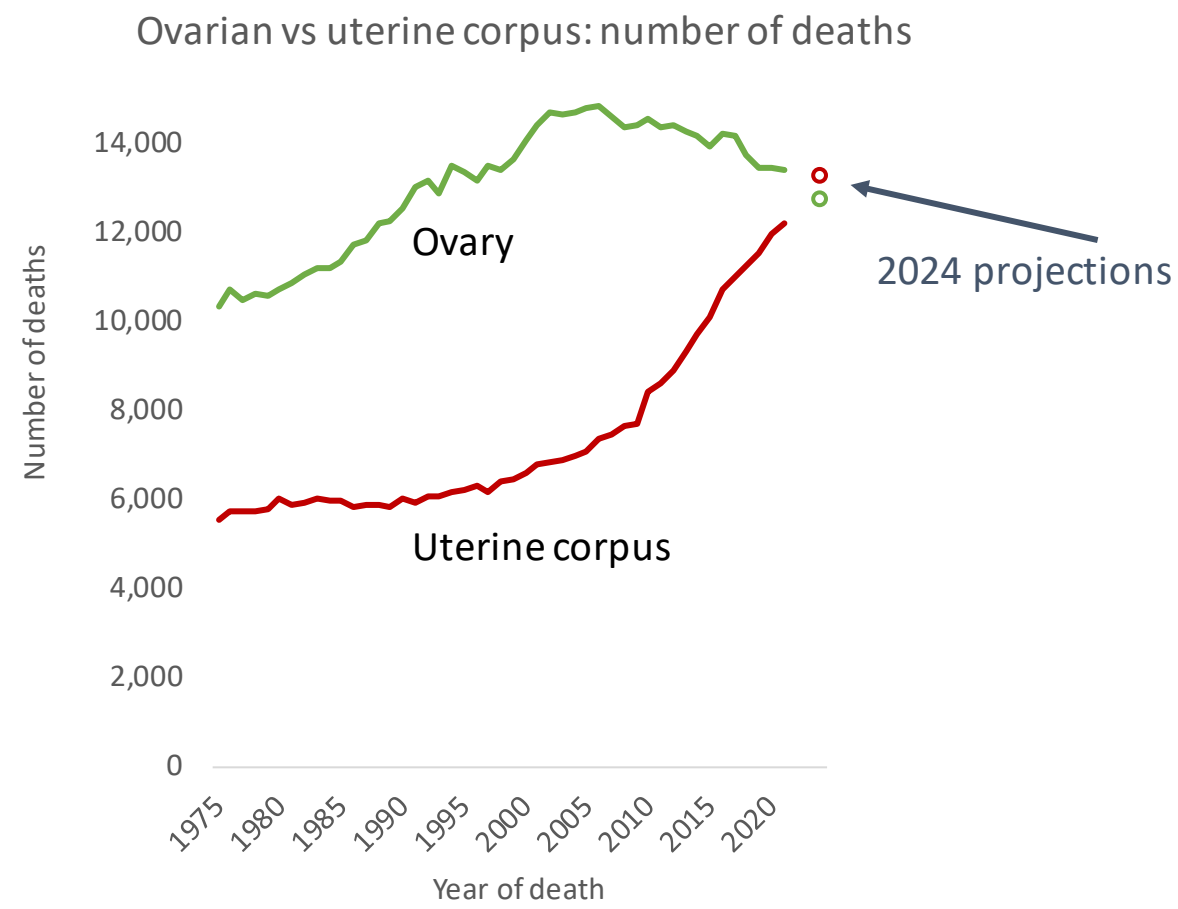
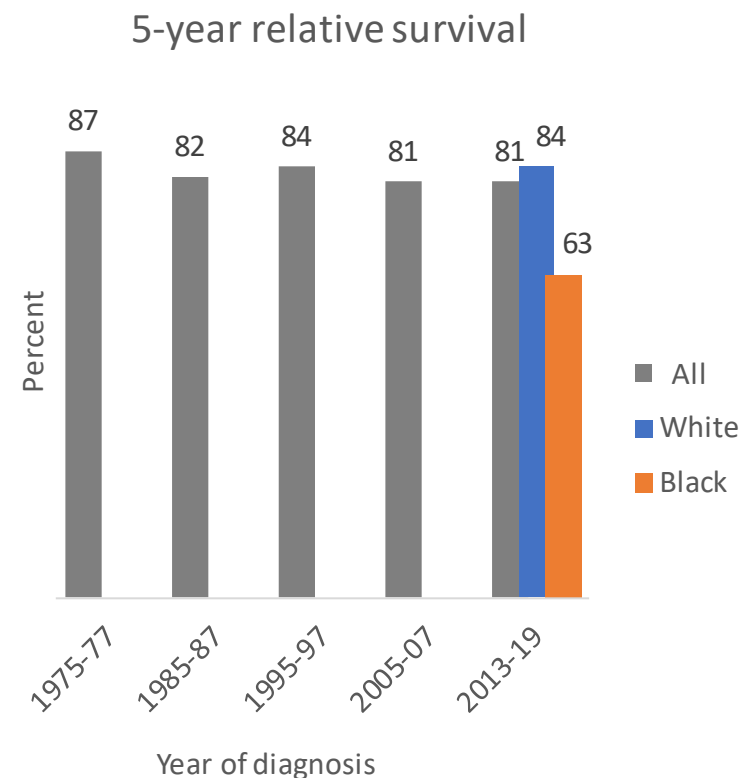
Breast cancer: rising incidence & racial disparity



