



Leveraging Data Visualization from Clinical Trial Registries for Enhanced Insights

Gowtham Manicka Selvam

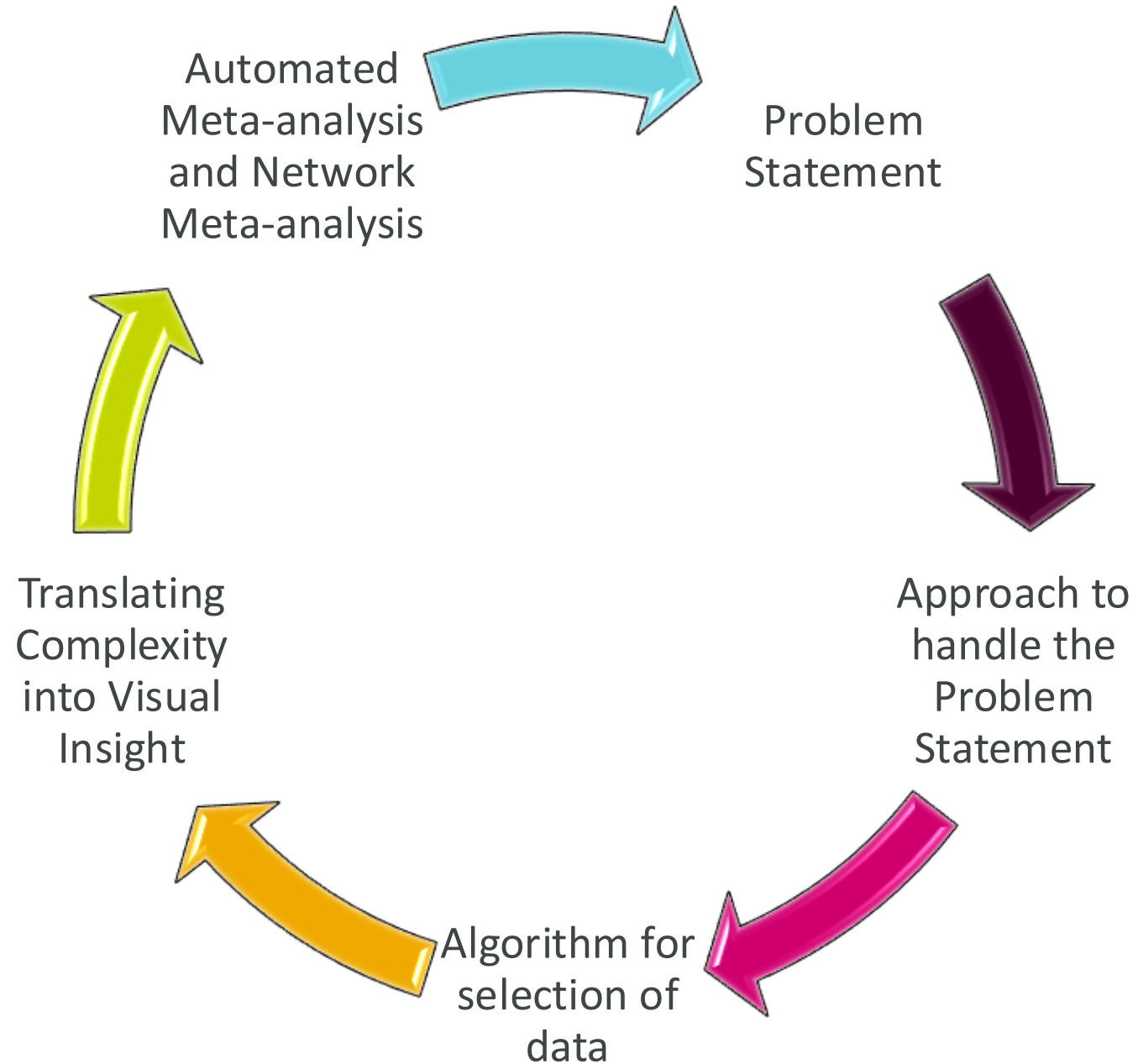
Anand Boopalan

21-Feb-2026



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ClinicalTrials.gov is a place to learn about clinical studies from around the world.



Search Results

Card Table Map By Topic

Focus Your Search

[Expert Search](#)

Focus

Condition/disease

Cardiovascular Diseases

Other terms

Intervention/treatment

Location

Search by address, city, state, zip code, or country. For information on using this field, see the [How to Search for Clinical Studies](#) page

Study Status

All

Recruiting

Study Status

Looking for participants

Not yet recruiting (2,663)

Recruiting (8,008)

Search Details: Viewing 1-10 out of **62,045** studies for: Cardiovascular Diseases

NCT01770210 Completed
Ekvasis of Atorvastatin (Antorcin®) Treatment in Patients With Acute Cardiovascular Events

Conditions

Cardiovascular Disorders

Locations

Athens, Greece (2)

Nikaia Piraeus, Greece

Piraeus, Greece

Pátrai, Achaia, Greece

[Show all 17 locations](#)

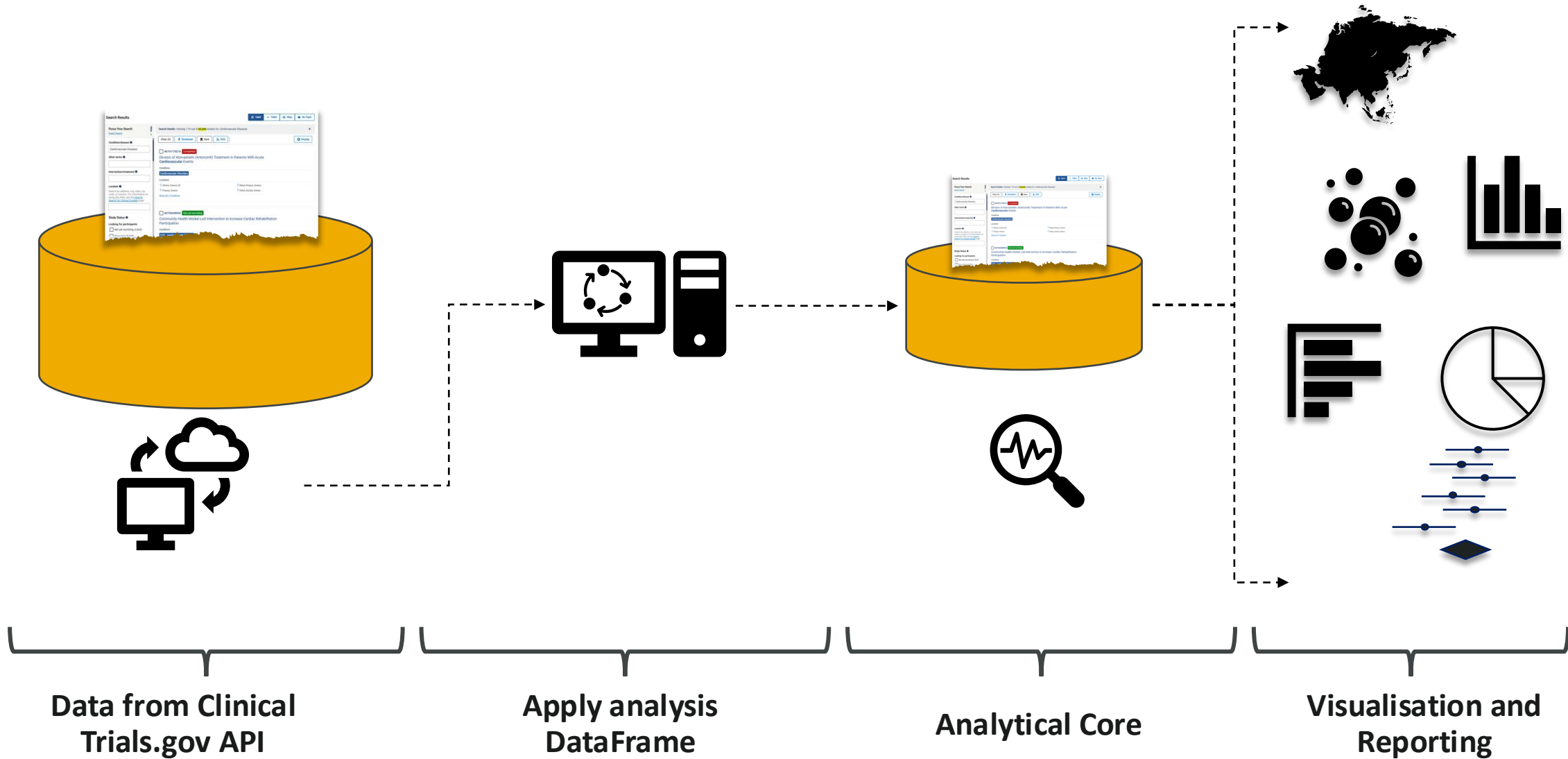
NCT06908590 Not yet recruiting
Community Health Worker-Led Intervention to Increase Cardiac Rehabilitation Participation

