Phaseline

The guide

The *Phaseline* guide

Every active drug trial from companies, universities and hospitals, with approval likelihood, readouts, earlier results, competitors, stopped trials and trends, built from open data. This guide shows where to click, what every number means, where it comes from and where it stops.

Part I	Orientation
1	Clinical trials in one chapter
2	What Phaseline is, and the weekly cycle
3	Access, finding your way and the weekly letter
4	Sources and licences, and where AI is used
Part II	The site, view by view
5	Start here: Explore
6	All trials: reading the table
7	The registry, and how Phaseline reads it
8	Finding trials
9	Trial detail and drug view
10	The approval likelihood
11	Readouts, slips and drift
12	Competitors, trial sites and the Industry Landscape
13	Stopped trials
14	Design check: how did trials like yours go?
15	Watchlist and trial map
16	Diagnoses (ICD-10)
17	Patents and loss of exclusivity
18	Evidence, guidelines, sites, trends and more: how they are made
19	Trial trends
20	Research trends and women's health
21	Reports, slides, posters and exports
22	US and EU regulatory paths
23	The weekly newsletter
24	Connect your own AI assistant (MCP)
25	Investors, Deals and Labs
Part III	Reading the signals
26	Choosing the right signal
27	The signals, one by one
28	Worked readings
29	The signals in pictures
30	Rules of thumb
Part IV	Playbooks
31	Scan a target in half an hour
32	Plan a phase 2 trial
33	Prepare a partnering meeting
34	Find academic science to partner with
35	Keep watch, week by week
36	For CROs, consultants and investors
37	For clinicians, patient organisations and universities
Part V	Reference
38	Limits, good practice and the forecast record
39	The numbers at a glance
40	Glossary
41	Questions, privacy and contact

Phaseline · usephaseline.com · October 2026 · Lars Kullman, Gothenburg · The site is updated every Monday; this guide follows the site and is rebuilt with it. Not medical, investment or regulatory advice.

Part I

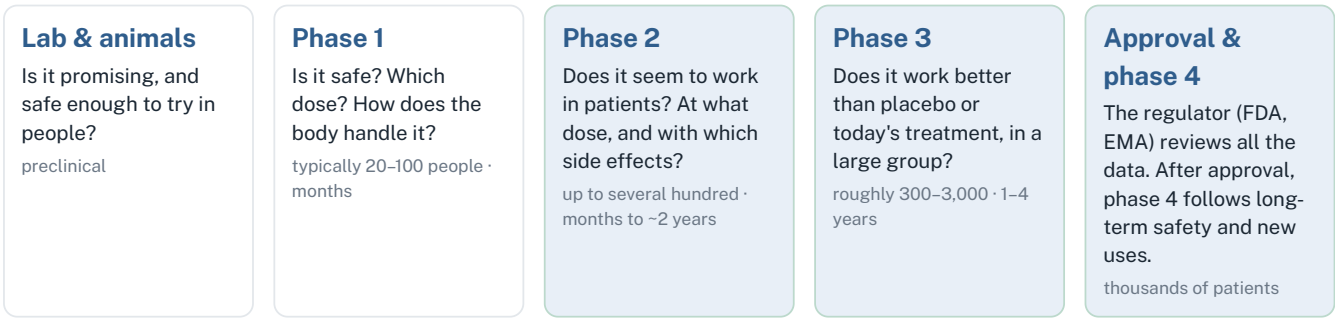
Orientation

What a clinical trial is, what Phaseline does with the public record every Monday, what is free and what is not, and where every number comes from.

Clinical trials in one chapter

A **clinical trial** is a research study that tests a new treatment in people. It follows a written plan, the protocol, which says who can take part, what they receive, what will be measured and for how long. An ethics committee and the medicines regulator must approve the plan before the first patient is treated, and most trials are registered in public databases such as **ClinicalTrials.gov**, where each one gets an NCT number.

A new drug passes through a series of steps. Each phase answers a different question, and the drug only moves on if the answer is good enough. Most do not.



Phaseline covers trials in **phases 2, 3 and 4** run by companies (shaded above). A phase 4 trial concerns a drug that is already approved, so it gets no approval likelihood.

The words that matter most

- **Sponsor** – the organisation responsible for the trial. A *company* (industry) sponsor usually owns the drug; an *academic* sponsor is a university, hospital, government body or foundation.
- **Primary endpoint** – the main outcome the trial is designed to answer. **Primary completion** is the date the last patient is examined for it; top-line results typically follow weeks to months later.
- **Randomised, blinded** – patients are assigned to treatment by chance, and (double-blind) neither they nor the doctors know who gets what. Both make a result more trustworthy.
- **Target and mechanism** – the molecule in the body a drug acts on (a receptor, an enzyme) and what it does to it. Drugs hitting the same target compete, even in different diseases.
- **Modality** – the kind of drug: small molecule, antibody, protein or peptide, or cell, gene and nucleic-acid therapy.
- **Genetic support** – evidence from human genetics that the target is causally involved in the disease. Programs with it have reached approval markedly more often.
- **Loss of exclusivity** – when patents and regulatory exclusivity end and generic versions may enter.

The glossary in chapter 40 has many more.

What Phaseline is, and the weekly cycle

Fewer than one in ten drugs that enter human testing ever reach approval: 7.9% from phase 1, according to the largest industry study (BIO, Informa Pharma Intelligence and QLS, 2021). Phaseline makes that attrition visible, trial by trial. Every week it reads all recruiting and active drug trials run by companies in phases 1 to 4 on ClinicalTrials.gov and gives each phase 2 and 3 trial:

- an **approval likelihood**: the estimated chance that the drug is eventually approved, for trials of this kind;
- an **expected readout window**, with any delays tracked week by week and links to FDA advisory committee meetings;
- **genetic support** for the drug's target, the **drug type**, and **earlier published results** for the same drug;
- for drugs already on the U.S. market, **patents and exclusivity**: when protection ends and generic competition can begin.

Phase 1 trials are listed too, they show who is entering a field and where the first studies in people run, but they get **no approval likelihood**. The method is built and checked on phase 2 and 3, and at phase 1 the road is long: in most areas about one drug in ten that enters phase 1 is ever approved, in oncology about one in thirty. The table marks them *Early · no estimate*, and the trial panel shows the base rate for the area as background only.

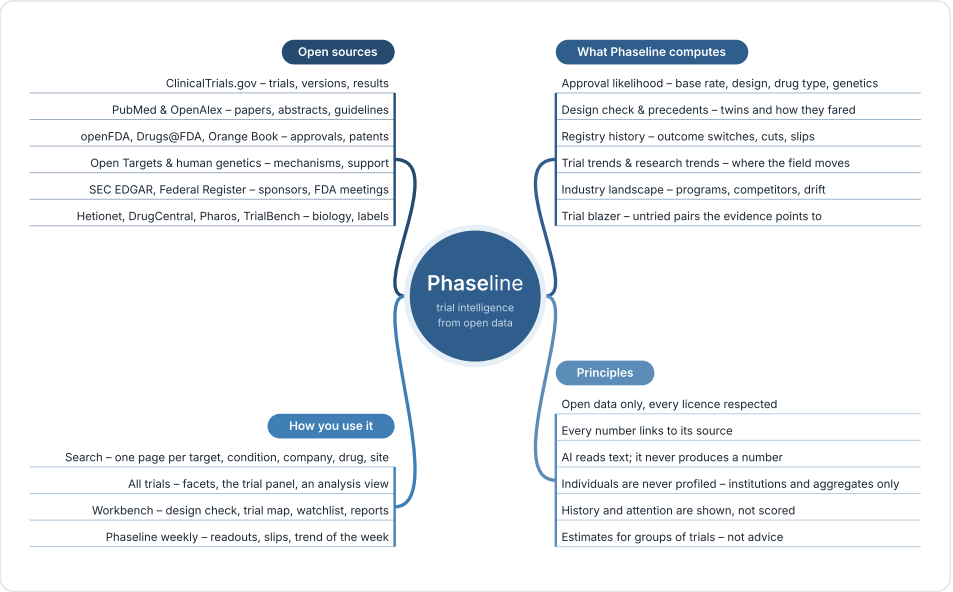
Around the trial table sit **Trial trends** (which targets, conditions and countries are gaining trial starts), **Research trends** (what medical research is publishing most about), **Women's health** (trials designed for women), the **Industry Landscape** (competitors, diagnoses, loss of exclusivity and company reports) and a **weekly newsletter**.