Uterine corpus cancer: rising incidence, mortality, & racial disparity



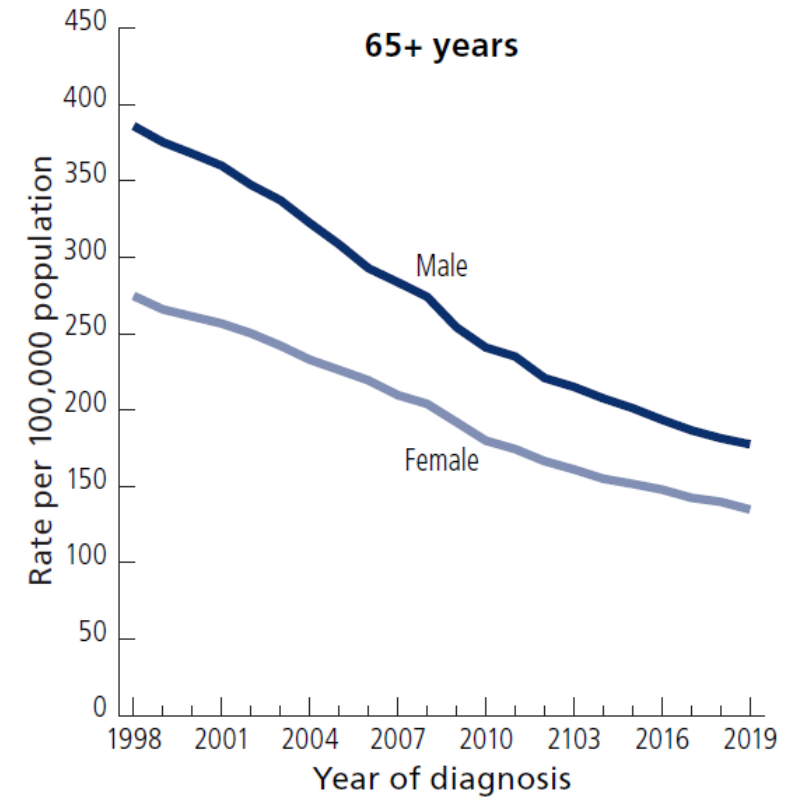
