

GLOBAL DISTRIBUTION OF CANCER RESEARCH INVESTMENT AND IMPACT OF COVID-19 ON FUNDING ALLOCATION 2016 – 2020

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Background

Cancer constitutes a huge burden on healthcare systems globally. Cancer is the second biggest cause of death worldwide. Cancer research is key to improving cancer prevention, diagnosis, treatment and survivorship. Competitively awarded funding supports most cancer research. The distribution and utilisation of the world's cancer research investment is largely unknown. COVID-19 has delivered a massive blow to clinical cancer services. The impact of COVID-19 on cancer research funding allocation is also unclear.

Objectives

- To determine the impact of COVID-19 on global cancer research funding by comparing the data obtained from 2016-2019 with 2020.
- To categorise global cancer research investment from 2016-2020 based on cancer type, presence of metastases, study theme and phase of research.



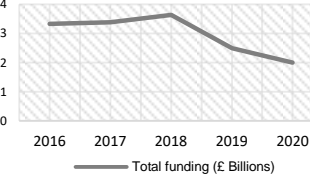
Methods

Data from public and charitable funders were obtained from Dimensions database. Individual abstracts were reviewed and non-human/non-cancer studies excluded. Remaining studies were characterised according to cancer type, research theme and phase.

Results

- A search of the dimensions database yielded 25,739 studies. Of which 23,311 (91%) met the human-cancer inclusion criterion and proceeded to analysis.

Total funding (£ Billions)



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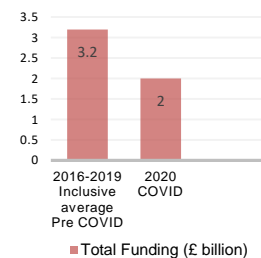


Figure 1. Total average funding between 2016-2021

Figure 2. The difference in total average funding before and after the start of COVID-19

- Investment in 2020 fell by £1.2 billion compared with annual average funding from 2016-2019.

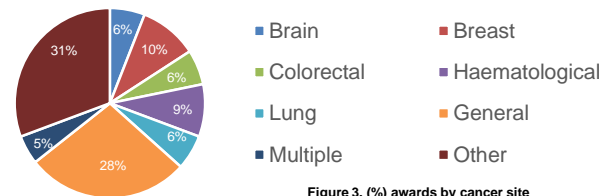


Figure 3. (%) awards by cancer site

- Breast was the most common site-specific cancer to receive financial support with 1 in 10 awards granted to this area.

Results

- Only 10% of the budget was spent on research into metastatic disease

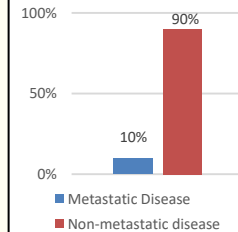


Figure 4. (%) Awards by stage of disease

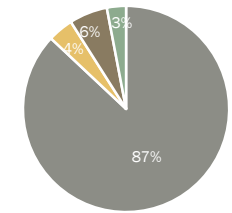


Figure 5. (%) Awards by Phase of Research 2018/19

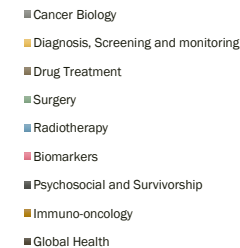


Figure 6. (%) Awards by research theme

- Half of awards examined cancer biology, with 87% of funded work occurring in laboratory settings (pre-clinical)
- Surgical research accounted for 1% of the total expenditure

Discussion

- COVID-19 has clearly adversely affected cancer research investment, with a 37.5% decrease in funding in 2020 compared with average annual funding from 2016-2019.
- This comprehensive study highlights that the distribution of research funding between 2016-2020 may not reflect the global burden of disease according to disease site.
- Funding should be divided evenly between clinical and non-clinical work to enable the translation of benefits from the 'bench to bedside'.
- Surgery and Radiotherapy are first-line treatments for most solid tumours therefore these areas warrant greater levels of investment than the current allocation.