Who it is for

Phaseline is built for two readers first: the investor looking at a biotech or pharma company, and the small company that develops drugs without an analyst of its own (strategy, business development, clinical development, medical affairs). CROs, consultants, clinicians and universities use the same views from their side of the table. Typical questions it answers: *who else is working on the same target or diagnosis, and how far have they got? When does a competitor's drug lose its patent protection? Which trials have already been stopped, and why? Where are trials in this field run? How likely is a program to reach approval, and when will we know?*

Read every number as an estimate for trials like this one. ClinicalTrials.gov records how a trial is designed, not how it will turn out. Phaseline tells you the odds that history and published research suggest; it cannot tell you whether a particular trial will succeed.

What Phaseline covers, and the weekly cycle



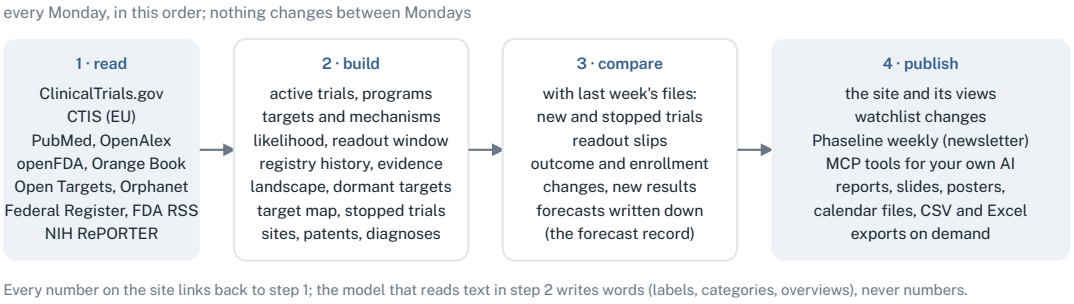
How it fits together: open sources go in, estimates, comparisons and trends come out, and every number links back to its source.

Phaseline reads ClinicalTrials.gov every week and keeps every **active interventional drug trial in phases 1 to 4**, from every kind of sponsor. "Active" means not yet recruiting, recruiting, enrolling by invitation, or active but no longer recruiting. Around it, Phaseline builds a set of connected views.

Layer	What it holds (October 2026)
Active trials	28,485 trials; 10,411 led by companies and 18,074 by universities, hospitals and other non-commercial sponsors.
Programs	About 15,000 programs (one sponsor × one investigational drug), 7,769 with a known molecular target.
Stopped trials	19,202 phase 1–4 trials terminated, withdrawn or suspended since 2015, 17,680 with a stated reason.
Finished trials	45,903 phase 2–3 drug trials started since 2010 and completed (37,398) or terminated (8,505) – the reference set of the design check.
Trial sites	617,011 site entries in 158 countries; 27,205 institutions running at least two active trials.
Evidence	Published results, conference abstracts, preprints and registry results for the drugs in active trials, clinical guidelines that name them, FDA approvals, Orange Book patents.

The weekly cycle

Every Monday morning (European time) an automatic run fetches the registry and the other sources, rebuilds every layer and compares the result with the week before. That comparison feeds the readout slips, the change log behind the watchlist and the newsletter. The date of the data is shown on the site. Between Mondays nothing changes, so a figure you note on Tuesday still holds on Friday.



The weekly cycle. Open sources go in on Monday, every layer is rebuilt, the result is compared with the week before, and the site, the newsletter and the tools for your own AI are published from the same files.

What is not covered

- Trials that are only registered elsewhere (ISRCTN, the Chinese or Japanese registries; the EU register CTIS is read for company phase 2–3 trials) and not on ClinicalTrials.gov. Most multinational industry trials are on ClinicalTrials.gov; many national academic trials are not.
- Device, behavioural and procedure trials, and observational studies.
- Anything not in a public source: company plans, unpublished data, preclinical work, deal terms.

A rule of thumb for the whole guide: Phaseline describes the public record well and the private world not at all. When the record is silent, Phaseline says "unknown", never "no".

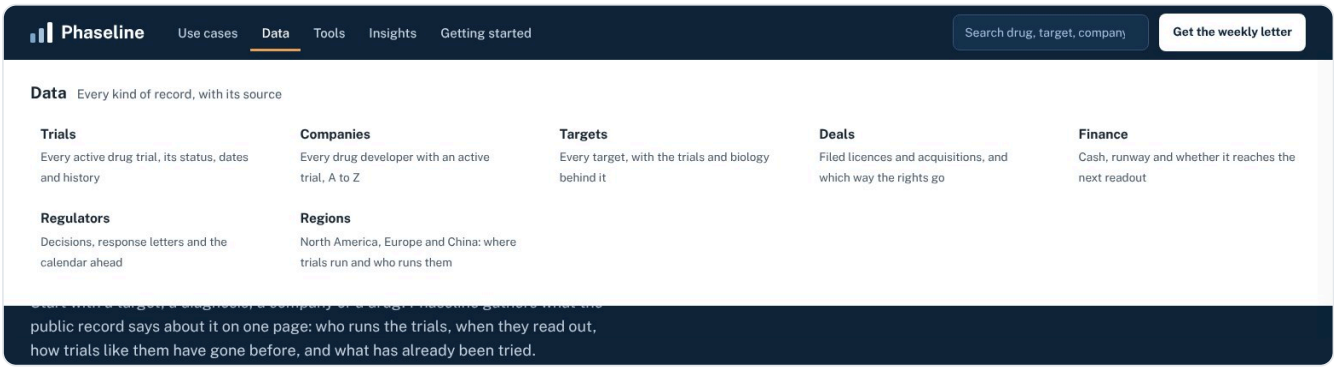
Access, finding your way and the weekly letter

Everything described in this guide is open to everyone, with no account and nothing to pay. All thirteen areas, the landscape, the design check, the watchlist, reports, slides and posters work the same for every visitor. Lists you save stay in your own browser.

Finding your way

The dark bar at the top holds five menus. Each opens a panel in which every view has a line saying what it answers.

Menu	What it gathers	Examples
Use cases	What you came to find out	Competitive landscape, Readout watch, Trial design, Partnering, Due diligence, New directions
Data	Each kind of record	Trials, Companies, Targets, Deals, Finance, Regulators, Regions
Tools	Where you work with the data	Search, Watchlist, Readout calendar, Design check, Company reports, Trial map
Insights	What the data says, written up	Weekly letter, Trial blazer, Trends, Labs, Reports and papers, Track record
Getting started	For a first visit	The how-to video, this guide, Methodology, About, Give feedback



The top bar with the Data menu open.

The same view can be reached from more than one menu: Deals is under Data and, as Partnering, under Use cases. Under the bar, a row of buttons shows the views that belong together with the one you are in, so that Industry landscape, Investors, Deals, Trends and Labs are one click apart. The search box in the bar goes straight to Explore from any page.

The weekly letter by email

1. Click **Get the weekly letter** (top right). It opens the Weekly page with the sign-up form.
2. Enter your email address. Role and organisation are optional and help us understand who reads Phaseline.
3. A mail asks you to confirm. Nothing is sent to you until you have clicked the link in it.
4. The letter comes on Mondays. Every letter has a link to leave the list.

The address is held by MailerLite, which sends the letter; the Privacy page says what is stored. The full letter and its archive are also on the Weekly page, without signing up.

Give feedback

We would value your view. The short form, **Give feedback** under *Getting started*, asks what you used Phaseline for and what is missing. Every question is optional.

Part I · 4

Sources and licences, and where AI is used

Every source is open and its terms allow this use. No paid trial-intelligence database is used.