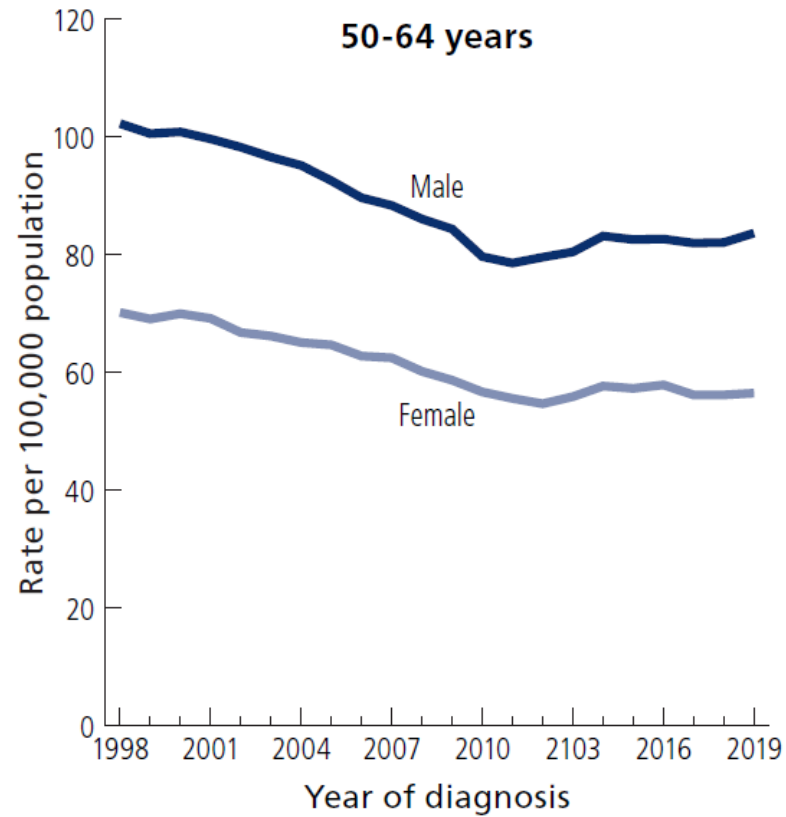
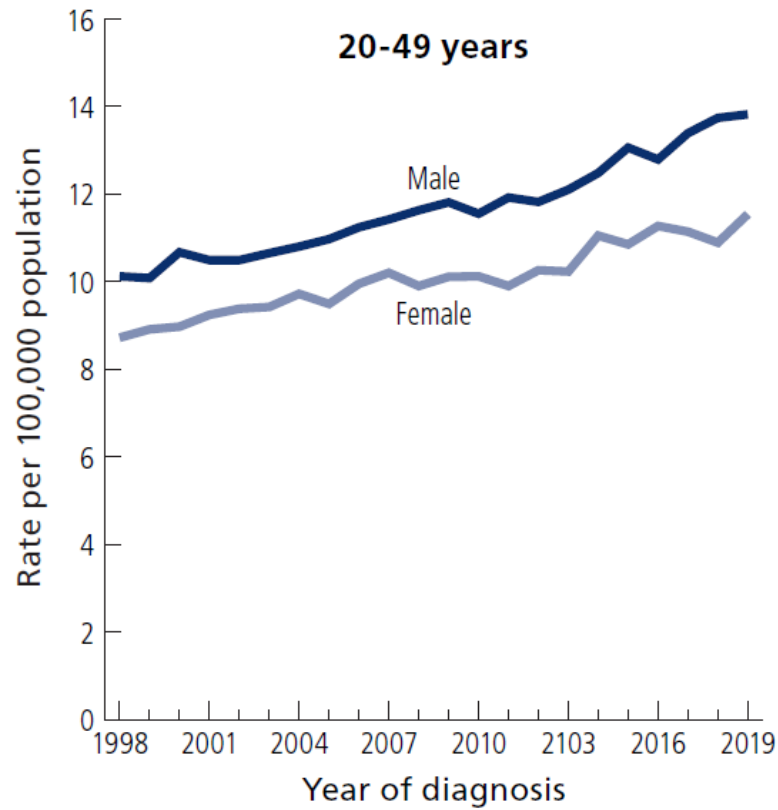
Uterine corpus cancer: signs of lagging progress



