Charting the Course: The Evolution of Cancer Surveillance in the United States and Vision for the Future

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NCPF: Cancer Surveillance Through Enhanced Registries & Beyond

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The views expressed are my own and do not necessarily reflect those of NCI/NIH

This presentation

- **Improving cancer surveillance**
- Some examples of “what” and “why,” but not “how”

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

The Effect of Advances in Lung-Cancer Treatment on Population Mortality

Nadia Howlader, Ph.D., Gonçalo Forjaz, D.V.M., Meghan J. Mooradian, M.D., Rafael Meza, Ph.D., Chung Yin Kong, Ph.D., Kathleen A. Cronin, Ph.D., Angela B. Mariotto, Ph.D., Douglas R. Lowy, M.D., and Eric J. Feuer, Ph.D.

N Engl J Med 2020;383:640-9.

- ***Method:*** *Used SEER database*
- ***Main conclusion:*** "Our analysis suggests that a reduction in incidence along with treatment advances — particularly approvals for and use of targeted therapies — is likely to explain the reduction in mortality observed during this period."
- ***A substantial limitation:*** Main conclusion was inferential. No information on the drugs patients actually used and their response

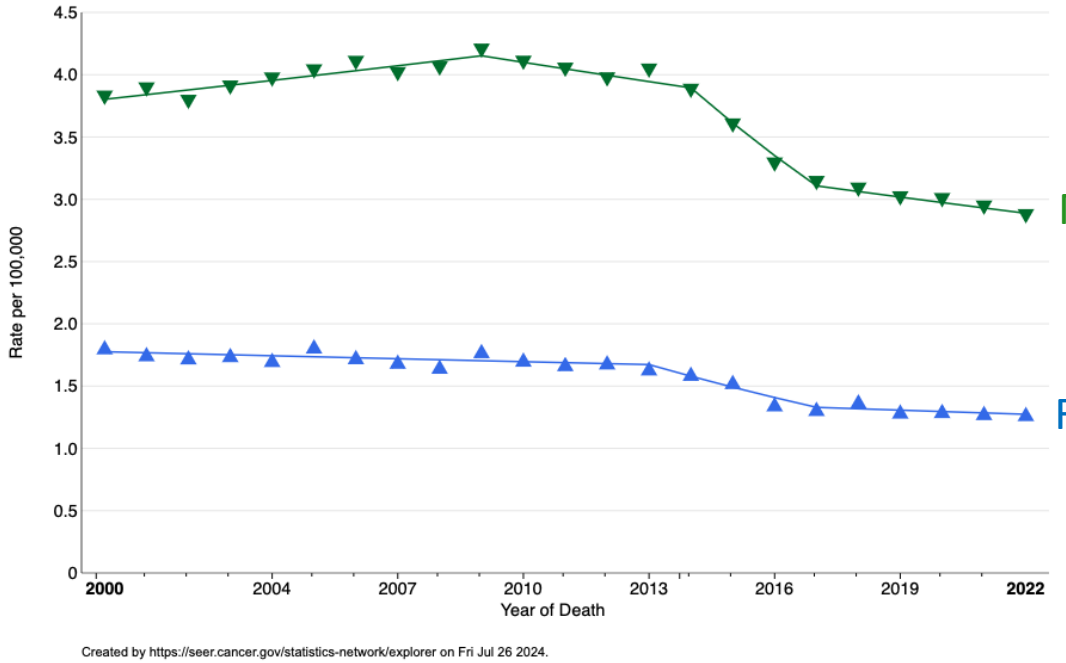
Some possible improvements **(1)**

- **Enable cancer surveillance to be *more comprehensive***
  - "One-stop shopping" for US cancer data
- Include cancer prevention, screening, treatment, and survivorship.
  - At individual patient level
- Some advantages: Could link cancer prevention and screening to treatment and survivorship
  - Prevention examples: tobacco consumption, HPV vaccination
  - Screening examples: what screens, when, outcomes

Some possible improvements **(2)**

- **Enable cancer surveillance to be *faster***
  - As close to real-time as possible
- Include patient level data on diagnosis, treatment, response, recurrence
- Some advantages: Could help determine the degree to which post-licensure real-world data resemble pivotal clinical trial results
  - Rationale: clinical trials often exclude patients with comorbidities; patients from some racial and/or ethnic groups are often under-represented in clinical trials

Melanoma mortality trends 2000-2022



- Question: What accounts for slowing of decreasing mortality trend 2016-2022?

Some possible improvements **(3)**

- **Enable cancer surveillance to be *a major source for real-world data***
- Detailed patient level data are critical to quality and inferences for real-world data

Some possible improvements **(4)**

- **Enable cancer surveillance to include detailed data about molecular characteristics (germline and somatic), imaging, etc.**
- Patient level data are critical to making other proposed improvements feasible in terms of quality and for inferences

Questions & comments?