Source	Used for	Terms
ClinicalTrials.gov	Trials, design, conditions, MeSH terms, sites, dates, status, stop reasons, posted results	Public domain
PubMed (NCBI)	Published results, guidelines, research trends, similar articles	NLM terms; abstracts read, not republished
MeSH	Condition and topic headings	NLM
Open Targets	Drug–target mechanisms	CC0
UniProt (Swiss-Prot)	Protein name, function, location per target	CC BY 4.0
ClinVar (NLM)	Gene-level variant summary, gene–condition links	Public domain
Reactome	Pathways per protein	CC0
AlphaFold DB (EMBL-EBI)	Structure link per accession	CC BY 4.0
NIH RePORTER	NIH grants behind trials (via the registry's grant numbers); SBIR/STTR awards to sponsoring companies	US government work, public domain
openFDA, Drugs@FDA	Approvals and labels; whether the drugs of finished trials were approved afterwards	Public domain
AACT (Clinical Trials Transformation Initiative)	ClinicalTrials.gov's posted results as tables: participant flow and dropout, serious adverse events, primary-outcome p-values, time to results; monthly, for the design check	ClinicalTrials.gov data, public domain; free account, cited
ClinicalTrials.gov version history	What each active trial's entry looked like before: primary outcomes, enrollment, dates, collaborators, sites	Public domain
FDA Orange Book	Patents and exclusivity	Public domain
Federal Register	FDA advisory committee meetings	Public domain
FDA RSS feeds	Approvals, safety communications, advisory committees, guidances as announced	Public domain
SEC EDGAR, Form D	Private offerings in biotech and pharma: issuer, industry, amount sold, total offering, date of first sale	Public domain
openFDA, complete response letters	FDA's published letters declining approval as submitted: date, application, company, drug, kinds of deficiency; later approvals via Drugs@FDA	Public domain
SEC EDGAR, XBRL company facts and 8-Ks	Cash, investments and operating cash flow as tagged by each filer; press releases filed as 8-Ks; for runway against readouts and the filings list	Public domain
SEC EDGAR	Listed or private sponsor, company size	Public domain

CTIS (EU Clinical Trials Information System, EMA)	EU trials since 2023: status, member states, sites, substances, conditions, results; joined to ClinicalTrials.gov by NCT number, or shown as EU-only rows	EMA data, reuse with acknowledgement
OpenAlex	Citations from guidelines to studies; conference abstracts (ASCO, ESMO, ASH, AACR and other meetings) and preprints (medRxiv, bioRxiv) that name a trial or its drug; the references of trial reports walked back to the basic research behind them (Toward the clinic)	CC0
medRxiv / bioRxiv API	Whether a preprint has since been published (the published DOI)	Public API; preprint text never shown
ROR	Matching trial sites to institutions	CC0
UniProt, NCBI Gene	What each target is: protein name, function, aliases (the target primer)	CC BY 4.0; public domain
Pharos / TCRD (NCATS)	Target family and development level (Tclin, Tchem, Tbio, Tdark)	Public, per primary sources
Hetionet	Gene–disease associations and pathways (Trial blazer, experimental)	CC0
DrugCentral	Approval dates from FDA, EMA and PMDA	CC BY-SA 4.0
TrialBench, CTO	Labelled trial outcomes for backtests (Trial blazer)	CC BY 4.0; MIT
Human Disease Ontology, ICD-10-CM	Diagnosis codes and titles	CC0; public domain
Minikel et al. 2024; Zhou et al. 2025	Genetic support; success rates by drug type and disease class	CC BY 4.0

Where AI is used, and where it is not

An AI model (Claude, from Anthropic) helps with reading: it reads registry text to tell a sponsor's own drug from comparators and to name targets for code-named drugs; it reads abstracts to label published results; it sorts stop reasons the rules cannot place; it matches some conditions to ICD-10 codes; and it writes the short research-trend overviews from counts and titles. Each reading is checked by rules where possible and marked **AI** on the site. **No AI model produces an approval likelihood, a design-check figure or any other number.**

Part II

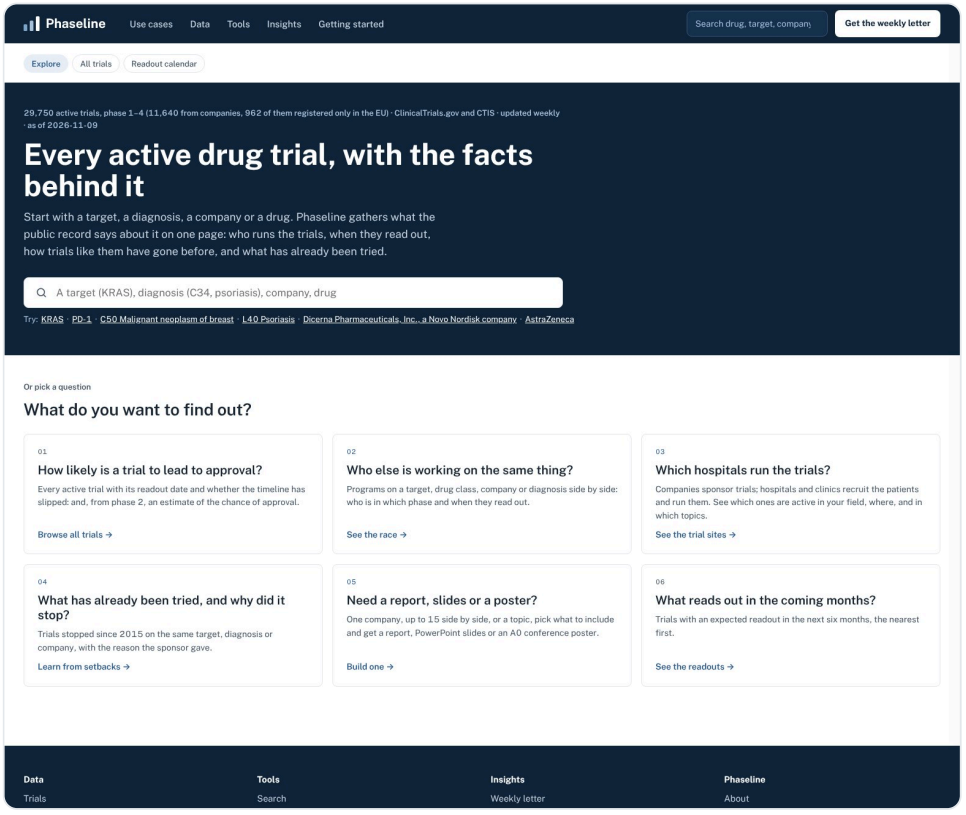
The site, view by view

Each part of the site: what it shows, how to read it, and how the numbers behind it are made.

Part II · 5

Start here: Explore

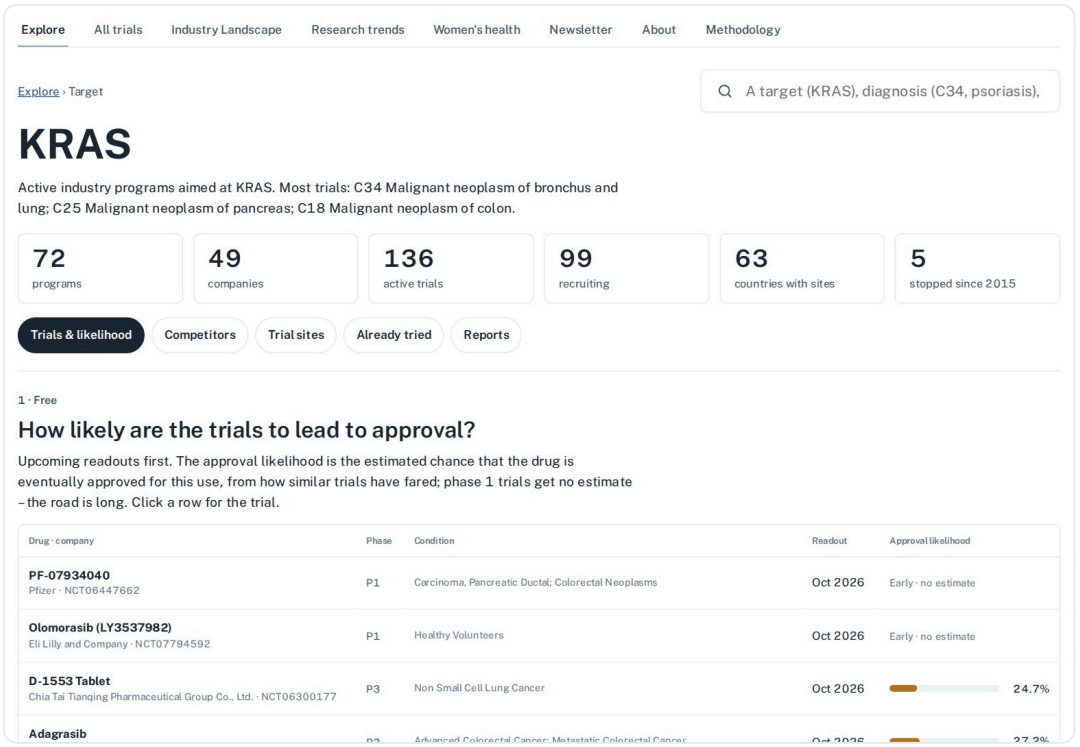
Phaseline opens on **Explore**. Most people come with one thing in mind, a target, a diagnosis, a company, a drug or a hospital, and a question about it. Type it in the search box. The suggestions say what kind of thing each one is: *Target*, *Drug class*, *Diagnosis · ICD-10*, *Condition · MeSH*, *Company*, *Drug* or *Institution*. Use the arrow keys and Enter, or click.