Conditions

CVD - Cardiovascular Diseases

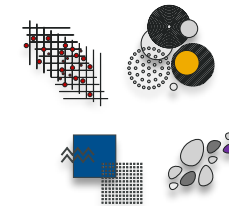
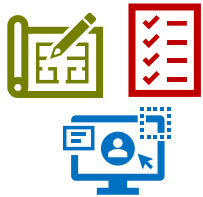


Approach to handle the PS



Trial Design, pOPulation, InterVention & outComes

TOPIC: From Question to Evidence and Informal Decisions

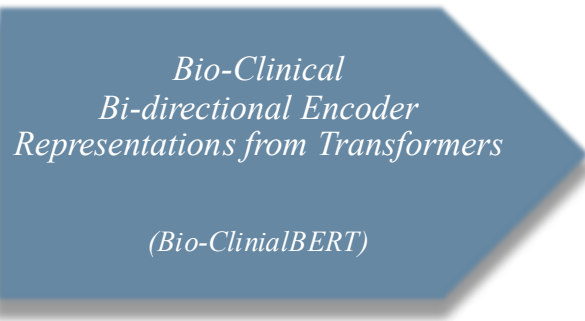


Trial Design

P**OP**ulation

Intervention

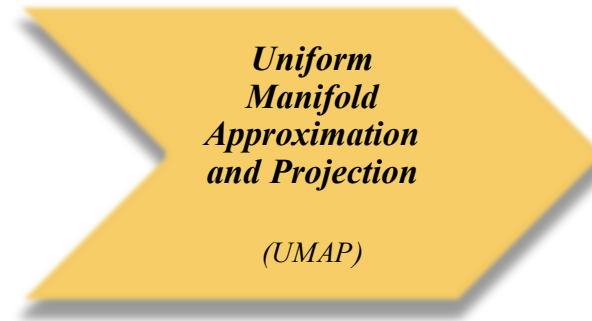
Out**C**omes
/ Results



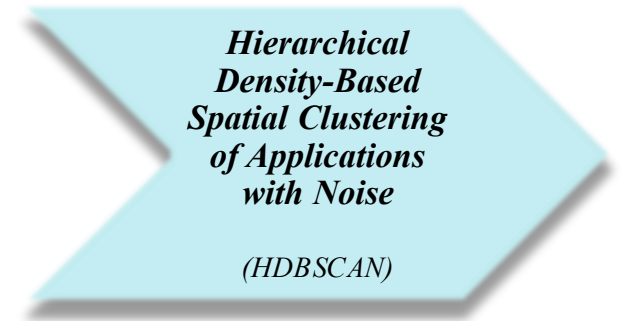
- Reading each study's text into embeddings and then grouping those embeddings.

A common workflow:

- Pass study text (titles, abstracts, or full texts) through Bio-ClinicalBERT to get dense vector representations.
- For long documents, use sliding windows over sections and aggregate (mean-pool or attention-pool) the token or sentence embeddings into a single document vector.



- Nonlinear Dimensionality reduction method that maps high-dimensional data to a low-dimensional space, while preserving the data's local neighborhood structure.
- UMAP constructs a graph of nearest neighbors in the original space, models that graph as a fuzzy topological structure, and then optimizes a low-dimensional embedding that best preserves those neighbor relations.



- Unsupervised clustering algorithm that groups points by areas of high density, builds a hierarchy of such groupings across density levels, and then extracts a flat clustering that's both stable and robust to noise.
- Produces a hierarchy and a flat "best" clustering, with soft cluster probabilities if desired.
- Works with different distance metrics (Euclidean, Cosine, Haversine, etc.), making it flexible for embeddings, geospatial data, and more



Trial Summary: Overall

Clinical Trial Insights

Search & Filter
 Global Search (Condition, Drug, Area)

Type to search...

559503 studies found

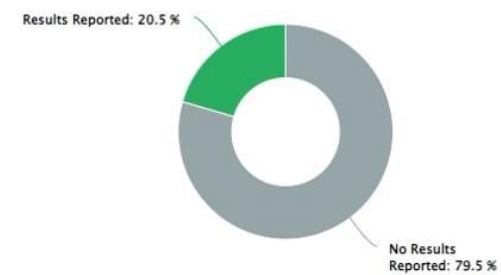
Search

Trial Landscape

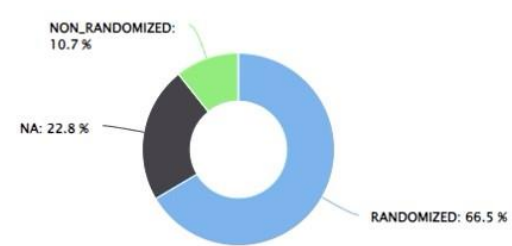
559,503
 Total Matching Trials



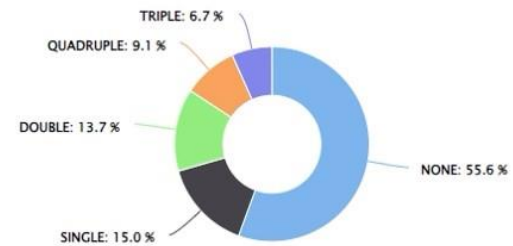
Results Reporting (Completed Trials)



Allocation



Masking

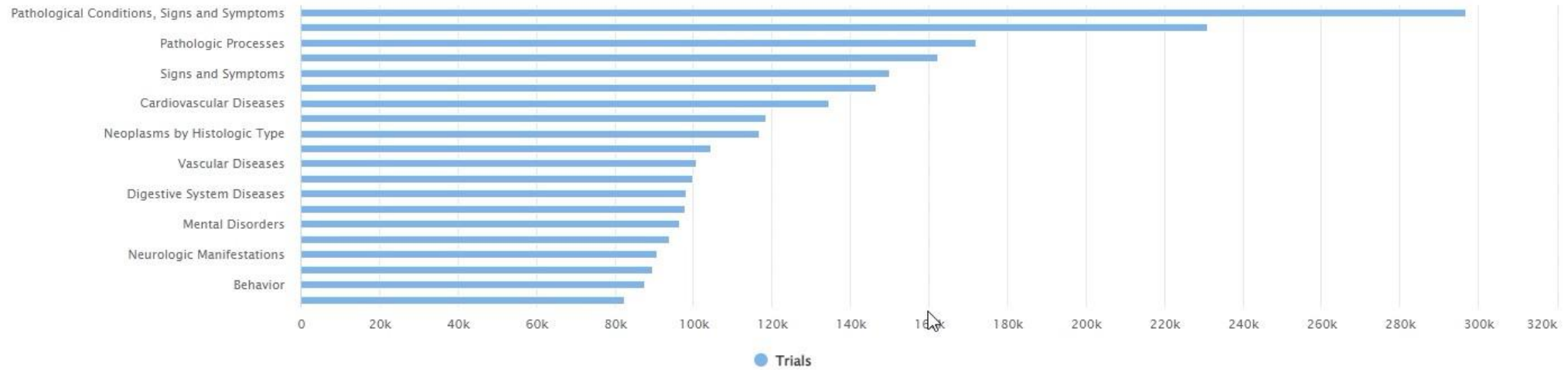


Trial Summary: Overall

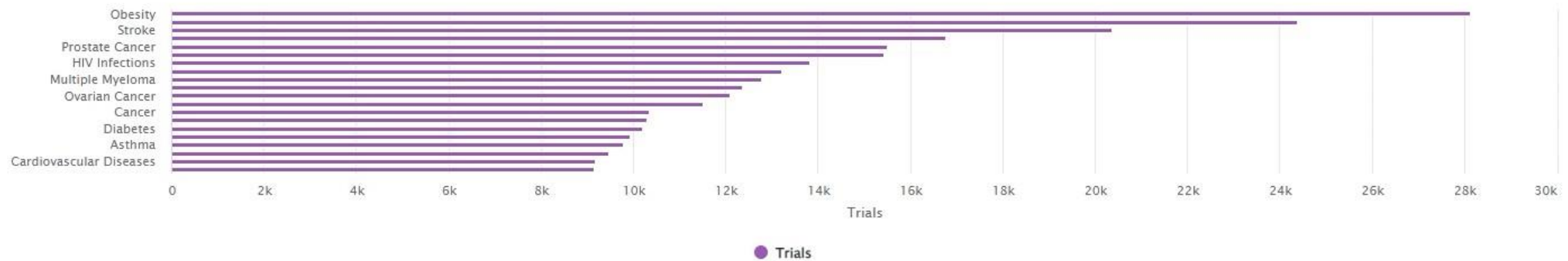


Trial Summary: Overall

Conditions based on Mesh term



Top Reported Condition Names (Breakdown)



