

## Supplementary Information

# Critical Review: Point of Care Molecular Cancer Diagnostics

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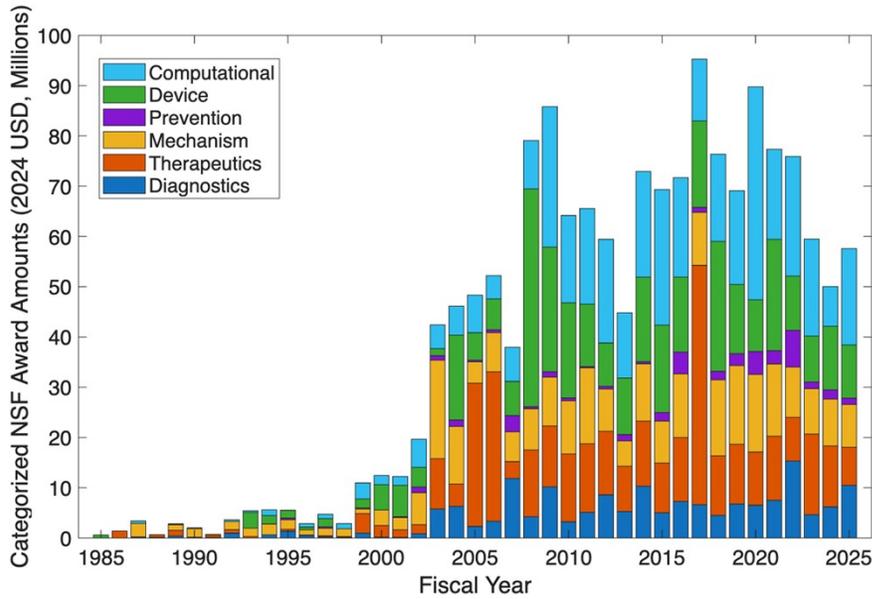
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NIH and NSF grants were categorized using a set of keywords related to each domain of research; every abstract received a score in all categories via the tf-idf algorithm<sup>1</sup> and the abstract was assigned to the category in which it received the highest relevance score. The regex search strings for each category are as follows:

- Diagnostics: ["early detection", "screening", "biomarker", "assay", "liquid biopsy"]
- Therapeutics: ["therap(y|e)utic", "drug delivery", "(chemo|immuno|nanoparticle)therapy", "radiation"]
- Mechanism: ["mechanism", "mutation", "tumor microenvironment", "oncogene", "genomics", "epigenetic"]
- Prevention: ["prevent(ion|ative)", "proactive", "chemoprevention", "lifestyle", "vaccin(e)ation", "risk reduction"]
- Device: ["device", "sensor", "microfluidic", "point(-)of(-)(care|use|need)", "lab(-)on(-)a(-)chip", "instrument"]
- Computational: ["artificial intelligence", "machine learning", "deep learning", "computational", "algorithm", "modeling"]

Because all terms are normalized by their frequency in the corpus of abstracts, higher scores indicate that a set of terms have been used more *relative* to their frequency in other abstracts, preventing high-frequency but non-specific words from having an outsized effect on the category determination. MATLAB code for abstract analysis is available on reasonable request.



**Figure S1.** NSF grant amounts categorized by abstract theme, adjusted for inflation by CPI data. This figure uses the same search criteria as the NIH grant amount figure shown in the main text.

**Reference:**

1. K. Sparck Jones, *Journal of documentation*, 1972, **28**, 11-21.