Explore: one search box for everything, and six questions to start from.

Every thing gets one page, and every page has the same five parts, in the same order:

1. **Trials and likelihood** (all plans) – the active trials, upcoming readouts first, with the approval likelihood of each.
2. **Competitors** – who else is working on the same thing, by phase and expected readout. On a drug's page: the other programs on the same targets. On a company's page: its own pipeline and the companies working on the same targets.
3. **Trial sites** – the hospitals and clinics that recruit patients and run these trials (chapter 12).
4. **Already tried** – trials stopped since 2015 and the reason the sponsor gave.
5. **Reports** – a report, PowerPoint slides or a poster, and the programs as CSV.



The page for KRAS: key figures, the five parts, and the trials with the nearest readouts first.

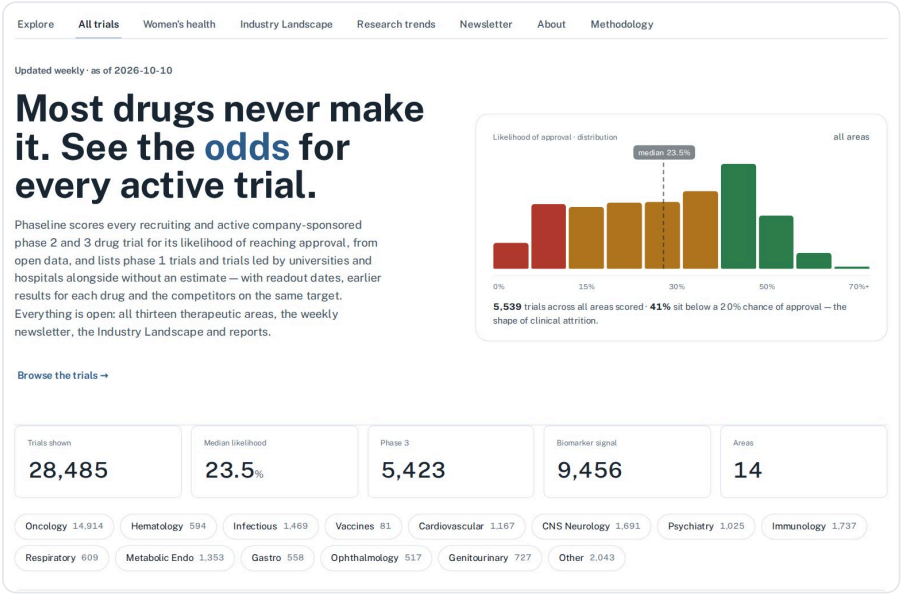
On the page of a target or a condition there is also **Research vs trials**: the change in PubMed papers on the topic set against the change in trial starts, with a verdict in words, is the science ahead of the trials, or behind? Both are counts; treat it as a prompt for a question.

Every part of the page is open. Company and drug names on a page lead to their own pages, so you can follow a thread, from a target to a company, from a company to a hospital, without changing tab. If you have no particular thing in mind, the six question cards under the search box lead to the right view: all trials, the race, trial sites, stopped trials, reports or the coming readouts.

Each page has its own address (for example usephaseline.com/#x/target/KRAS), so it can be bookmarked or sent to a colleague.

Part II · 6

All trials: reading the table



The All trials tab: key figures, the therapeutic areas and the trial table, sorted by expected readout.

The page opens with key figures (trials shown, readouts due in the next six months, phase 3 trials, biomarker-selected trials, areas), the therapeutic areas (locked ones marked with a padlock) and then the trial table, sorted by expected readout with the nearest first. The approval likelihood is not a column in the table: open a trial to see its estimate and the reasons behind it. To rank trials by likelihood instead, pick *likelihood, high first* in the **Sort** menu above the table.

Column	What it shows
Phase	P1, P2, P3 or P4. Phase 4 trials concern approved drugs and are marked *approved*.
Readout	Month the primary outcome is complete. If that date has passed but the study is still running, the expected study completion is shown instead. *est.* = estimated date; *slipped* = the date has moved later; *AdComm* = linked FDA advisory committee meeting.
Genetics	✓ and a gene name when the drug's target is genetically linked to the disease; *none* when it is not; a dash when the target is unknown.
Area	Therapeutic area; a *biomarker* label when patients are selected by biomarker.
Study	Title, drug names and NCT number (links to ClinicalTrials.gov). ▲ and ▼ count earlier positive and negative results for the drug.

Use the **Sort** menu (expected readout, likelihood, phase, sponsor, title, enrollment, status) or click a column header. Hover over a number for a short explanation. The estimate itself, when a trial has one, is shown in the trial card: green 30% or more, amber 12–30%, red below 12%; trials led by a university, hospital or government have no estimate.

Why academic trials have no estimate

The approval likelihood is built on how company drug programs have fared. Trials led by universities and hospitals often test drugs that are already approved, in new uses or combinations, and rarely lead to an application of their own. They are listed so that the picture is complete: who else is working on a target or a disease, and where the trials run.

The registry, and how Phaseline reads it

Almost everything in Phaseline begins with ClinicalTrials.gov, the registry run by the US National Library of Medicine. Knowing what the registry is, and is not, explains most of what Phaseline can and cannot show. This chapter answers the questions that come up most often, in the order people ask them.

What is in ClinicalTrials.gov, and what is not?

The registry holds a structured record for every study its sponsors chose or were obliged to register: title, conditions, interventions, phase, sponsor and collaborators, design (randomisation, masking, allocation), enrollment (estimated, then actual), start and completion dates (estimated, then actual), primary and secondary outcome measures, eligibility criteria, sites and countries, status, and, for a minority, posted results. US law requires registration and results for most drug trials with a US site or an IND, and journals require registration before enrollment, so coverage of company phase 2–3 trials is close to complete worldwide. What the registry does not hold: the protocol itself (sometimes attached, usually not), interim data, the statistical analysis plan, the reason a company really stopped (only the sentence it wrote), and anything about trials run only under the EU system and never registered in the US, a minority, but a real one in Europe.

Why does Phaseline rely on one registry?

Because it is the one with a complete, machine-readable version history, open terms of use and a stable identifier (the NCT number) that papers, conference abstracts, preprints and FDA documents all cite. The EU's CTIS is read as well, since October 2026: trials that also carry an NCT number get their EU side on the trial card (authorisation, member states, sites, results), and company phase 2-3 trials registered only in CTIS appear as rows of their own, marked "EU only", without a likelihood, because the estimate is built on ClinicalTrials.gov fields. CTIS lacks the version history that the slips, outcome switches and enrollment cuts in chapter 11 depend on, so those signals remain ClinicalTrials.gov's. The WHO's ICTRP is not used. Phaseline's licence rule (chapter 4) is that every source must be usable commercially with its terms documented; ClinicalTrials.gov is public domain and EMA's data may be reused with acknowledgement.

Who is the sponsor? How are companies merged?

The registry names a lead sponsor and any collaborators. Phaseline takes the lead sponsor as the trial's owner. Company names are then normalised, legal suffixes and generic words removed, so that "Merck Sharp & Dohme LLC" and "MERCK SHARP DOHME" are one sponsor, and the main subsidiaries are folded into their parents from a short table (Genentech under Roche, Janssen under Johnson & Johnson, Genzyme under Sanofi), extended when a new name turns up. Smaller acquisitions are not merged until they are added to that table, so a recently bought biotech may still appear under its own name; the company report lists the registry names it matched so the reader can check. Where the registry entry is a contract research organisation acting for a company, the CRO stays the sponsor of record: Phaseline does not guess who is behind it.

Industry or academic?

The registry classifies each sponsor as industry, NIH, other US federal, or "other" (universities, hospitals, foundations, networks). Phaseline uses this classification and then checks company names against its own list, so that a small biotech filed under "other" is still counted as industry. "Academic & other" in the filters means everything not industry. A university trial of a company's drug joins the company's program in the Industry Landscape, marked academic, because the question there is what is being tested, not who registered it.

Does a trial belong to the drug, the sponsor, or the site?

All three, depending on the page. On a drug's page the trial counts once under that drug, whichever company runs it. On a company's page it counts under the company that registered it, and the company's drug is the one Phaseline identifies as investigational, comparators, placebo and background therapy are read out of the intervention list and left aside. On a

hospital's page the trial counts if the hospital is one of its sites. The same trial can therefore appear on many pages; it is still one trial, with one NCT number, and the counts on different pages are not meant to add up.

How current is the data?