Trial Summary: Based on Search Term

Search & Filter
 Global Search (Condition, Drug, Area)

 4975 studies found

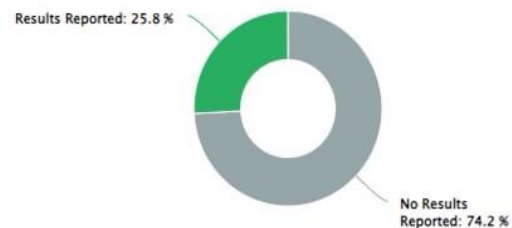
Trial Landscape

4,975
Total Matching Trials

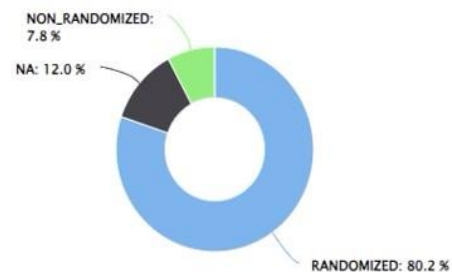
Recruitment Status



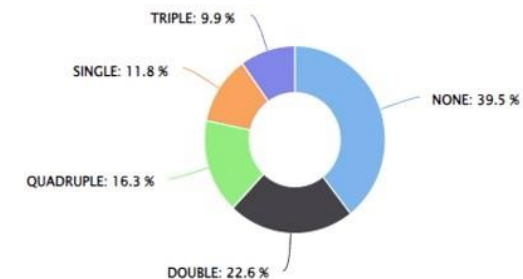
Results Reporting (Completed Trials)



Allocation

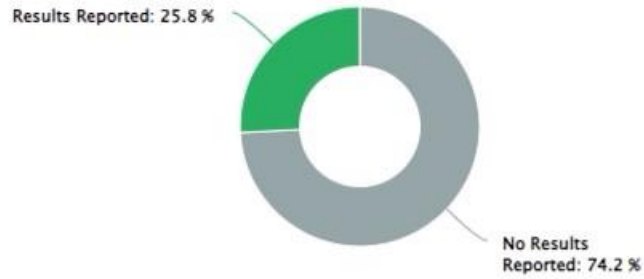


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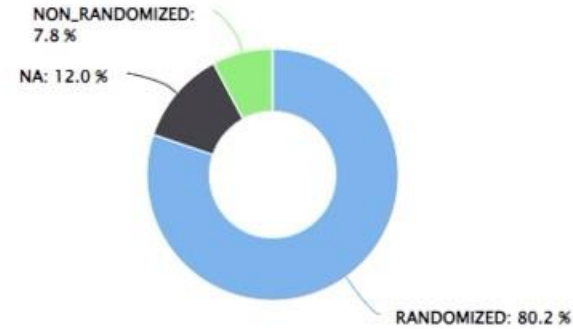


Trial Summary: Based on Search Term

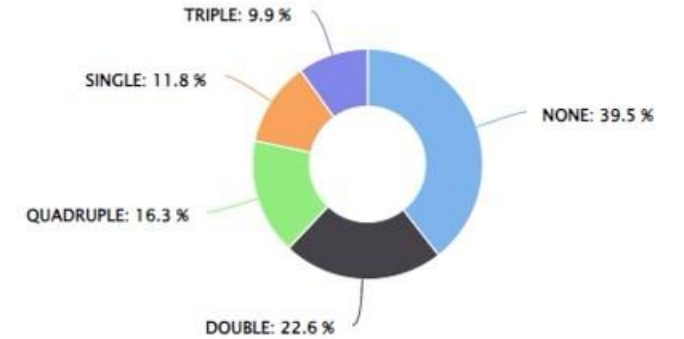
Results Reporting (Completed Trials)



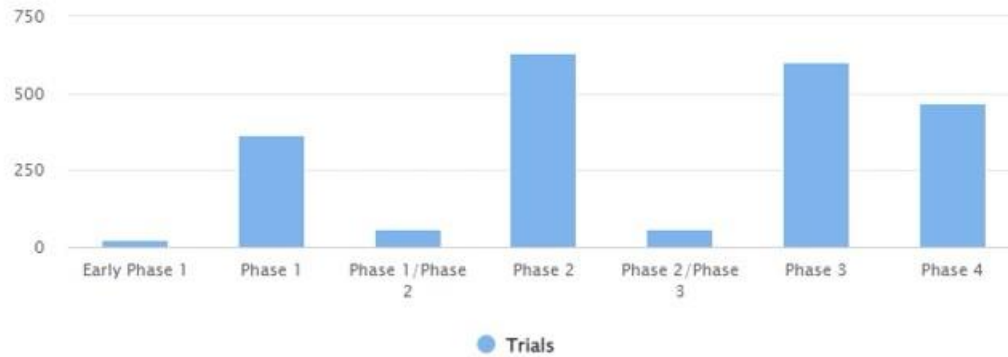
Allocation



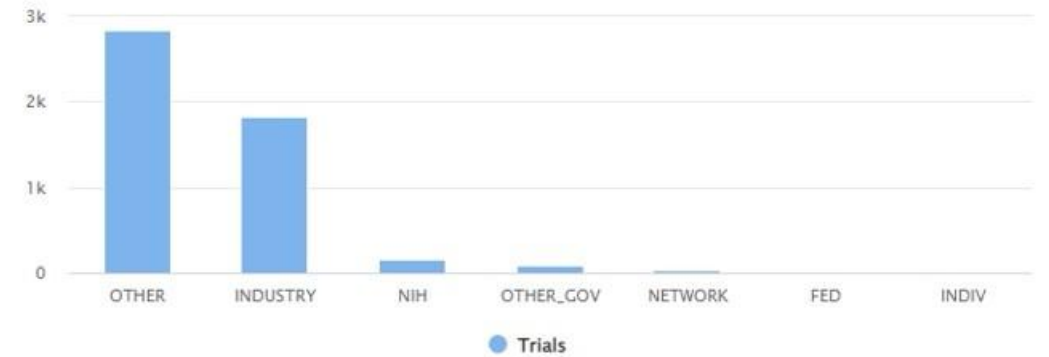
Masking



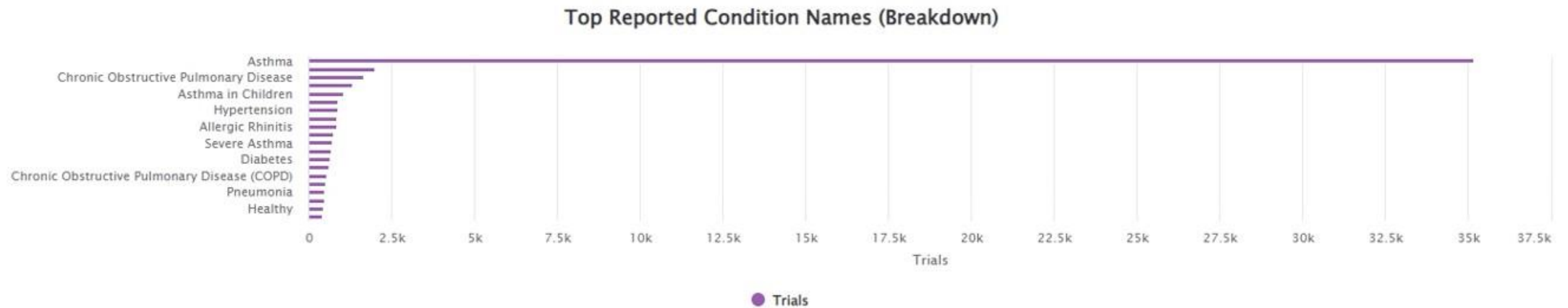
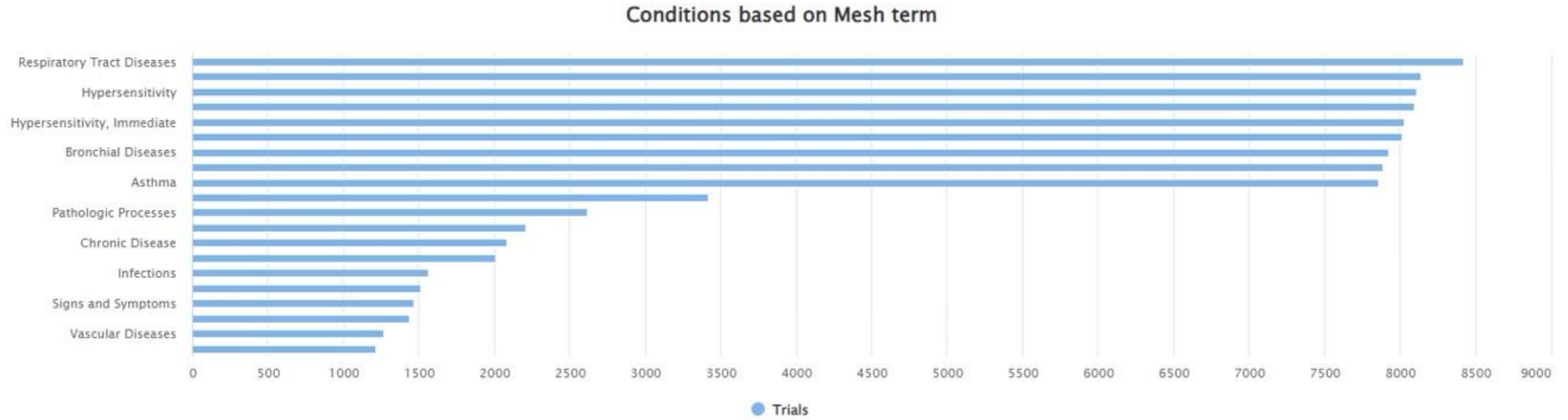
Clinical Trial Phase



