



Global Breast Cancer Clinical Trial Visualization

Course: BMI706

Group: Group 5

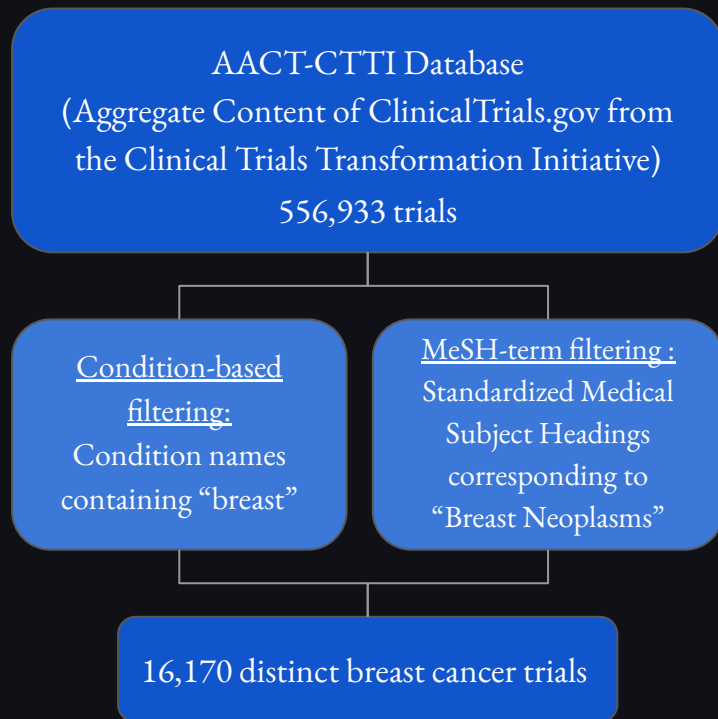
Group Member: Alice Zhang, Junyang Deng, Cece Jen, Jason Liang

Date: 2025/12/10

Goal

- Provide a comprehensive visual overview of the breast cancer clinical trials landscape
- Support clinical researchers in generating new hypotheses and identifying gaps in current research