Phaseline refreshes every Monday. The registry itself is updated by sponsors when they choose to, within the deadlines the law sets (status changes within 30 days, results within a year of primary completion, in principle). In practice, a sponsor's press release often precedes the registry change by weeks, and some estimated dates are never updated at all. Registry history (chapter 11) shows when each field was last touched; a primary completion date marked "estimated" and untouched for two years should be read as a guess the sponsor made two years ago.

What does Phaseline add to the record?

Six kinds of thing, each marked so that it can be told from the registry's own content: the therapeutic area and ICD-10 codes assigned to each trial; the identification of the sponsor's investigational drug and its targets; the links to results, abstracts, preprints, guidelines, patents and FDA meetings; the estimates (approval likelihood, trial twins); the derived signals from the version history (slips, switches, cuts); and the trend counts. Everything else on a trial card is quoted from the registry. The source tags, OT, AI, ✓, Conference abstract, Preprint, say which is which.

What can go wrong in the record?

- **Wrong dates and counts.** Entered by hand; some are typos, some are placeholders. Phaseline shows them as entered.
- **Vague outcome measures.** "Efficacy" as a primary outcome cannot switch, because nothing was specified.
- **Conditions listed loosely.** A trial in one cancer may list five; area assignment follows the MeSH terms the registry maps, and can land in Other.
- **Drug names.** Code names change, brand names arrive late, salts and suffixes vary. Phaseline matches on normalised names, with salts and biologic suffixes stripped, and shows the names it used.
- **Status lag.** A trial that has in fact finished may say "active, not recruiting" for months. A conference abstract reporting results is often the first public sign.

A habit worth keeping: when a figure in Phaseline matters to a decision, click through to the registry record. The link is on every card, and the version history is one more click.

Finding trials

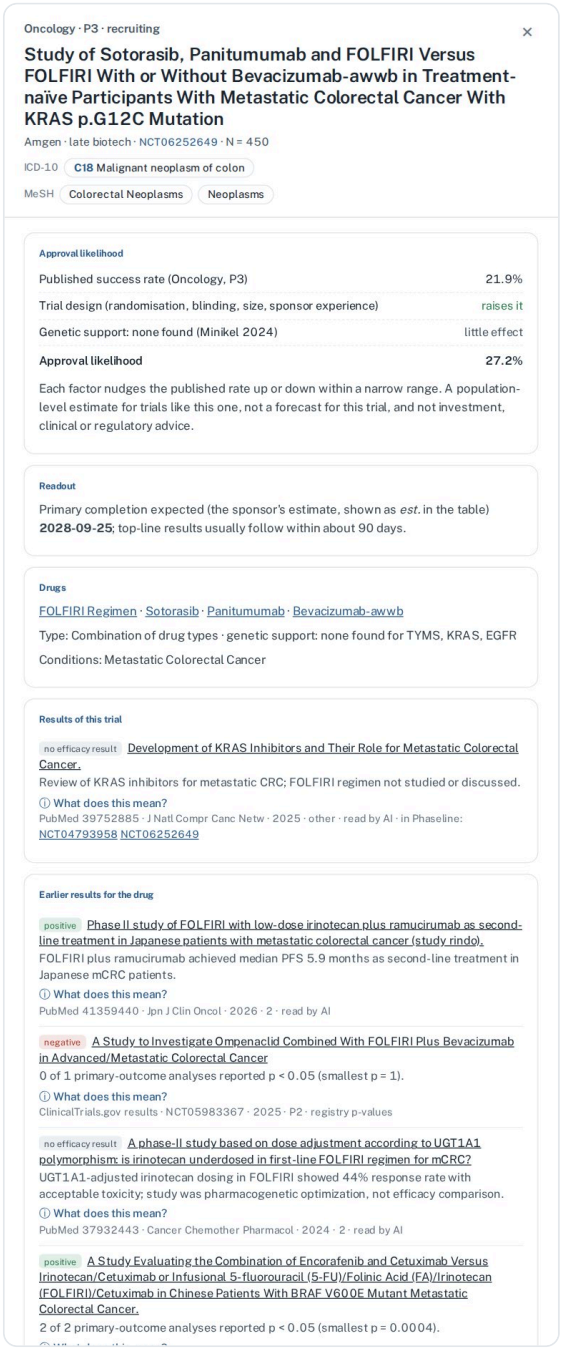
The search box

Searches drug, disease, sponsor, title, NCT number, MeSH terms and ICD-10 diagnosis. With several words, all must match: `semaglutide obesity`. Type an ICD-10 code such as `E11` (type 2 diabetes) or `C34` (lung cancer) to list every trial coded with it; the codes are shown in small type under each trial's area. MeSH terms are the National Library of Medicine's subject headings that ClinicalTrials.gov gives each trial's conditions; broader headings work too, so `cardiovascular diseases` finds trials in every heart and vessel disease. The trial panel shows a trial's ICD-10 codes and MeSH terms; click one to see every trial that has it.

Filters

- **Sponsor**: all sponsors (the default), **Industry** (a company leads the trial) or **Academic & other** (universities, hospitals, governments and other non-commercial sponsors). The choice applies across the site, the table, every Explore page, the landscape, stopped trials and competitor lists, and is remembered by your browser.
- **Phase** and **area**.
- **Drug type**: small molecule, antibody-related, protein or peptide, or cell, gene and nucleic-acid therapy.
- **Results**: only trials whose drug has published results, only positive or negative ones, or only trials with a **conference abstract** (results presented at ASCO, ESMO, ASH and other meetings, see chapter 9).
- **Readout**: in the next 90 days, 6 months or 12 months, or completion date already passed; or trials whose completion date has **slipped twice or more**, or whose **primary outcome changed** after the start (chapter 9, Registry history).
- **Register**: ClinicalTrials.gov trials, trials also found in the EU register (CTIS, joined by NCT number: the trial card then shows the EU authorisation, each member state's status and site count, the rare-disease flag and whether results were submitted), and trials registered only in CTIS. The last appear as rows marked "EU only" with their EU CT number, phase, area, sponsor, substances, countries and estimated end date as the readout, but without a likelihood, because the estimate is built on ClinicalTrials.gov fields.
- **Orphan designation**: trials where a tested drug holds an orphan drug designation in force at FDA, at EMA, or either, and trials where FDA has approved the drug for an orphan indication. The list marks them "Orphan FDA", "Orphan EMA" or both, and the trial card lists each designation with its indication, date, sponsor and, for FDA, the approval and exclusivity dates. Designations belong to the drug and an indication, not to the trial, so the designated indication is shown and may differ from the trial's.
- **Drug status**: *New drug* keeps the trials where a tested drug had no FDA approval for any use when the trial started; *Approved drug, new use* keeps those where every tested drug already carried one (repurposing, line extensions, combinations of approved drugs). The list marks each trial with a small green "New drug" or grey "New use" badge next to the drug names, the sort menu can put either first, and the trial card names the approved drugs. The lookup is Drugs@FDA, so a biologic licensed by CBER can look new although it is approved. Trials where no drug name could be read carry no badge.
- **Population**: trials that admit children, older adults (65+) or adults only, and trials open to women only or men only, from the registry's eligibility entry. Each trial card says who may take part.

Trial detail and drug view



The detail panel.

Click any row to open a panel with everything Phaseline knows about the trial:

- **Approval likelihood**, broken down factor by factor: the literature base rate, the design signal, drug type and genetic support.
- **Readout**: expected date, slips and FDA advisory committee meetings.
- **Drug**: names, type, targets and conditions.
- **Results of this trial**: publications that cite its NCT number.
- **Earlier results for the drug**: phase 2–3 papers, **conference abstracts** and registry results, labelled *positive*, *negative*, *mixed* or *no efficacy result*, with links to PubMed, the abstract's DOI or ClinicalTrials.gov. Conference abstracts (ASCO, ESMO, ASH, AACR and other meetings) are not in PubMed; Phaseline finds them through OpenAlex and marks them with the meeting and year. Rows with one carry an **Abstract** marker in the table.
- **Registry history**: what the trial's own ClinicalTrials.gov entry looked like before, every move of the completion date since the entry was first posted, a primary outcome replaced after the start, planned enrollment cut or raised, collaborators that came or went, on a timeline with a link to each version. Shown, not scored: none of it enters the approval likelihood, and every change has ordinary explanations too.
- **Trials like this one, and how they went**: for a phase 2 or 3 trial, its closest finished twins from the design check, with whether their drugs were later approved by the FDA, for which indication and how long after the trial. Shown when at least five twins have a decided outcome.
- **Clinical guidelines**: published guidelines that name the drug or cite a study of it, labelled *recommended*, *emerging*, *under investigation*, *mentioned* or *cites a study*. A guideline is where experts weigh all the evidence and turn it into advice for doctors, so a place in one means the drug's results have been judged strong enough to change care. It is a form of impact that citation counts miss. Supplementary information: it does not change the approval likelihood. Rows marked **GL** in the table have at least one.
- **Competitors on the same target**: other active phase 1–4 programs aimed at the same molecular target, from any company, on a small timeline by phase and

expected readout. The panel counts how many are further along or read out earlier, and lists the nearest ones. Context only; it does not change the approval likelihood.