Sponsor Class

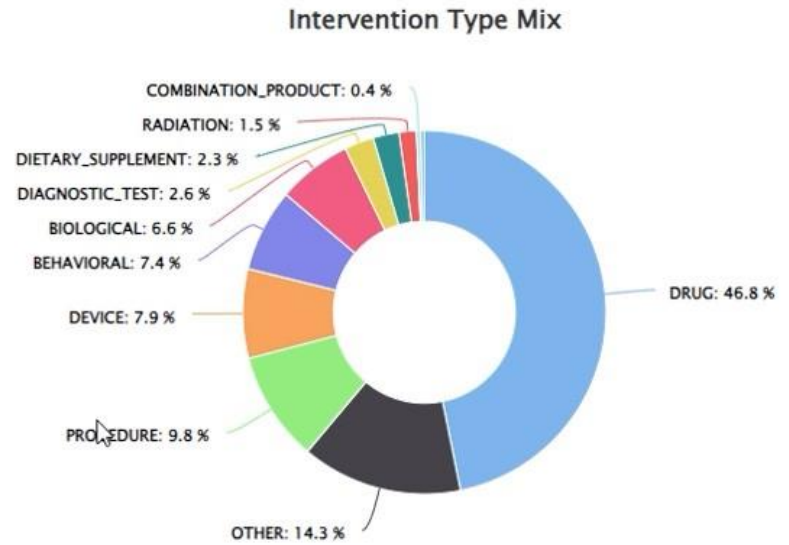
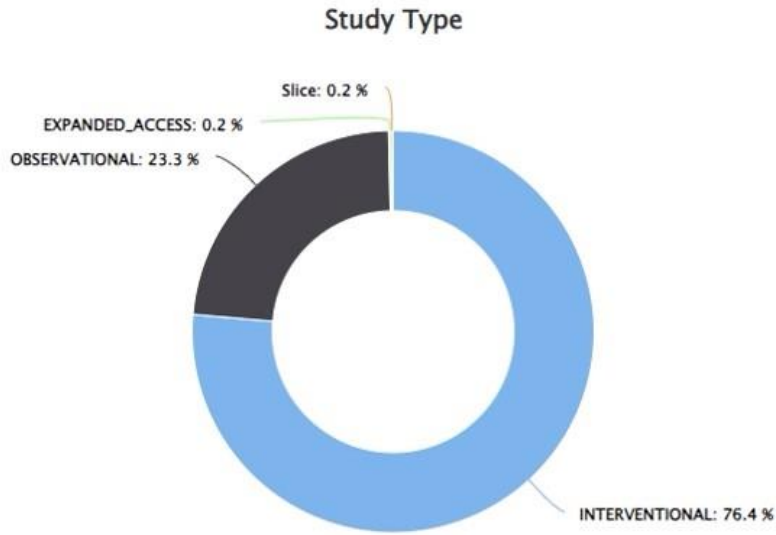


Trial Summary: Based on Search Term

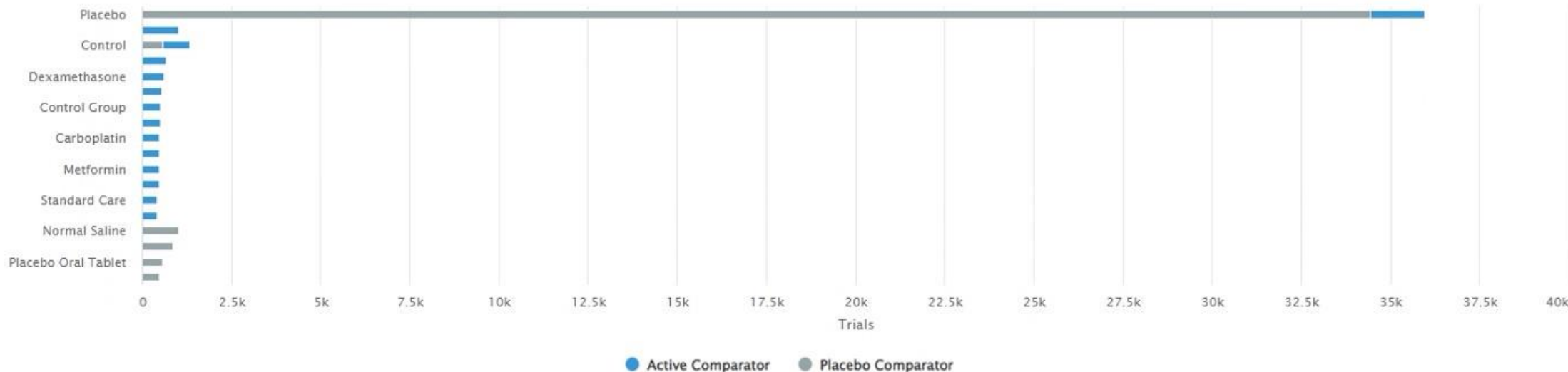


Intervention Summary: Overall

2. Interventions Analysis



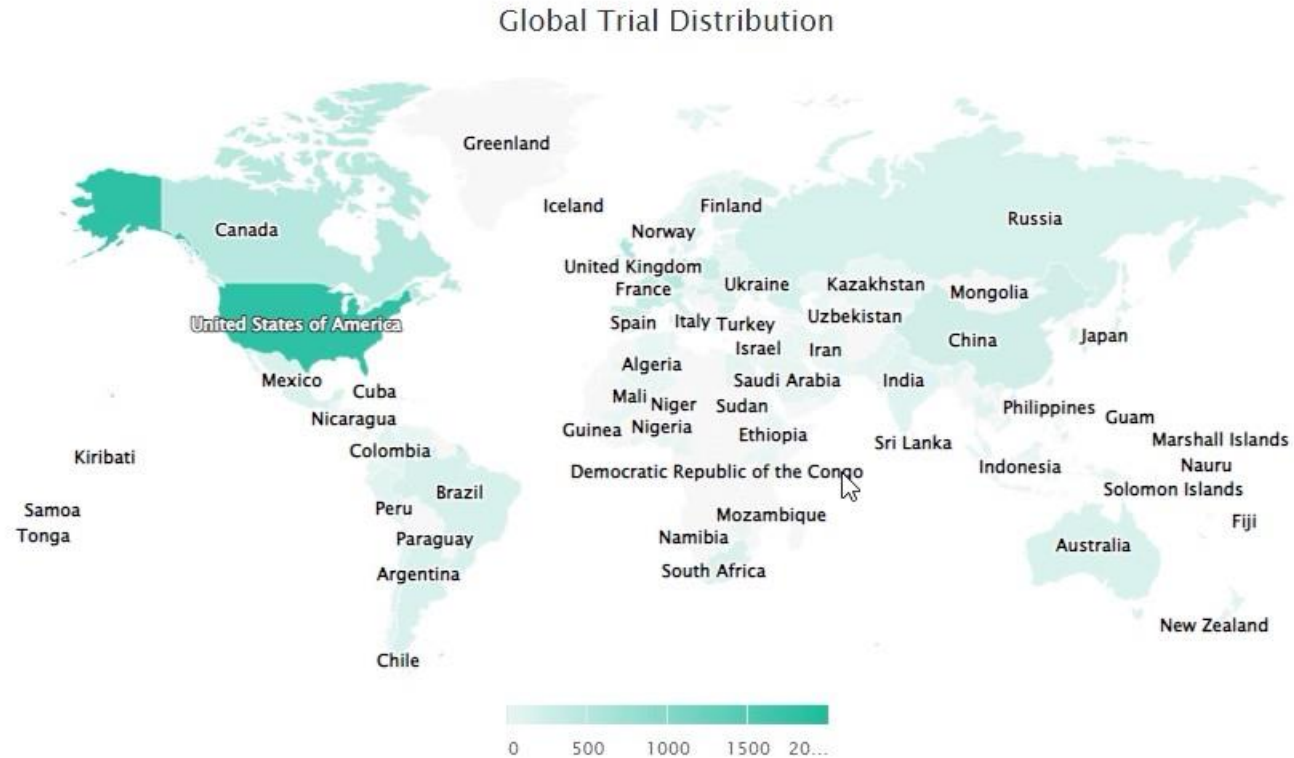
Top Comparators (Active vs Placebo)



Enrollment distribution: Search Term

3. Enrollment & Locations

12,562,118
Total Enrolled Subject



Safety Tab

Clinical Trial Insights Visual Summary **Safety** Similar Trials Meta-Analysis Network Meta-Analysis

Safety Filters

Data driven by Global Search results.

