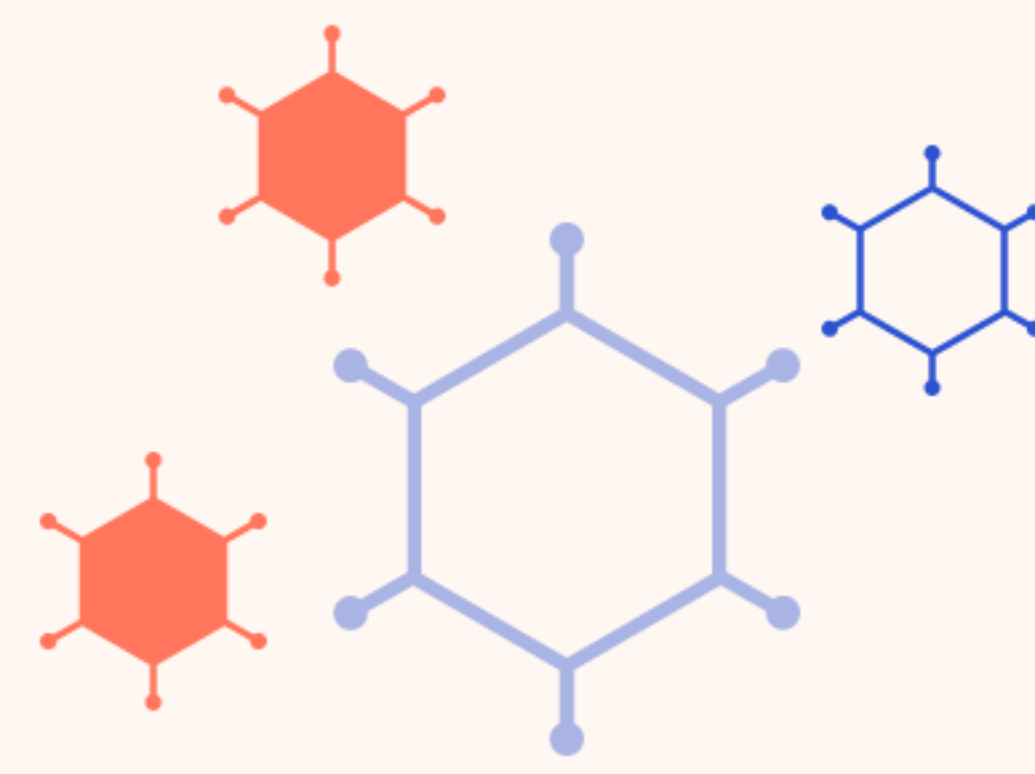


DEFINING
SUCCESS

What makes rare disease clinical trials successful?

Before we can figure out what makes a drug trial successful, it's important to define what success means. Taking both medical and financial goals into account, our team deemed any drugs that successfully completed phase IV and went on to get FDA approval for marketing as a successful trial.