- **Patents and exclusivity**: for drugs already approved in the United States, the patents and exclusivity periods listed in the FDA Orange Book, with the last expiry date of each kind and whether generic versions are approved. A listed date is not the date generics launch.
- **Other trials with the same drug** and the **success-rate trend** for the disease class.

Click a drug name for the **drug view**: all its active trials and all earlier results in one place.

Every panel has its own address, such as usephaseline.com/#trial/NCT04622319, which you can bookmark or share. Close it with × or `Esc`.

> Publication labels come from an AI reading the abstract, and registry labels from the reported p-values. Always open the source before relying on a label.

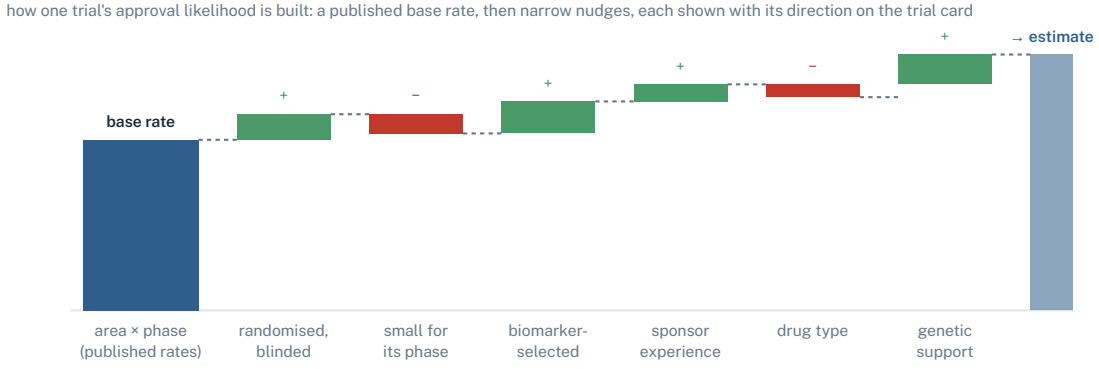
Part II · 10

The approval likelihood

Each company-led trial in phase 2 or 3 gets one estimate of the probability that the drug is eventually approved for that use. It is a **population-level estimate for trials like this one**, not a forecast for the specific trial, and it is shown as a **band**: under 5 %, 5–10 %, 10–20 %, 20–30 %, 30–45 % or over 45 %, with a word beside it (low, around the industry average, high).

The figure is shown when a trial is opened, together with the reasons behind it (the *Approval likelihood* breakdown, the finished *trial twins*, the *Registry history*). The All trials list itself is sorted by expected readout and does not carry the figure as a column; the **Sort** menu can order the list by likelihood, high or low first. Trials led by universities, hospitals or governments, and phase 1 trials, have no estimate.

How it is built



From base rate to estimate. The trial card shows the base rate and each nudge with its direction; the exact weights are Phaseline's own, the evidence behind each is linked.

1. **Starting rate.** The published phase-transition success rate for the trial's therapeutic area and phase, how often drugs at that stage have historically gone on to approval (Wong et al. 2019; Hay et al. 2014; industry benchmarks).
2. **Adjustments.** The rate is nudged up or down, within a narrow range, by factors with a published or well-documented link to success:
   - *Trial design and context*: patient selection by biomarker, randomisation, blinding, whether the trial is large enough for its phase, and the sponsor's experience. Better-designed trials move the estimate up.
   - *Drug type*: from the success rates by modality in Zhou et al. (2025). Adjusted modestly, because modality is partly tied to disease area, which the starting rate already covers.
   - *Genetic support*: support raises the estimate; no support lowers it a little; an unknown target changes nothing.
3. **Ceiling.** No estimate exceeds 90 %.

The trial panel shows the starting rate, the **direction** of each adjustment and the result. The exact weights are Phaseline's own calibration and are not published.

Why a band and not a number

The arithmetic above produces a number with decimals, and Phaseline keeps that number for sorting, medians and the forecast record. The reader never sees it. The Leiden Manifesto for research metrics (Hicks, Wouters, Waltman, de Rijcke and Rafols, 2015) asks that indicators avoid misplaced concreteness and false precision, and the backtest shows why that applies here: trials scored 10–15 % and trials scored 15–20 % were approved at the same observed rate, so a figure such as 13.4 % claims a resolution the method does not have. The bands are the backtest's own calibration bins, and the trial panel says for each band how the backtest's trials in that band actually went: the observed approval rate, a 90 % interval and the number of trials. In phase 2, for instance, trials scored 20–30 % were approved for their disease about 23 % of the time, and trials scored 30–45 % about 39 % of the time. Where the record is uncomfortable (phase 2 trials scored 5–10 % were approved more often than those scored 10–20 %) it is shown as it is; that is what the record is for.

Who gets one

Trial	Estimate?	Why
Company, phase 2–3	Yes	What the method is built and checked on.
Phase 1 or 1/2	No	The road is long; the panel shows the area's published phase 1 rate as background only.
Phase 4	No	The drug is already approved.
Academic sponsor	No	Investigator-led trials often test approved drugs in new uses and rarely lead to their own application.

Does it work?

Phaseline scored 5,693 industry phase 2 and 3 trials that started 2012–2016 with today's method and checked which drugs the FDA later approved for the trial's disease. The method ranked them clearly better than the published rates alone, and among trials with the same starting rate, those Phaseline lifted most were approved far more often. The full track record, with its misses and limits, is on the site as a PDF.

How to read it

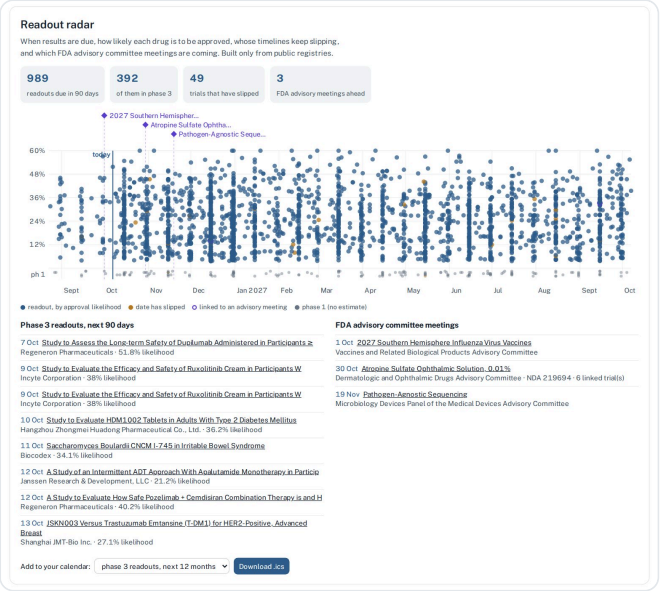
- Compare, don't predict: the number is most useful for ranking programs against each other and against the area's base rate.
- Two trials in the same band are, for the method, alike; the bands are as fine as the backtest can tell apart.
- It ignores what the public record cannot show: interim data, manufacturing, money, strategy.

Not investment advice. The likelihood says nothing about share prices, deal value or what to buy or sell.

Why not a machine-learning model?

Models for trial outcomes benchmarked on public data reach only moderate accuracy, especially in early phases (Qian et al. 2025). Starting from published rates and documented effects keeps every estimate traceable and explainable, factor by factor.

Readouts, slips and drift



Upcoming readouts on a one-year timeline, with FDA advisory committee meetings as purple diamonds.

The radar has its own button, **Readout calendar**, under **Tools** in the top bar, and in the row of buttons on the start page. Each dot is a trial whose primary outcome is due; the higher the dot, the higher the approval likelihood, and phase 1 trials sit in a band at the bottom. Amber dots have slipped, and a purple ring means an FDA advisory meeting is linked. Click a dot to open the trial on ClinicalTrials.gov. Two lists below show the largest expected moves in the next 90 days and the coming FDA meetings.

Add readouts to your calendar

Choose what to follow in the menu under the radar (large expected moves, all readouts in 90 days or 12 months, or FDA meetings only) and click **Download .ics**. The file opens in Google Calendar, Outlook and Apple Calendar. Dates change, so download a fresh file after the Monday update.