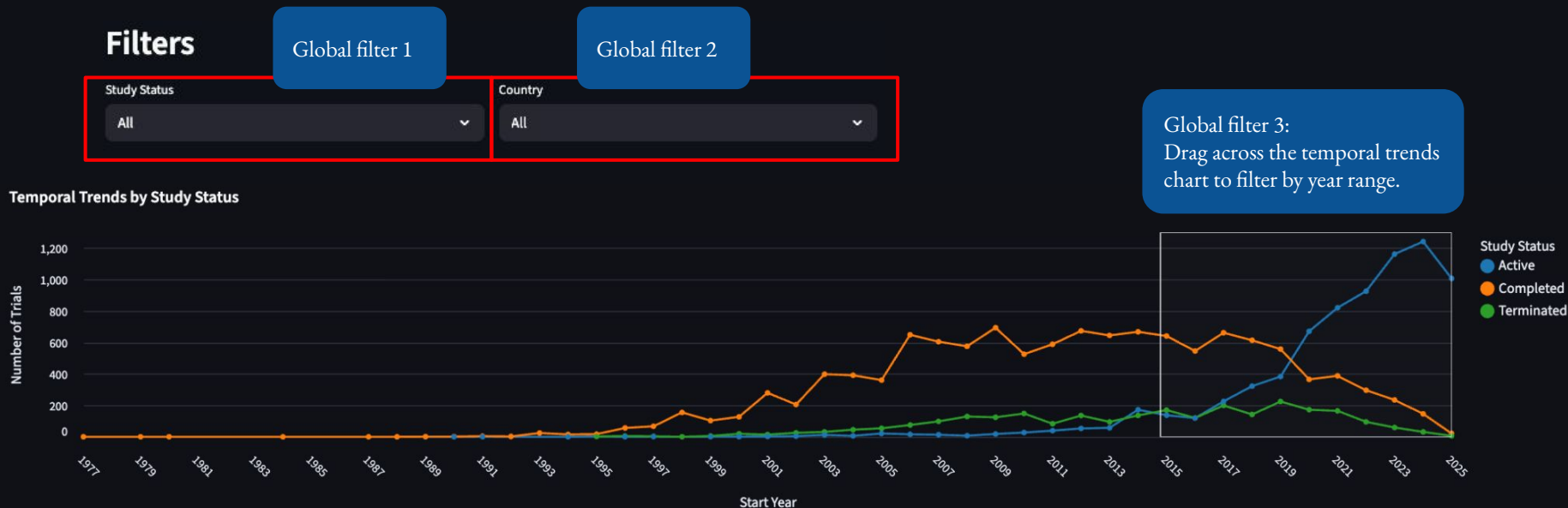
Dataset



Data Type	Data
Geospatial	Country
Temporal	Trial start year
Categorical	Trial Identifier
	Study status (Active, Completed, Terminated)
	Source class (Fed, Individual, Industry, Network, NIH, Government, Others, Unknown)
	Intervention types (Drug, Behavioral, Procedure, Device, Biological)
Quantitative	Study duration (days)

Task 1: Temporal trends in breast cancer clinical research activity

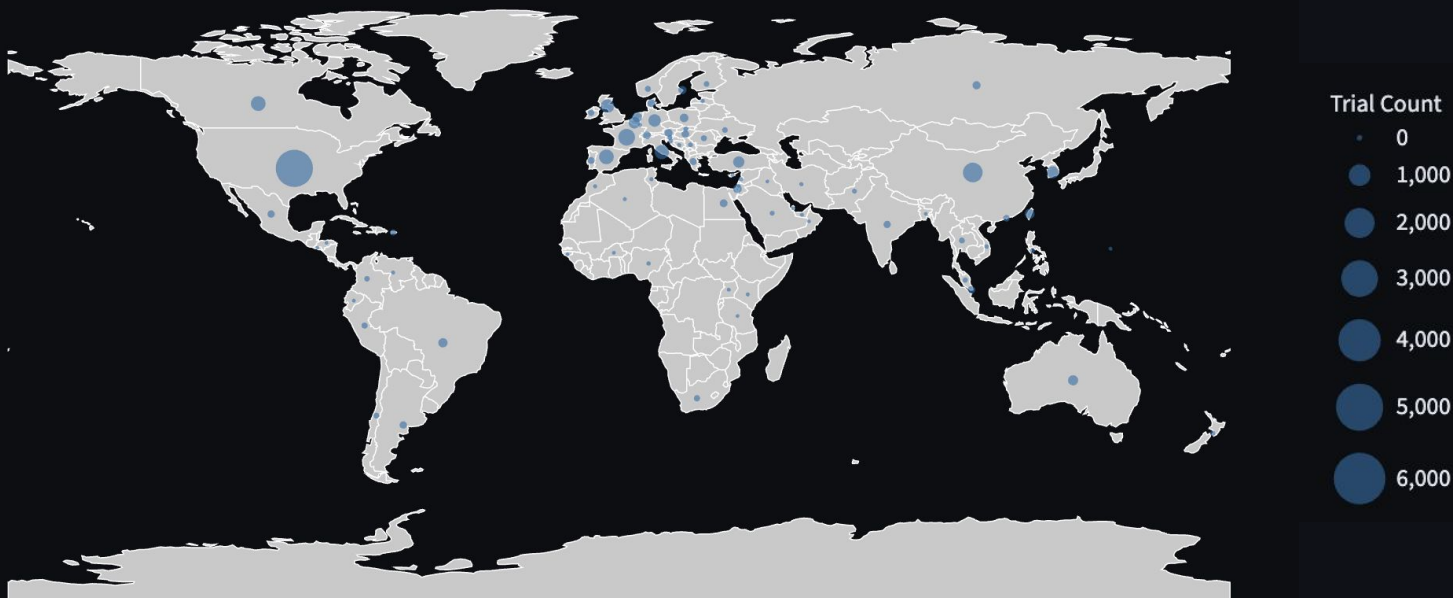
How has the volume of breast cancer clinical trials changed over time?



