

Cancer research often falls short: study

April 29 2013, by Kerry Sheridan

Cancer research tends to involve small studies focused on a single therapy, often falling short of scientific standards seen in other medical investigations, said a study released Monday.

The trend may be driven by a desire to speed treatments to market, but raises questions about how well experimental [cancer](#)-fighting therapies will work in practice, said the findings in the *Journal of the American Medical Association*.

"By increasing transparency, I think we can understand what works and what doesn't," lead author Bradford Hirsch, assistant professor of medicine at Duke University, told AFP.

Researchers looked at the US government's database of clinical trials and found that about 22 percent of all research is devoted to cancer, the largest single discipline, followed by mental health (nine percent) and infectious disease (8.3 percent).

Sixty-two percent of [cancer trials](#) were based on one drug, without comparing it to other therapies, said the analysis of nearly 41,000 studies from 2007 to 2010 contained in the online registry www.clinicaltrials.gov.

Only around a quarter of other research specialties did these types of single-arm studies.

[Cancer studies](#) tended to be smaller in enrollment, with a median size of

51 patients compared to 72 elsewhere, and nearly two-thirds of [cancer research](#) was not randomized, compared to less than a quarter in other fields.

Also, clinicians were less likely to be "blinded" to the drug being used to avoid bias—nearly nine out of ten cancer trials were "open-label" compared to just under half in other studies.

The analysis is part of a project known as the Clinical Trials Transformation Initiative, a partnership between Duke and the [US Food and Drug Administration](#) to improve [research practices](#).

Nearly 42 percent of the studies reviewed were funded by drug companies. But the majority of studies were funded otherwise: 15.3 percent by government and 42.9 percent by outside funders including academic groups and foundations.

"The design of trials is often blamed on drug companies. The feeling is that they fund the vast majority of research. But we found that ultimately that was not the case," Hirsch told AFP.

"The positive is, I think, that there is a significant opportunity to help guide the portfolio and improve the rigor of the trials as a result of that finding."

The analysis also found that certain cancers may be receiving more research attention than they are due.

Lymphoma, for example, accounted for 6.6 percent of cancer research, while its incidence in the population is 4.8 percent and its mortality rate is 3.8 percent.

Other cancers, like lung cancer and bladder cancer may deserve more

study.

Lung cancer was the focus of nine percent of [clinical trials](#) in cancer, but makes up 14.5 percent of all diagnoses, and it has the highest mortality rate (27.6 percent of all cancer deaths in 2010).

And although the amount of breast cancer research was in proportion to its prevalence in the general population, one in four breast cancer studies focused not on treatment but on supportive care, diagnosis or prevention.

The study also found that just over a third of cancer trials registered by the US government take place entirely outside the United States.

Peter Bach, a doctor at Memorial Sloan-Kettering Cancer Center in New York, wrote in an accompanying JAMA editorial that he hopes more can be learned about how to improve the state of cancer research.

The study is "necessarily a flyover, a view from high altitude, and thus may gloss over some important dimensions of the research enterprise, but I am optimistic that the database will yield important insights as it continues to be augmented," Bach wrote.

The "most intriguing finding" is how "it is readily apparent that the clinical research endeavor as a whole is not a coordinated effort guided by any particular set of agreed-upon principles," he said.

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Citation: Cancer research often falls short: study (2013, April 29) retrieved 16 August 2024 from <https://medicalxpress.com/news/2013-04-cancer-falls-short.html>

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