Success-rate trend

The chart *Are success rates rising or falling?* shows the share of drug development programmes that reached approval in each disease class since 2001, against all drugs (Zhou et al. 2025). Choose a disease class and a phase in the menus.

How readouts, slips and drift are made

Every trial states a **primary completion date**, either estimated or actual. Phaseline shows a **readout window** starting at that date and running about 90 days, the usual delay before top-line results. When the primary completion date has passed but the study is still running, Phaseline shows the study completion date instead (usually an estimate), and the trial panel gives both.

Slips

Each week the estimated date is compared with last week's. When it moves later, Phaseline counts a **slip** and adds the delay. The registry itself shows only the current date; the history is what Phaseline adds. Weekly tracking began in September 2026, so slip counts grow over time.

Registry history

ClinicalTrials.gov keeps every version of a trial's entry. Phaseline reads that history for the active trials, phase 3 first, filled in over the first weekly updates, and keeps, per version, the status, the enrollment and whether it is estimated or

actual, the start and completion dates, the primary outcome measures, the reason it stopped, the collaborators and the number of sites. From consecutive versions it notes what changed *after the trial started*:

Change	Rule	Why it is worth a look
Primary outcome replaced	A primary outcome measure in one version is not in the next, and a new one appears; rewordings of the same measure (added time frame, the same words) do not count	The measure that counts should be fixed before the data come in. A switch after the start is the classic thing to check, and sometimes has a good reason, such as a regulator's request.
Primary outcome added or dropped	The number of primary measures changes, the rest unchanged	Often a sign of a redesign or of power concerns.
Enrollment cut or raised	The estimated enrollment moves by a fifth or more	A cut usually means recruitment is slow; a raise, a redesign after interim data or a new cohort.
Enrolled fewer than planned	The actual count comes in a fifth or more below the last estimate	The trial ended short of its plan; check whether the analysis is still powered.
Primary completion moved	The date moves later by a month or more; from the second time on, "moved again" with the count	One move is ordinary; the pattern is the signal. These counts reach back to the first version, before Phaseline's own weekly tracking began.
Collaborator added or removed	A collaborator joins or leaves the entry	Partnerships and exits often show here before a press release.
Sites cut	The number of sites falls by a quarter or more	Consolidation; often recruitment-related.

The trial panel shows the timeline under *Registry history*, with a link to every version on ClinicalTrials.gov. The table marks trials whose primary outcome changed or whose date slipped twice or more, and the readout filter can select them. The watchlist lists these changes for what you follow, and the newsletter carries the week's. All of this is shown, not scored: nothing from the history enters the approval likelihood, and every change has ordinary explanations too.

What the history predicts

Which of these changes matter was tested on a random sample of 4,000 finished industry phase 2-3 trials started 2014 to 2021, with each signal computed only from versions dated up to 12, 24 and 36 months after the start. At 24 months an enrollment cut carried a termination rate of 34% against 19% (risk ratio 1.8), a primary-outcome change 27% against 20% (1.4), while postponed completion dates, present in six trials of ten, did not predict termination (1.0). The signals add up: trials with two or three had the highest rates. The paper is a preprint, not yet peer reviewed: Kullman L, Research Square 2026, doi:10.21203/rs.3.rs-11447828/v1. The practical reading: an outcome change or a cut is a reason to look closely; a slipped date is a reason to check the next version.

Drift by sponsor

The *Readout drift* view in the Industry Landscape adds slips up per sponsor, companies grouped with their subsidiaries: how many tracked trials, how many slipped, total and longest delay. Delays have many ordinary causes, slow recruitment, protocol amendments, added cohorts, so drift describes the registry, not a sponsor's competence.

Results reporting by sponsor

The *Results reporting* view, next to drift, counts a different registry fact: of a sponsor's finished company phase 2 and 3 trials whose primary completion lies two years or more back, how many have results posted on ClinicalTrials.gov. WHO's guidance, ICH E6(R3) and the UK rules all put the norm at twelve months; two years leaves a margin for the registry's

own lag. Companies are grouped with their subsidiaries, the share for stopped trials is shown separately, and the page gives the overall rate by phase and by completion year. It is a record, not a verdict: posting is required by law for some trials and not for others, and a result published only in a journal does not count here. Academic sponsors are not included.

FDA advisory committees

Meetings announced in the Federal Register are linked to trials by drug and sponsor name. Linking is automatic, so always check the notice itself.

FDA news

FDA publishes RSS feeds of what changed on fda.gov for drugs, biologics and press announcements. They are lists of recently changed pages, twenty items each, so Phaseline reads them every Monday and keeps what it has seen for a year. Each item is classified by rule, never by AI (approval, safety communication, advisory committee, guidance, enforcement; index pages are dropped) and matched to the landscape by drug name and sponsor. A drug match shows on the trial card of that program's trials and in the watchlist; a sponsor match goes to anyone watching the company; the weekly briefing lists the week's approvals, safety communications and advisory committees. The feeds are same-day where Drugs@FDA, which Phaseline reads for approval outcomes, follows days to weeks later.

Calendar files

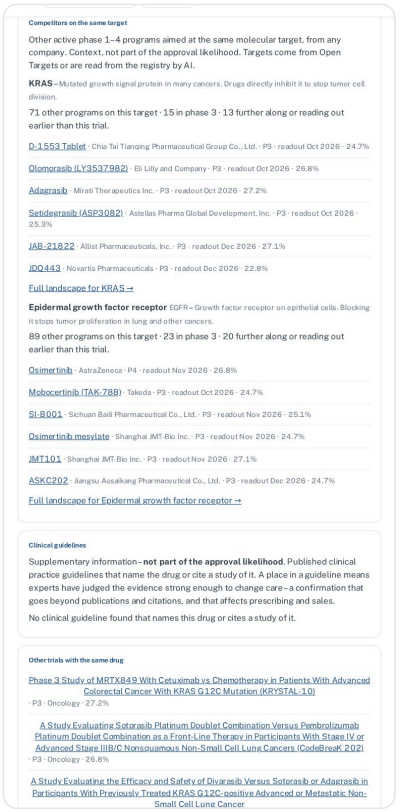
Readouts can be exported as an .ics calendar file from the readout radar, reports and the watchlist. Dates change; export again after the Monday update.

Competitors, trial sites and the Industry Landscape

Every drug acts on something in the body: a receptor, an enzyme, a protein on a cancer cell. Drugs that hit the same **molecular target** are in a race, even when they come from different companies and are tested in different diseases. Phaseline groups every active industry program in phases 1–4 by its target, so the race becomes visible.

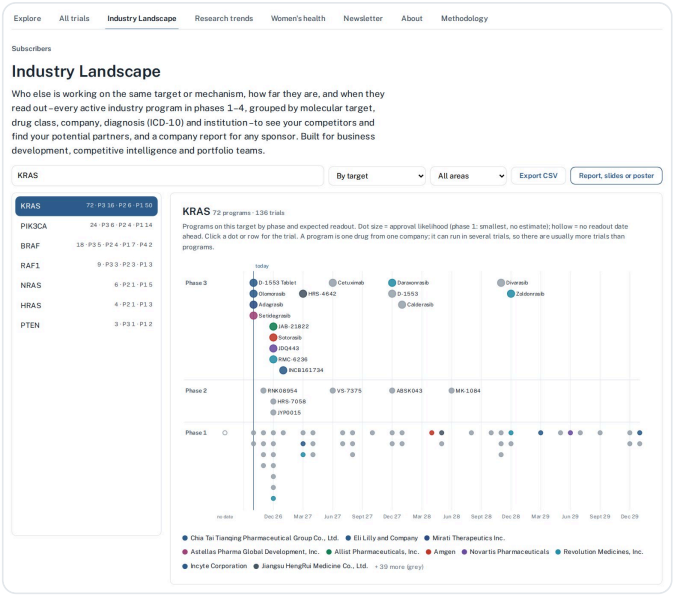
A **program** is one company's work on one drug, across all of its active trials. Its position on the timeline is its highest phase and its next expected readout; dot size shows the best approval likelihood among its trials, and a hollow dot means no readout date lies ahead.

In the trial panel (all plans)



Competitors on the same target for an Amgen trial of sotorasib: 18 other KRAS programs, 7 of them further along or reading out earlier.

The Industry Landscape tab



The Industry Landscape tab, searched for KRAS: the race by phase and readout date, and every program in a table below.

- **Search** for a target (KRAS, PD-1, GLP-1), a drug, a mechanism or a company.
- Switch between **By target**, **By drug class** and **By company**, and narrow to one therapeutic area.
- Click a dot or a row to open the trial. **Export CSV** downloads the group with all trial numbers, for your own analysis.