Frequency Threshold (%)

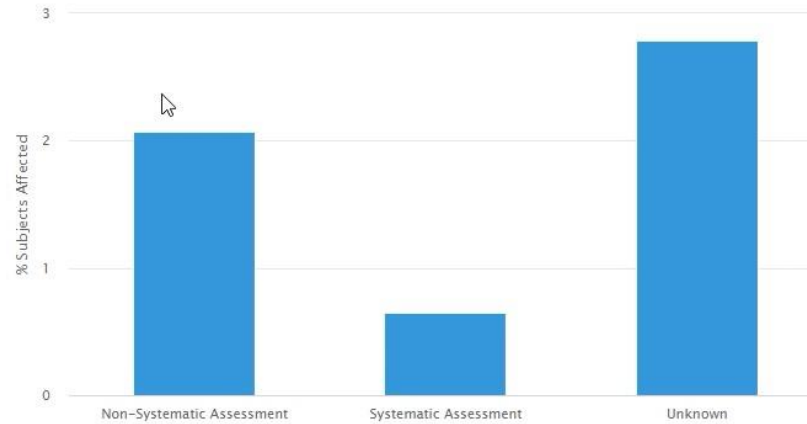


Overview

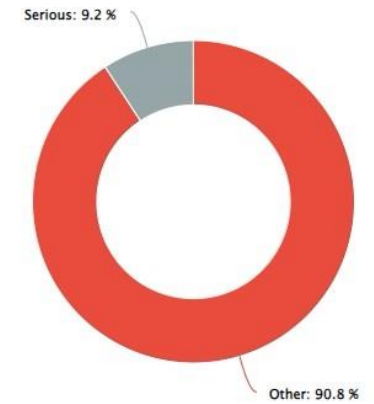
Organ Systems

AE Terms

AE Incidence by Assessment Type



Serious vs Other Events



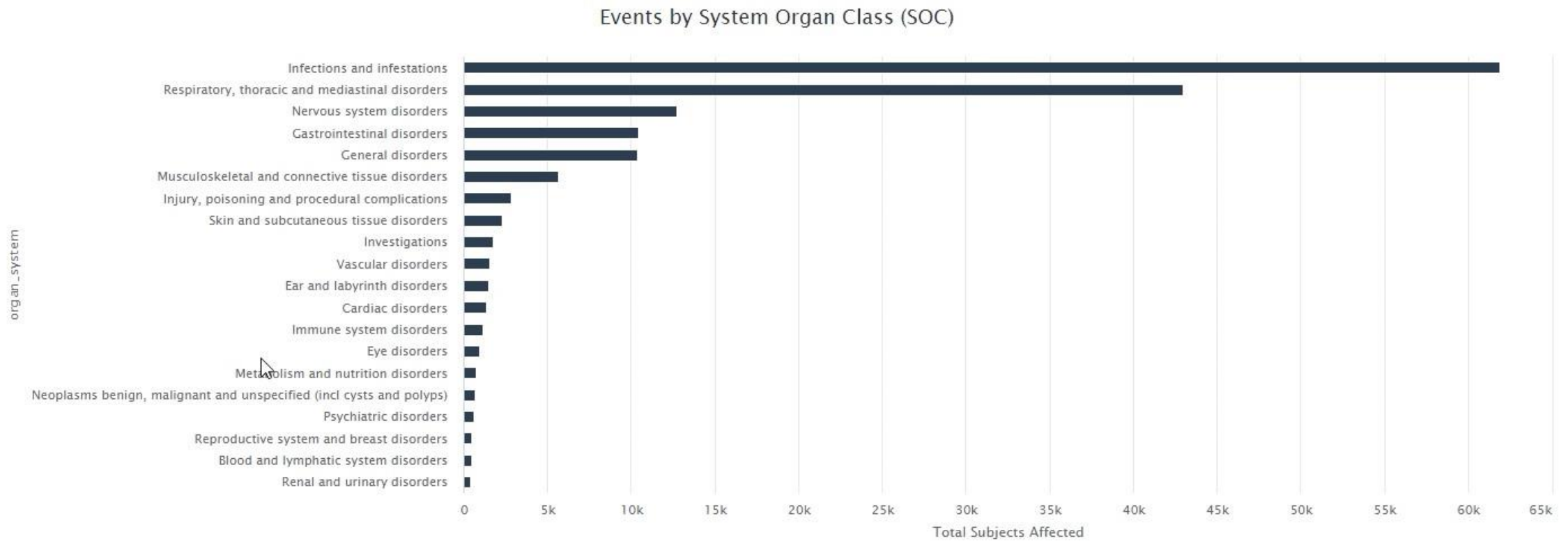
Safety Tab

Overview

Organ Systems

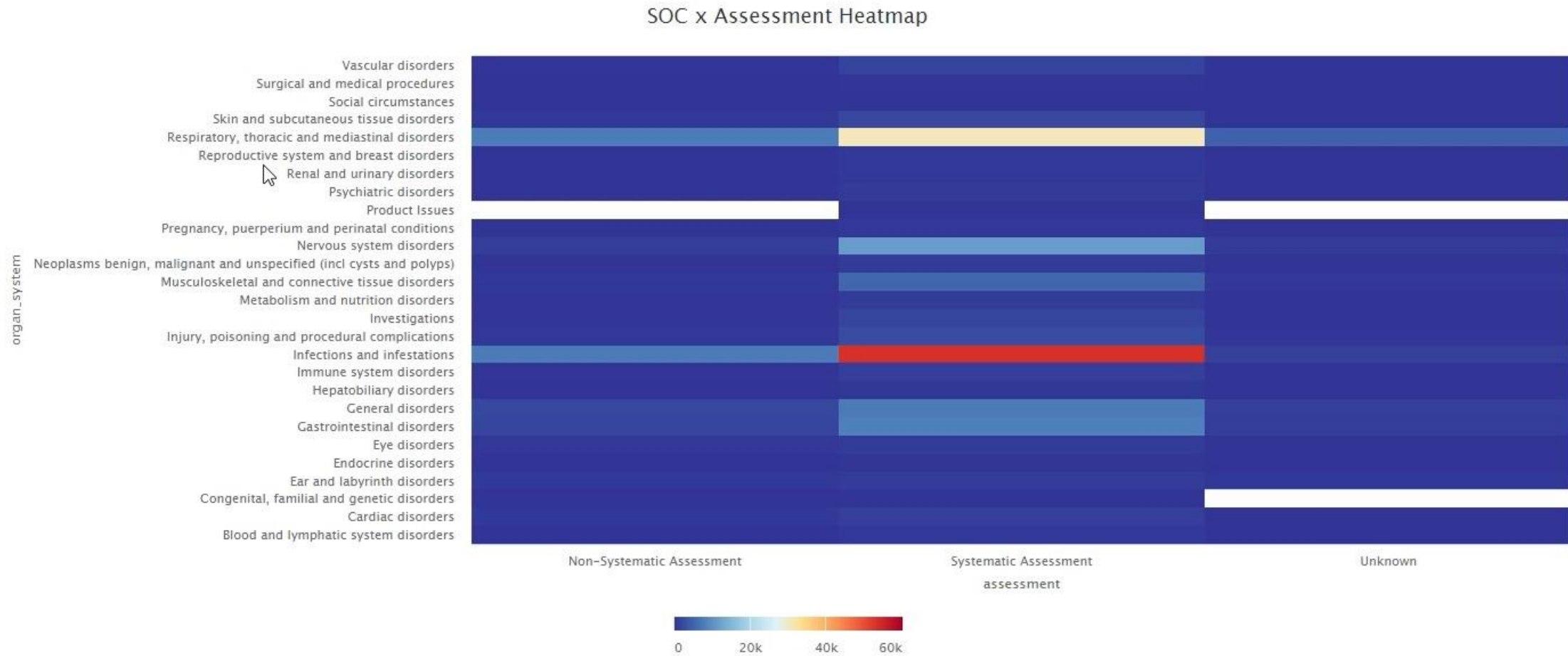
AE Terms

System Organ Class (SOC) Distribution



Safety Tab