Task 2: Geographic distribution of breast cancer clinical trials

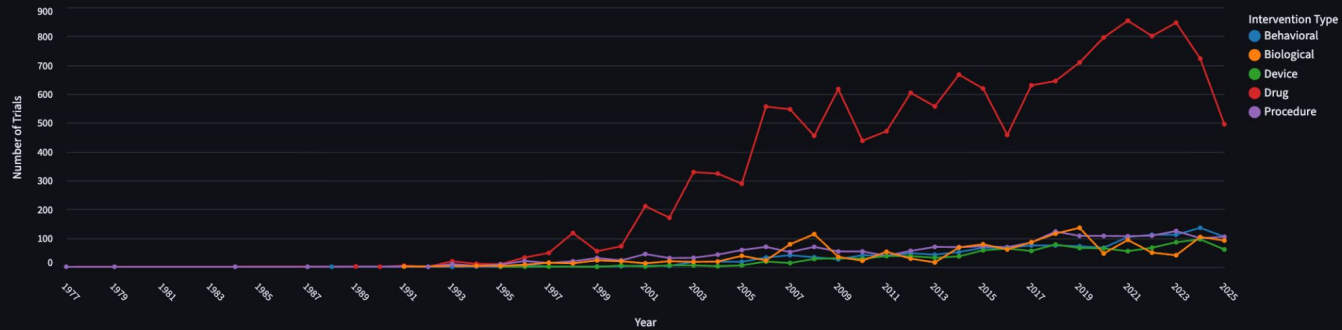
Which regions contribute the most to breast cancer clinical research, and where are the major geographic gaps?

Geographic Distribution

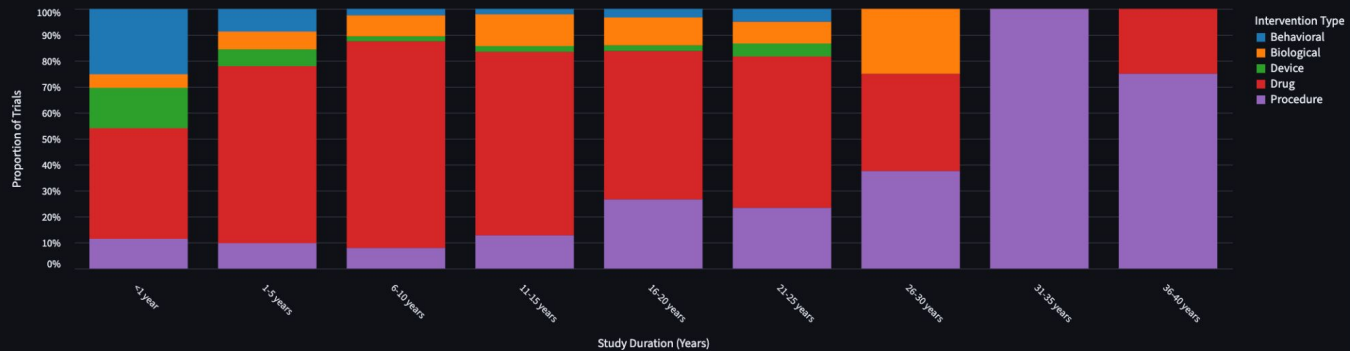


Task 3: Distribution and evolution of intervention types in breast cancer research

Which intervention types dominate, how have they evolved, and how do they affect trial duration?



Intervention Type - Composition by Study Duration



Task 4: Influence of sponsor types on trial design and outcomes

How do sponsor types shape study volume, status, intervention, and completion rates?