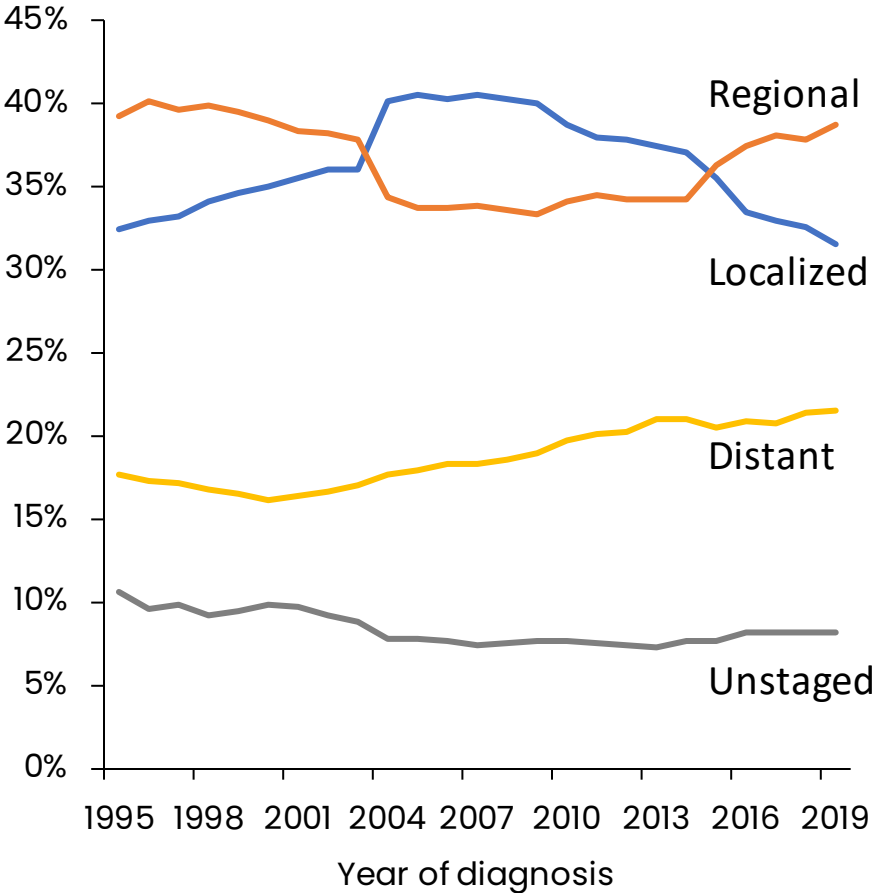
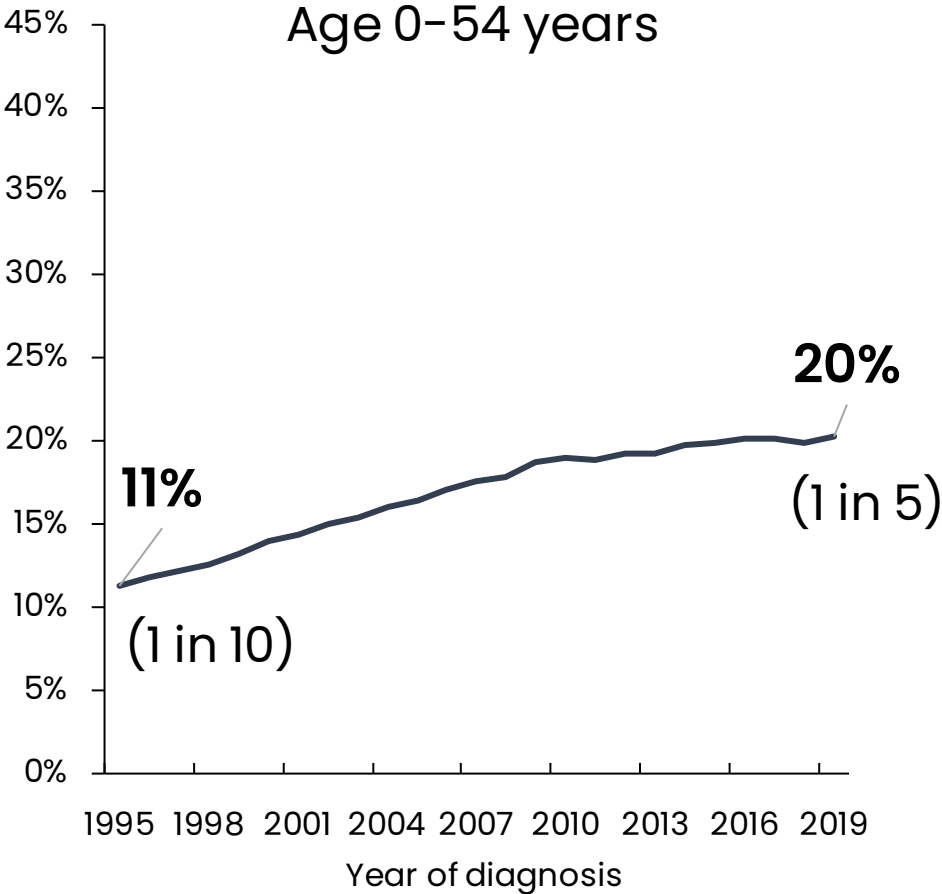
4th most common cancer, 24th in NCI funding in 2018