SOC x Assessment Heatmap



Safety Tab

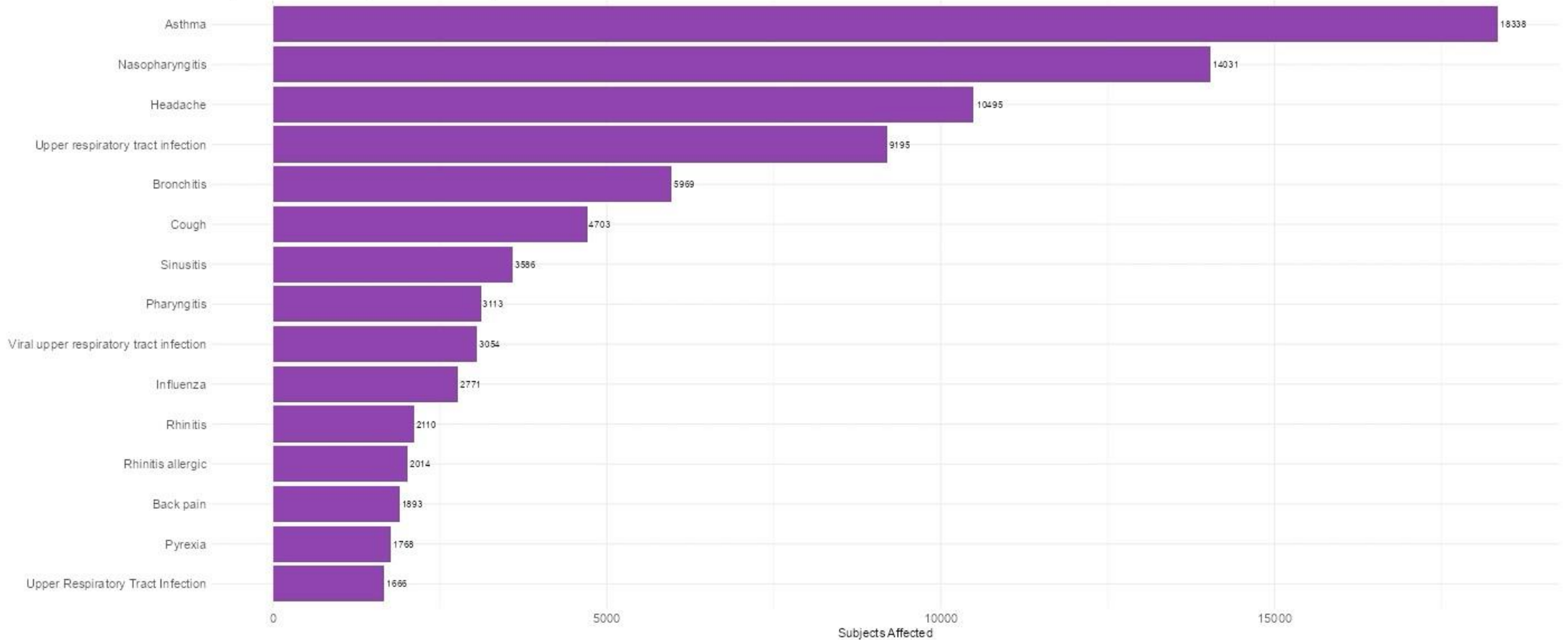
Overview

Organ Systems

AE Terms

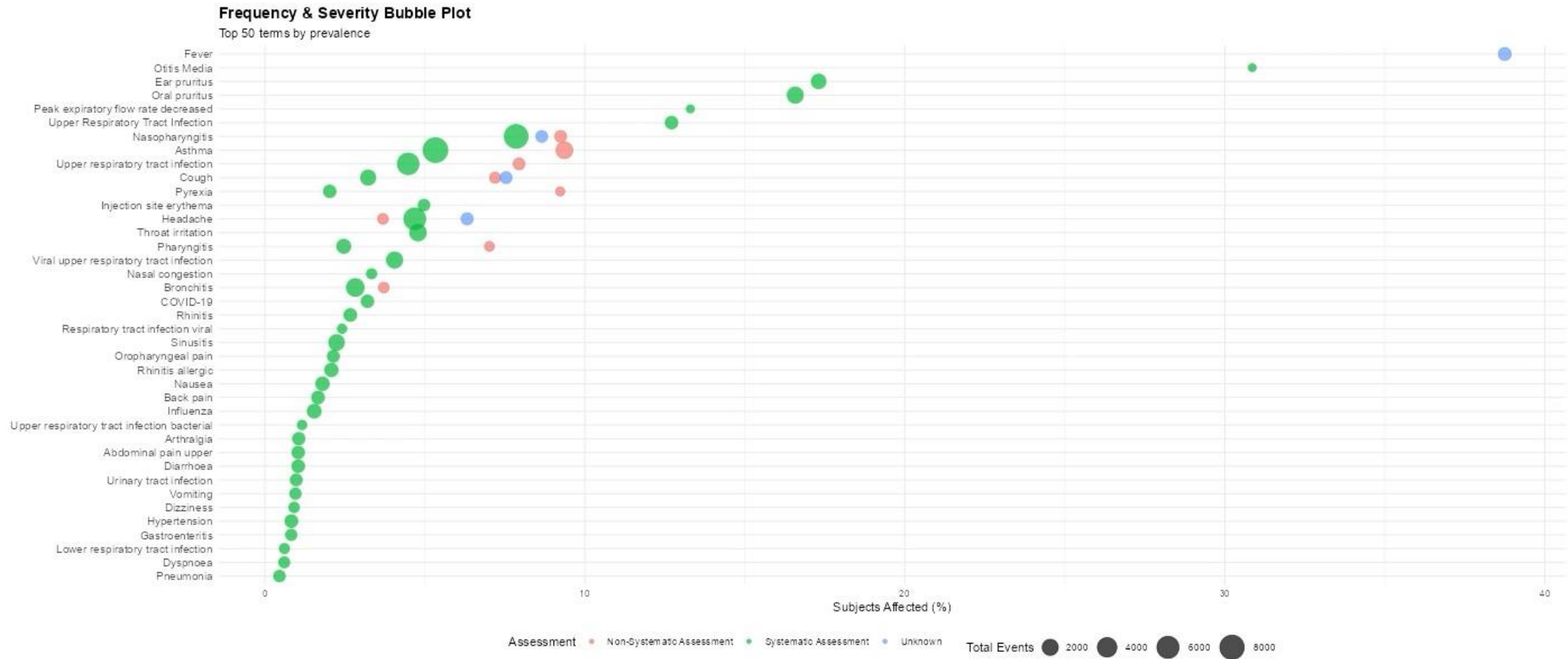
Preferred Term (PT) Analysis

Top Adverse Events (Preferred Terms)



Safety Tab

Frequency & Severity Bubble Plot



Similar-Trial selection

Min Trials per Cluster (HDBSCAN):

3 5 20

Adjusts the density threshold for clustering.