Sponsor Type Composition



▼ Sponsor Category Definitions

FED: US Federal government agencies excluding NIH

INDIV: Individual physician investigators

INDUSTRY: Pharmaceutical and biotech companies

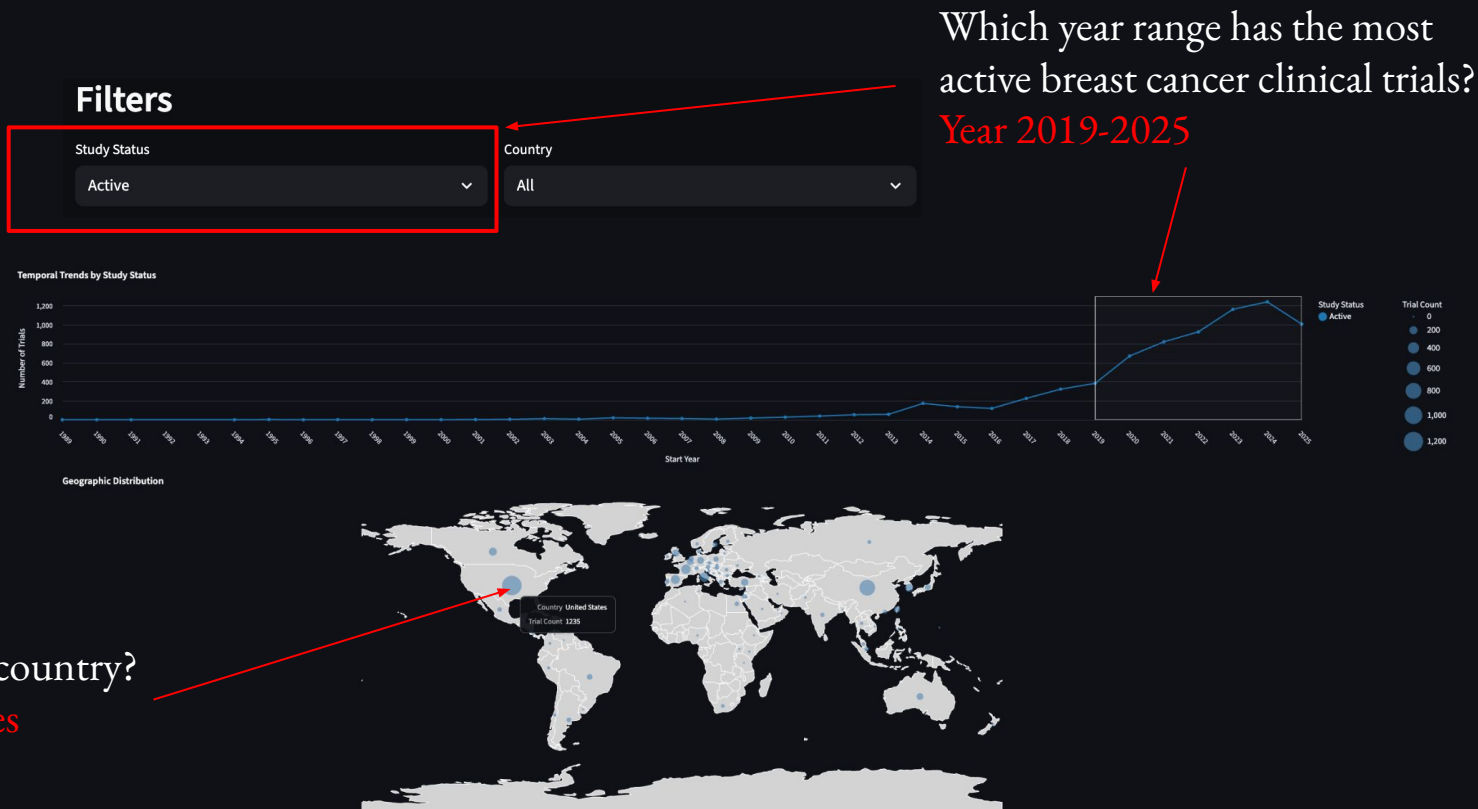
NETWORK: Research consortia and cooperative groups

NIH: US National Institutes of Health agencies

OTHER: Universities, academic medical centers, non-profit hospitals, and cancer research organizations

OTHER_GOV: Non-US government hospitals and health agencies

Example Demo



Example Demo

Filters

Study Status

Active

Let's focus on the United States!