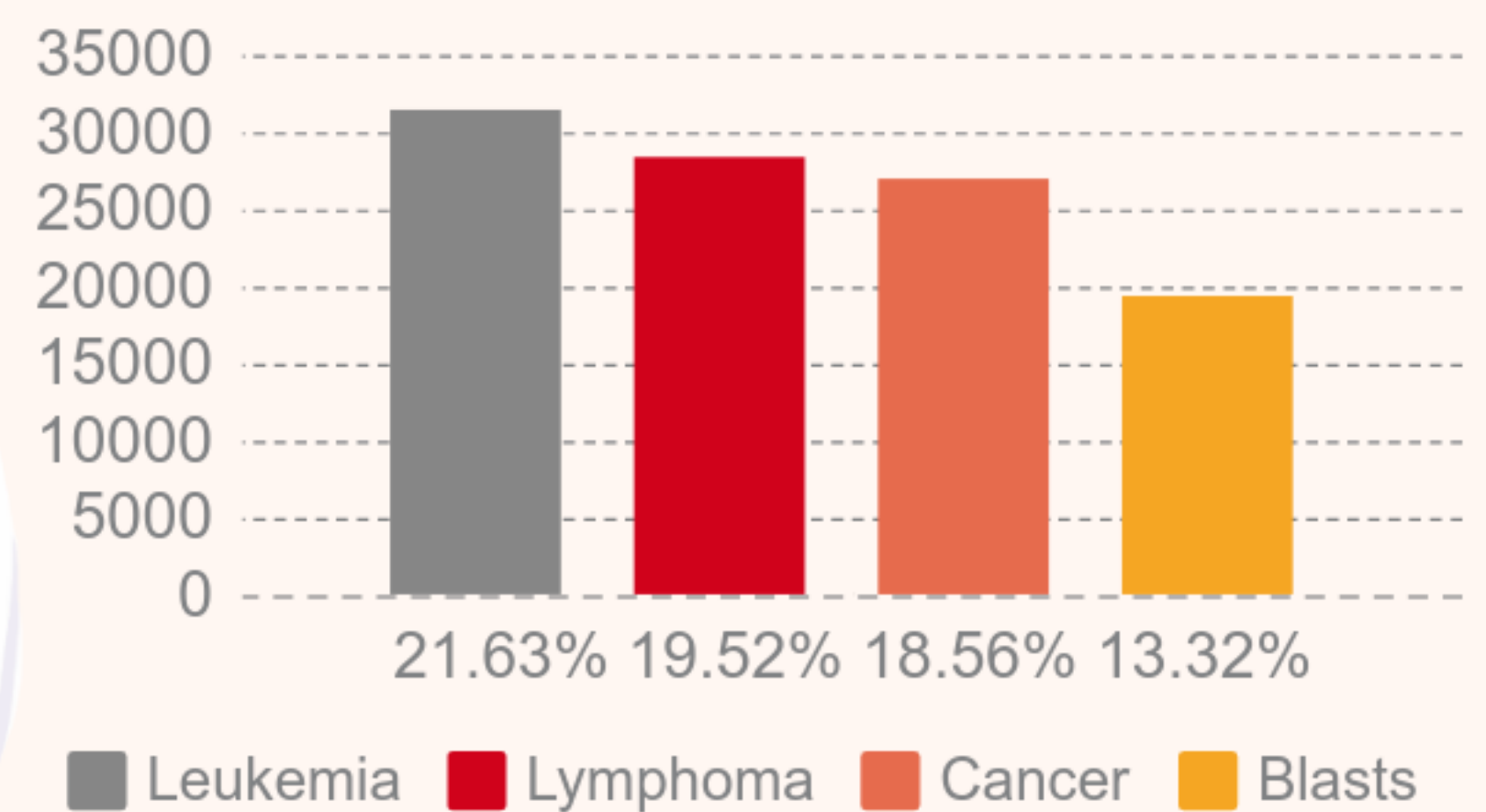
CLINICAL TRIALS | ANALYTICS
AND TRENDS

DATA | DISEASES

What diseases had the most trials?

Through analyzing, we found that leukemia had the most trials (31,391), followed by lymphoma (28,327), cancer (26,928), and blasts (19,330)

Alexion data



DATA | DRUG APPROVAL

Drug statistics

Only **93** out of **145,094** drugs are approved for market sale. Alexion sponsored/partially sponsored **5** of these trials.

Alexion data

Less than 1% approved!

DRUGS



Only **.064%** of drugs are approved for market

FUNDING



5 of these **93** are sponsored by Alexion (**5.4%**)

DATA | DRUG APPROVAL

Approved for Market

23 out of 93 Approved for Market drugs are for Leukemia, and 2 out of 93 for lymphoma which is a drastic drop.

Approved for Market

24.73% of approvals are for leukemia

Approval Rate

24.73% for leukemia

2.15% for lymphoma

Alexion



2% of Alexion sponsored trials approved

DATA | SAMPLING

Samplings Effects

The success of privately funded studies could be attributed to the larger streams of income and wider array of resources available. Private drug firms have a financial motive to spend more resources on market hopefuls, while public health organizations have to spread themselves too thin while worried about other ongoing

All genders

83% of trials are privately funded

ALL GENDERS



With the exception of 2, all other Approved for Market drugs are **All gender studies**. The two exceptions are for ovarian cancer.

SAMPLING

Funding Sources for Successful Trials



TRENDS

TRENDS IN CLINICAL TRIALS

Virtual trials, big data analytics and AI modeling, use of wearable technology, blockchain and cybersecurity are all upcoming trends in clinical trials.

Mathew Bonam, AstraZeneca

70-80% patient data collected at home

Mathew Bonam of AstraZeneca predicts that, **"by 2020, 70-80% of data being collected by the patient in their own home, rather than centers"**.

Current studies show that the majority of trials are interventional (79%), and the remaining are observational (21%). The majority of interventional types are drug or biological trials



Technology



Smartwatches have enabled users to provide activity and health analytics without having to visit a clinic.

Big Data Analytics



Trends



Efficacy

Interventional

eHealth

CONCLUSION

What's next for clinical trials?

Current trends show that in order to have a successful clinical trial, you need to have a lot of [accurate] patient data.

Privately funded trials have proven to be more successful than public, as pharmaceutical and biotech companies have the proper funds to hold databases of big data and accurately analyze patient health information in order to come up with the best treatment.

eHealth and mHealth are an important up-and-coming focus for clinical trials. Although wearable tech is not widely accepted for clinical trials, legislators are taking steps to enable them on becoming regulatory standards.

TECHNOLOGY

Patients are able to conveniently provide their up-to-date health information with the use of technology. With wearable tech users are able to accurately track their health, and with the help of their mobile phone or computer they are able to upload and share their data with their health care provider.

PRIVATELY FUNDED



SUCCESS!

Clinical trials are most likely to be successful with the proper use of funding along with accurate data analytics and with the convenience of technology-based health tracking.