Cancer accounts for approximately 160,000 deaths every year in France (number 1 cause of death in men, number 2 in women). Today’s research is the foundation for medical progress and improving the quality and safety of tomorrow’s care.

FHF Cancer and the CNCR have joined forces to conduct a study on cancer research carried out in France over the last 10 years. Through this partnership, FHF Cancer and the CNCR wish to evoke the commitment of Public Healthcare Establishments in the management of cancers and research. The analysis performed aims to objectify research-related production generated by French Establishments.

From 2010 to -2019, French research on oncology represented:

- Over 50,000 scientific publications: 7th rank worldwide
- Over 3,700 clinical trials: 3rd rank worldwide
- Over 300,000 patients enrolled in studies sponsored by CHU* and CLCC**

Bibliometrics
Research activity is often measured by the number of articles produced by an institution or country. Bibliometrics is a quantitative method that analyzes scientific publications, in terms of volume but also in terms of their impact on the advancement of knowledge.

Interventional research
This research focuses mainly on drugs, but also on other types of interventions such as surgical procedures, medical devices, or cell or gene therapies. These require “intervention” on the patient, as opposed to observational research.

Indicators
Various bibliometric indicators are used to evaluate research:
- Number of publications: volume indicator
- CNCI, Top 1% and Top 10%: standardized performance indicators based on the number of times an article has been cited by other articles

Translational research: the bridge between basic and applied research

Did you know?
Translational research is the link between basic and applied research: it allows for the transfer and rapid interpretation of knowledge, so it can be applied for the benefit of the patient.

*University Hospital Centers
**Cancer Treatment Centers
French oncology-related articles are cited much more often than the global average. The Category Normalized Citation Index (CNCI) increased from 1.58 over the first period (2010-2014) to 2.05 over the second period (2015-2019). Research excellence is also measured by the number of publications in the Top 6 major international generalist journals (The Lancet, Nature, Science, JAMA, NEJM, and BJM): France co-authored 13.8% of these articles over the first period (143 publications) and 19.2% over the second (211), i.e., a 48% increase.

Did you know?
The scientific impact of a publication is usually measured by the number of times it is cited by others.

Over 50,000 scientific publications co-authored by France from 2010 to 2019 in oncological research

In terms of biomedical research, France accounts for 4% of global production. In oncology, all cancer sites combined, it comes in 7th place worldwide and 4th place in Europe.

“Bench to Bedside” research: Who are the co-authors?
Bench to Bedside research covers fundamental, clinical, and epidemiological research.

Strong collaboration between Universities, Research Organizations, and Healthcare Establishments.

Public Establishments: leaders in cancer research.

The above figure, where the size of the bubbles corresponds to the number of publications relating to each cancer site, illustrates Healthcare Establishments’ contributions to cancer research. CHU/CH are heavily involved in hematology, brain, bladder, liver, lung and prostate cancers. CLCC are very involved in breast cancer research.

Cancer research in France
Clinical trials are essential if we are to test the effectiveness of new treatments, understand the mechanisms of a disease, and evaluate screening or management strategies.

**Clinical research**

Clinical trials are essential if we are to test the effectiveness of new treatments, understand the mechanisms of a disease, and evaluate screening or management strategies.

<table>
<thead>
<tr>
<th>2 ESSENTIAL PLAYERS IN CLINICAL RESEARCH:</th>
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<tbody>
<tr>
<td><strong>Investigators</strong></td>
</tr>
<tr>
<td>Healthcare institutions and/or professionals who wish to carry out a study.</td>
</tr>
<tr>
<td><strong>Sponsors</strong></td>
</tr>
<tr>
<td>Institutions that bear the legal and financial responsibility of the study, through industrial sponsorships (healthcare industries) or academic sponsorships (hospitals and EPST [Public Scientific and Technological Establishments]).</td>
</tr>
</tbody>
</table>

**France’s positioning from 2010 to 2019**

All categories combined

1st Place in Europe

3rd Place Worldwide

7% of global clinical trials have at least one center in France

 Oncology

3rd Place Worldwide

10% of global clinical trials have at least one center in France

**Active studies**

3,730 open studies in France

Every year, almost 200 studies on cancer receive financial support totaling:

24 M€

**Did you know?**

The ClinicalTrials.gov database lists all open clinical trials, from all around the world.

+50%

The number of active studies increased from 476 in 2010 to 717 in 2019.

CHU/CLCC

These studies are mainly sponsored by CHU and CLCC.

36% of studies focus on drugs. One quarter are Phase I/II** studies.

1/6 France participates in 1 interventional study on pediatric cancer, out of 6 opened worldwide.

More than 300,000 patients were included in these studies, which equates to almost 30,000 per year. By comparing the number of inclusions in studies on cancer to the number of inhabitants, obvious disparities appear between regions.

Research that is not limited to interventional studies focusing on therapeutic developments

Observational studies (registries, cohorts, clinico-biological bases, etc.) are also growing significantly. They aim to better understand diseases, monitor patients’ conditions, and prevent relapses. Mainly carried out by Healthcare Establishments and CHU in particular, these studies reflect their positioning, between basic research, clinical research, and patient care.
For 17 solid cancers and 6 hematological cancers, we carried out a specific analysis on France’s global positioning, both in terms of publications and in terms of clinical trials. These analyses are the subject of fact sheets, and are available for download on the CNCR website. Finally, for each of these cancers, we crossed data on publications (2015-2019) and clinical trials (2015-2019) against incidence and mortality data (number of cases in 2020) provided by the WHO (World Health Organization).

For more information on clinical research: www.notre-recherche-clinique.fr