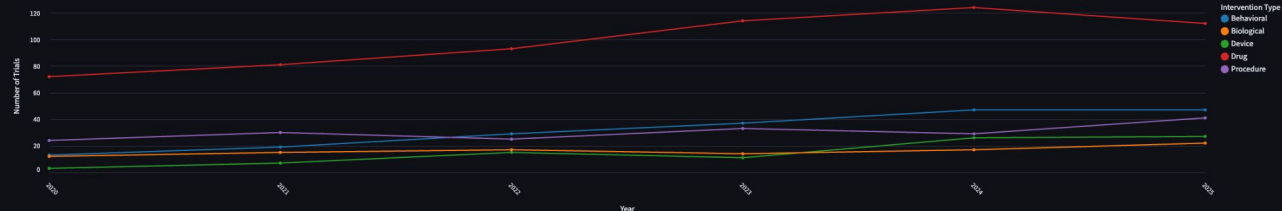
Country

United States

Which intervention type is most associated with the active trials in the U.S. from year 2019-2025?

Drug intervention

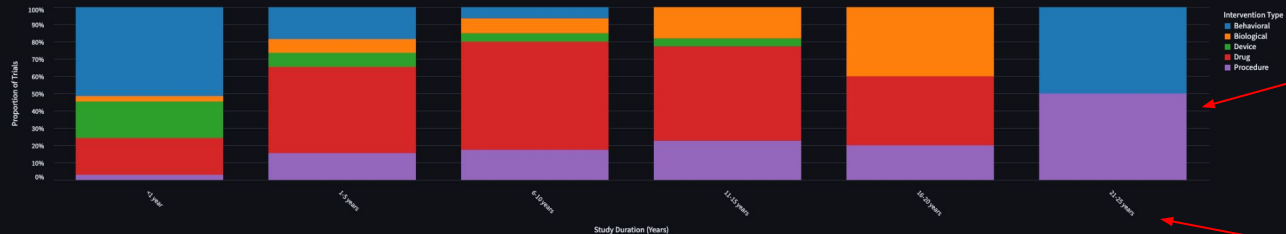
Intervention Type - Temporal Trends



What intervention type contributed the most to the longest-running active breast cancer clinical trials?

Procedure intervention

Intervention Type - Composition by Study Duration



Among active U.S. trials from 2019-2025, what are the longest study durations observed?

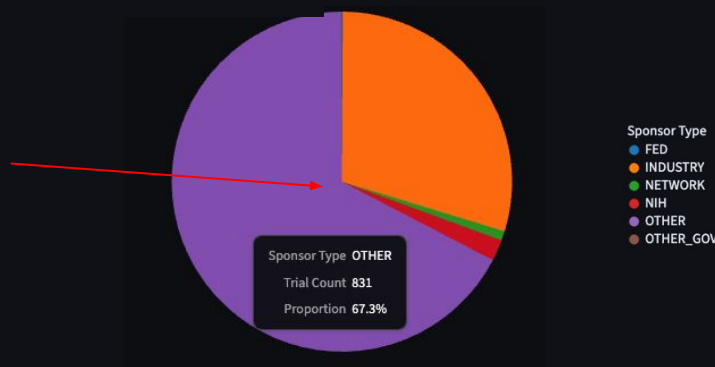
21-25 years

Example Demo

Among active U.S. trials from 2019–2025, which sponsor type contributed the most?

OTHER: Universities, academic medical centers, non-profit hospitals, and cancer research organizations

Sponsor Type Composition



▼ Sponsor Category Definitions

FED: US Federal government agencies excluding NIH

INDIV: Individual physician investigators

INDUSTRY: Pharmaceutical and biotech companies

NETWORK: Research consortia and cooperative groups

NIH: US National Institutes of Health agencies

OTHER: Universities, academic medical centers, non-profit hospitals, and cancer research organizations

OTHER_GOV: Non-US government hospitals and health agencies