Colorectal cancer: rising incidence in people born after 1950



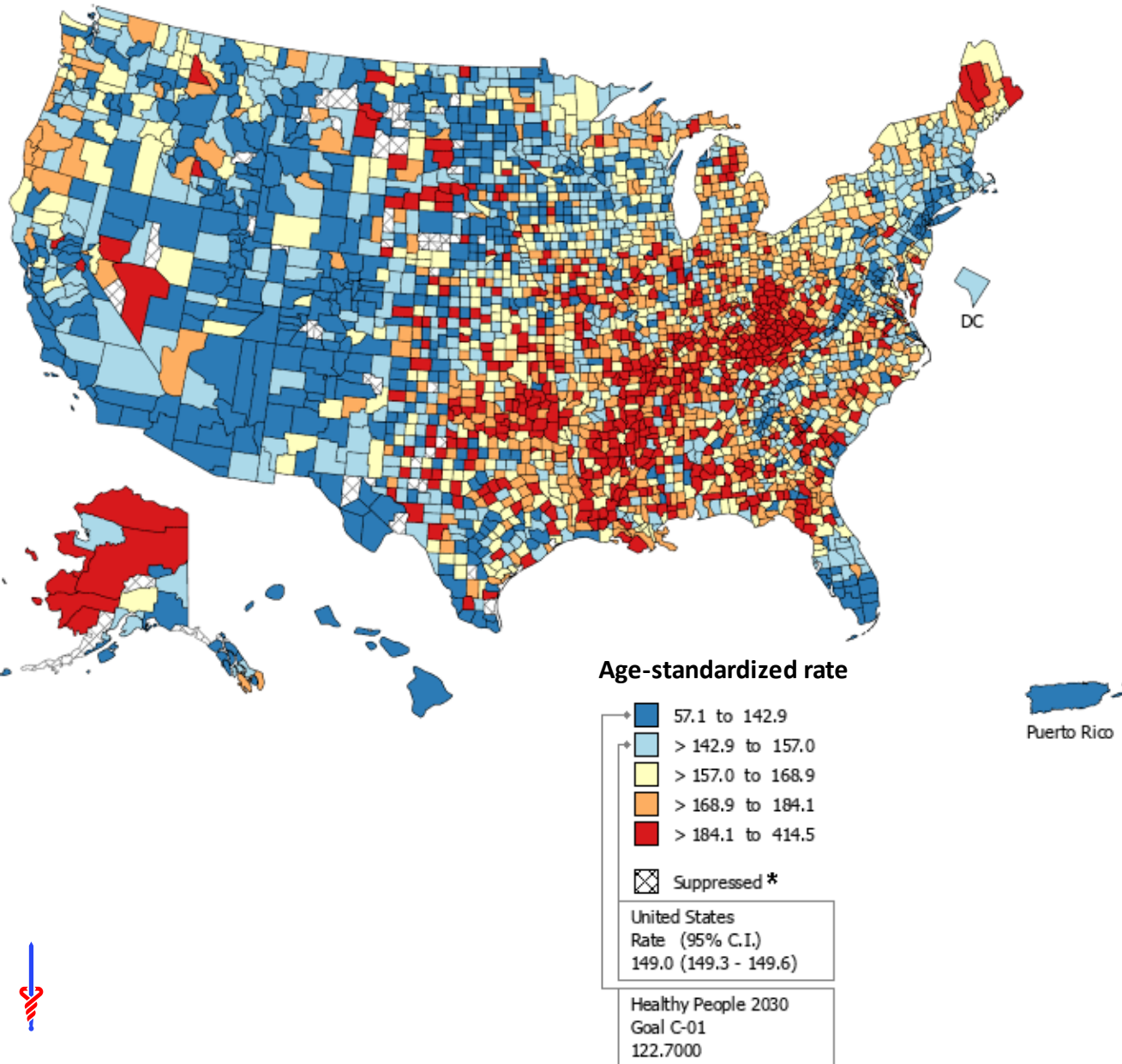
Colorectal cancer: shift to younger age & later stage diagnosis



Stage III most common



Cancer death rates by county, 2016–2020



57 to 415 per 100,000

JCO® Oncology Practice

Volume 17, Issue 1 31

STATE OF CANCER CARE IN AMERICA ReCAP

State of Physician and Pharmacist Oncology Workforce in the United States in 2019

Ya-Chen Tina Shih, PhD¹; Bumyang Kim, PhD¹; and Michael T. Halpern, MD, PhD²

- **75%** of counties in the top quartile had no oncologist
- **16%** nor a neighboring county

Summary

- Shift toward middle-aged patients – “prime of life” – and women
 - ✓ Longer life expectancy re: longterm effects
 - ✓ Unique characteristics, more engaged in tx, e.g., pallative vs aggressive end-of-life care
- Progress lagging in cancer prevention
 - Increasing incidence:

✓ Breast	✓ Melanoma	✓ Oropharynx (HPV)
✓ Prostate	✓ Liver (female)	✓ Cervical (30-44 yr)
✓ Uterine corpus	✓ Pancreas	✓ Colorectal (20-54 yr)
- Racial and geographic disparities are wide and stagnant



Acknowledgements



Angela Giaquinto, MSPH

Ahmedin Jemal, PhD, DMV



Thank you!