Run Analysis

Cluster Overview

Cluster Overview (Size = Trial Count)

Average Enrollment

Cluster ID

Cluster PICO Summary

Select Cluster to Analyze

6

NMA-Ready (Score: 13 / 16)

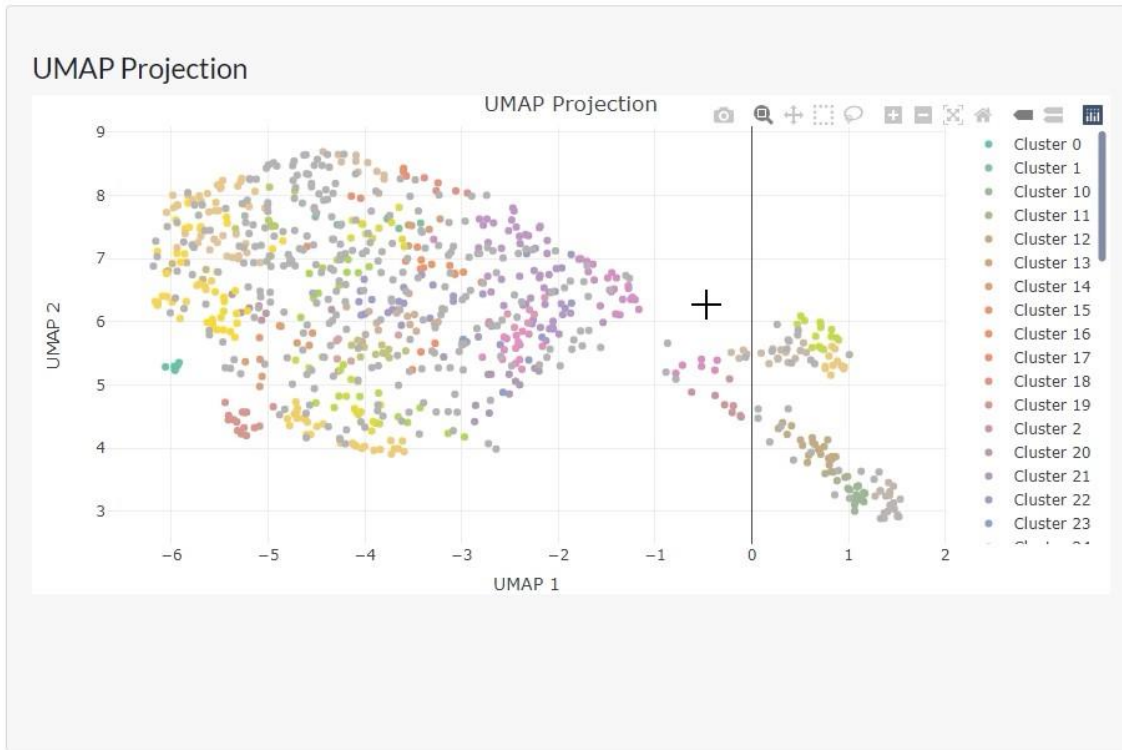
Intent: 3/3 | Outcome: 3/3 | Network: 1/4 | Data: 4/4 | Size: 2/2

- [P] Asthma, Bronchial Diseases, Hypersensitivity
- [I] Placebo metered-dose inhaler, Budesonide/albuterol sulfate metered-dose inhaler 160/180 µg, Budesonide/albuterol metered-dose inhaler 160/180 µg, ED-Dispensing home and school supervision, ADVAIR 100/50mcg
- [C] N-Nitro L-arginine-methylester (L-NAME), Albuterol sulfate metered-dose inhaler 180 µg, FLOVENT 100mcg
- [O] Maximum Change From Baseline in Airway Blood Flow (Qaw), Maximum Percentage Fall From Post-dose, Pre-exercise Baseline in Forced Expiratory Volume in 1 Second (FEV₁) Observed up to 60 Minutes Post-exercise Challenge, Number of Participants Experiencing an Event in the Composite Safety Endpoint of Serious Asthma Outcomes (Asthma-related Hospitalization, Asthma-related Endotracheal Intubation, or Asthma-related Death), Number of Participants With a Severe Asthma Exacerbation Event, Number of Participants With at Least One Asthma Exacerbation Over the 6-month Study Treatment Period

Run Meta-Analysis on This Cluster



Similar-Trial selection



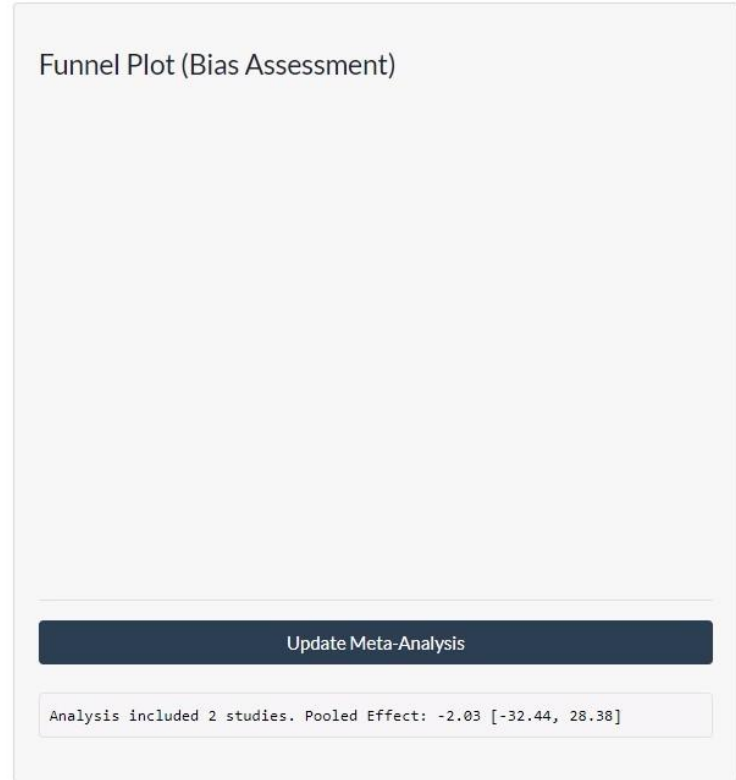
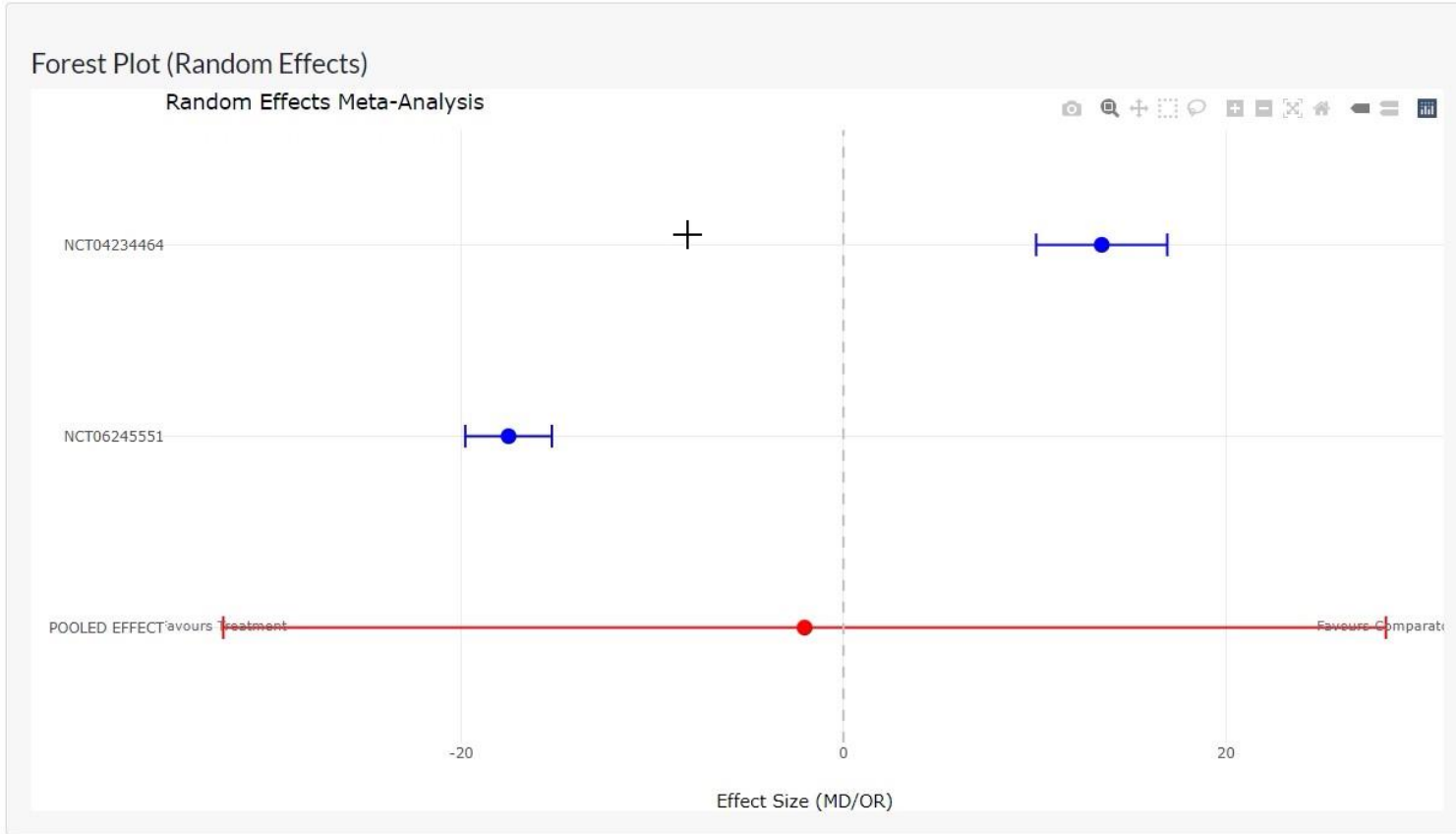
Cluster Details

Show entries

Search:

Cluster	ID	Title	Conditions
1	-1 NCT05448651	Safety and Biologic Impact (Pharmacodynamics) of Repeated Injections and Increasing Amounts of UPB-101 in Asthmatics	Asthma
2	-1 NCT02913872	Childhood Asthma Management in Primary Care: Implementation Of Exhaled Nitric Oxide and Spirometry Testing	Asthma
3	-1 NCT00600171	Efficacy And Safety Of GW642444M Comparing Placebo In Adolescent And Adult Subjects With Persistent Asthma.	Asthma
4	-1 NCT00317044	Safety and Efficacy Study to Determine Anti-Asthmatic Effect of Esomeprazole Magnesium; Nexium Reflux Asthma	Asthma; GERD
5	-1 NCT00943683	Montelukast in Pediatric Patients Aged 6 to 24 Months With Asthma-- Safety Study (0476-176)	Asthma
6	-1 NCT04203797	A Study to Evaluate the Effect of Dupilumab on Exercise Capacity in Adult Patients With Asthma	Asthma
7	-1 NCT01650844	School-Based Telemedicine Enhanced Asthma Management	Pediatric Asthma
8	-1 NCT00911547	The Clinical Effect of MK0476 With Concomitant Administration of and Removal of Inhaled Beclomethasone in Asthmatic Patients (0476-029)	Asthma

Meta-analysis



Included Studies (Select to Include/Exclude)

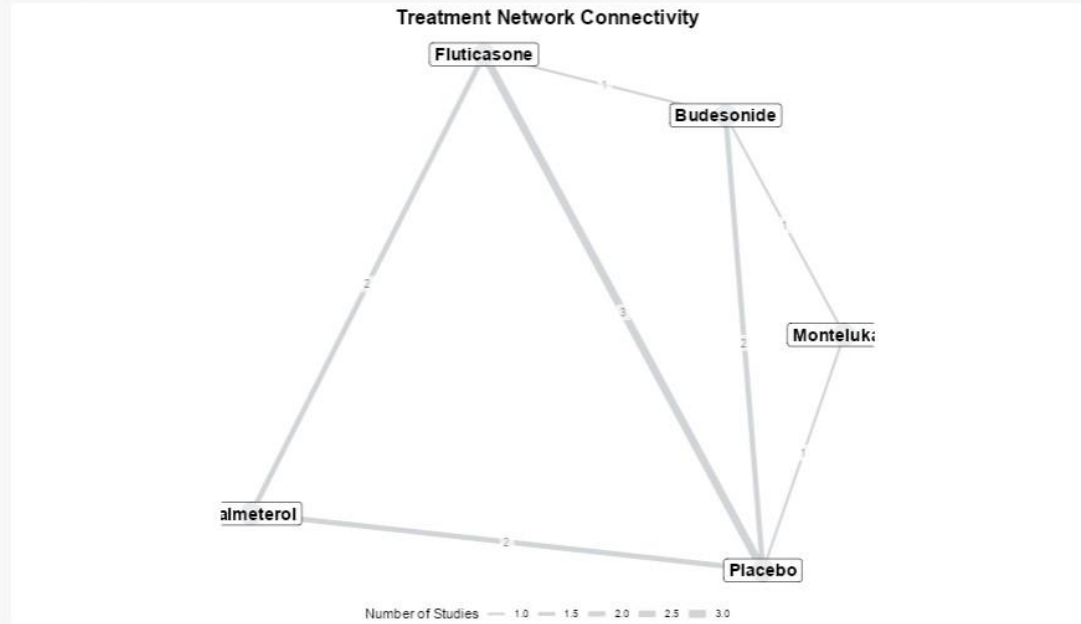
Use the checkboxes to include or exclude specific trials from the analysis.

Filter trials:

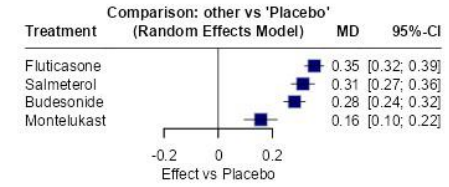
<input type="checkbox"/>	NCT ID	BRIEF TITLE	CONDITIONS	OUTCOME MEASURE
<input type="checkbox"/>	NCT00753948	Exhaled Levels of Nitric Oxide	Tetraplegia; Asthma	Exhaled Levels of Nitric Oxide
<input type="checkbox"/>	NCT01231230	Interactive Acute Smooth Muscle Effects of Salmeterol and Fluticasone in the Airway	Asthma	Maximum Change From Baseline in Airway Blood Flow (Qaw)
<input type="checkbox"/>	NCT01462344	6-month Safety and Benefit Study of ADVAIR in Children 4-11 Years Old	Asthma	Number of Participants Experiencing an Event in the Composite Safety Endpoint of Serious Asthma Outcomes (Asthma-related Hospitalization, Asthma-related Endotracheal Intubation, or Asthma-related Death); Number of Participants With at Least One Asthma Exacerbation Over the 6-month Study Treatment Period
<input type="checkbox"/>	NCT03769090	A Study to Assess the Efficacy and Safety of Budesonide/Albuterol Metered-dose Inhaler (BDA MDI/PT027) in Adults and Children 4 Years of Age or Older With Asthma	Asthma	Number of Participants With a Severe Asthma Exacerbation Event
<input type="checkbox"/>	NCT03952286	ED-Initiated School-based Asthma Medication Supervision	Asthma; Asthma in Children	90-day Emergency Department (ED) Recidivism
<input type="checkbox"/>	NCT04170348	Daily Vitamin D for Sickle-cell Respiratory Complications	Sickle Cell Disease; Anemia, Sickle Cell; Anemia, Hemolytic, Congenital; Respiratory Tract Diseases; Respiration Disorders; Acute Chest Syndrome; Lung Diseases; Asthma; Respiratory Tract Infections; Nutrition Disorders; Deficiency Diseases Vitamin; Vitamin D Deficiency	Annual Rate of Respiratory Events
<input type="checkbox"/>	NCT04234464	A Study to Assess the Efficacy of Budesonide/Albuterol Metered-dose Inhaler (BDA MDI/PT027) on Exercise-induced Bronchoconstriction in Adults and Adolescents With Asthma	Exercise Induced Bronchospasm	Maximum Percentage Fall From Post-dose, Pre-exercise Baseline in Forced Expiratory Volume in 1 Second (FEV ₁) Observed up to 60 Minutes Post-exercise Challenge
<input type="checkbox"/>	NCT06245551	A Study to Investigate the Effects of PT027 (Budesonide/Albuterol Sulfate) Metered-dose Inhaler Compared With Placebo on Exercise-Induced Bronchoconstriction in Adult Patients With Asthma	Asthma, Exercise-Induced	Maximum Percentage Fall From Post-dose, Pre-exercise Baseline in Forced Expiratory Volume in 1 Second (FEV ₁) Observed up to 60 Minutes Post-exercise Challenge



Network Graph



Forest Plot (vs Placebo)



League Table (Pairwise Comparisons)

League table (random effects model):

	Budesonide	-0.09 [-0.16; -0.02]	0.11 [0.04; 0.18]	0.30 [0.25; 0.35]	.
-0.07 [-0.12; -0.03]		Fluticasone	.	0.34 [0.30; 0.38]	0.05 [0.00; 0.10]
0.12 [0.07; 0.18]	0.20 [0.13; 0.26]		Montelukast	0.13 [0.04; 0.22]	.
0.28 [0.24; 0.32]	0.35 [0.32; 0.39]	0.16 [0.10; 0.22]		Placebo	-0.33 [-0.38; -0.27]
-0.03 [-0.09; 0.02]	0.04 [0.00; 0.08]	-0.16 [-0.23; -0.08]	-0.31 [-0.36; -0.27]		Salmeterol

Lower triangle: results from network meta-analysis (column vs row)

Upper triangle: results from direct comparisons (row vs column)

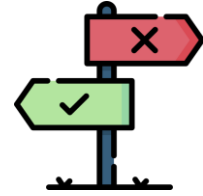
Use Cases and/or Decision Impacts



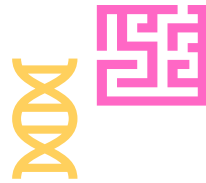
Portfolio strategy and competitive intelligence



Protocol optimisation



Early go/no-go decisions



Medical affairs and HEOR



Pharmacovigilance reconnaissance



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