What has already been tried

Below the program table, the Industry Landscape lists trials on the same target (or by the same company) that were **stopped** since 2015, with the reason the sponsor gave on ClinicalTrials.gov, grouped as *efficacy / futility*, *safety*, *business / strategic*, *enrollment*, *external*, *regulatory* or *no reason given*. Click a category to filter the list, or export it as CSV. Learning where others have stopped, and why, is one of the quickest ways to avoid repeating a failure. Remember that a sponsor writes what it chooses to: a business reason can follow disappointing data.

Trial sites: where the trials are run

A drug company sponsors and pays for a trial, but the clinical work, recruiting patients, treating them and following them up, happens at hospitals and clinics: the **trial sites**. ClinicalTrials.gov lists them under *Contacts and Locations*. Below the program table, **Trial sites** shows the countries and the institutions, mostly university hospitals and universities, some private research clinics, that run most of the active trials on the target, drug class, company or diagnosis you are looking at. That shows where the patients, the clinical experience and the research groups are: useful when choosing sites for a new trial, or looking for clinical expertise and scientific advice.

- An institution's own page shows the topics of its active trials (their MeSH headings, such as *Breast Neoplasms*), the companies running trials there, and how the institution is written on ClinicalTrials.gov, under *Contacts and Locations* in each trial.
- Under **Site record** the page counts the institution's site listings in active trials by registry status: live, completed, withdrawn (opened but never enrolled a participant) and terminated early, with the share closed early against the share for all listings, and the same by therapeutic area. When the version history has been read, it adds the activation time: the median days from a site being listed as not yet recruiting to the first update showing it recruiting, against the figure for all sites. Under **Finished trials it sat in**, the page turns to the company phase 2 and 3 trials of the last five years the institution was a site of, with the outcome known: how many were terminated, and terminated for enrollment, against the number expected for trials of their area and phase (1.0× means they ended as such trials usually do), and the single-site trials, where the fate of the trial rests on one site. The trial card shows the status counts for one trial under *Registry history*. These are registry facts about listings, not ratings: sponsors choose sites and protocols, and a few listings make a noisy share.

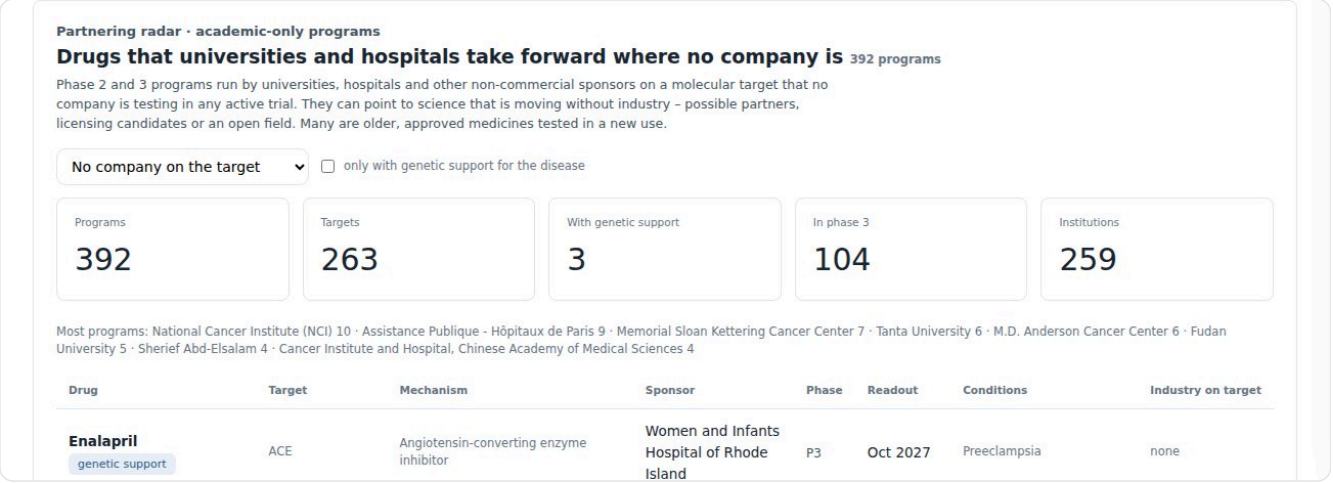
- Click **ROR** for the institution's record in the open Research Organization Registry.
- Click the institution, or choose **By trial site (hospital)** in the view menu and search for a hospital, city or country (Karolinska, Boston, Sweden), to see every active trial there, by company and area.

Institutions are matched to ROR, so the different spellings of the same hospital in the registry are merged. Most of the institutions are universities and university hospitals; some are research clinics. Phaseline shows institutions only, never investigators or other people, and it ranks no researchers. That is deliberate: the established names in your field you probably know already, and a ranked list would mostly confirm them while newcomers stay out of sight. Going to the publications, newest first, shows both. Sites that the sponsor lists without a name ("Research Site") count only towards their country.

Academic-only programs: a partnering radar

Choose **Academic-only programs (partnering)** in the view menu. It lists phase 2 and 3 programs run by universities, hospitals and other non-commercial sponsors on a molecular target that **no company** is testing in an active registered trial, or, if you choose, not beyond phase 1. These are places where science moves without industry: possible partners, licensing candidates or an open field. Tick **only with genetic support** to keep programs whose target is genetically linked to the disease (Minikel et al. 2024), the kind of evidence that has doubled success rates in the past. Many are older, approved medicines tested in a new use.

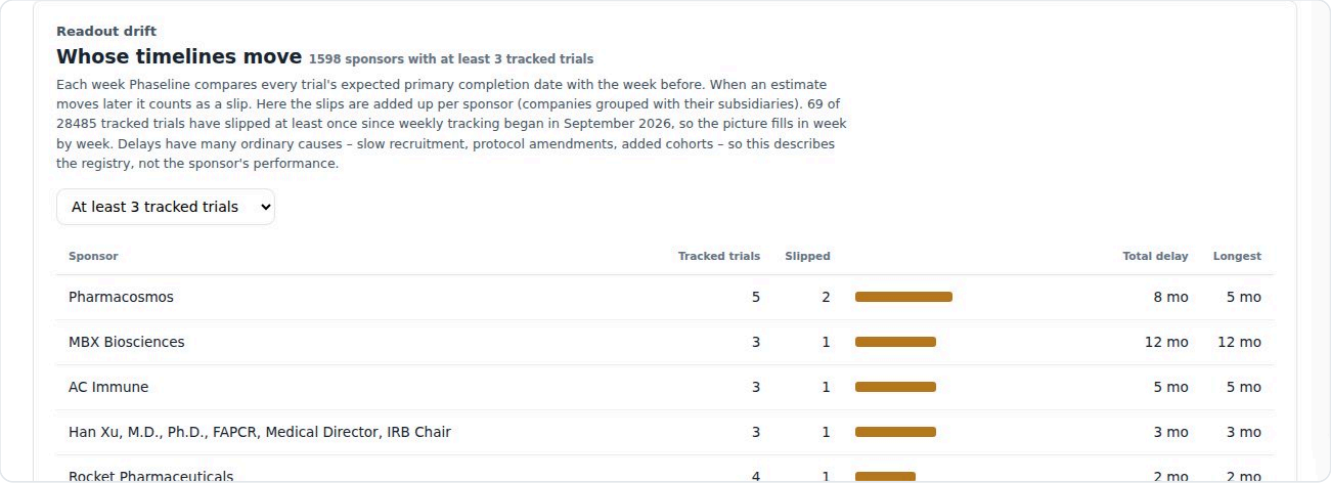
Programs with an NIH project grant behind them carry an **NIH-funded** mark; where only a centre or training grant is cited the mark is grey, because such grants support the institution rather than the program (hover for the institute, grant and amount), and the header counts them. The grant itself, with its fiscal years and total awarded, is on the trial card under *NIH funding*. Company reports list the company's NIH SBIR/STTR awards of the last five years.



Academic-only programs: drugs that universities and hospitals take forward where no company is.

Readout drift: whose timelines move

Choose **Readout drift by sponsor** in the view menu. Every week Phaseline compares each trial's expected primary completion date with the week before and counts a **slip** when it moves later. The view adds the slips up per sponsor, companies grouped with their subsidiaries; click a sponsor for its slipped trials and how far each has moved. Weekly tracking began in September 2026, so the picture fills in week by week.



Readout drift: tracked trials, slips and total delay per sponsor.

Delays have many ordinary causes, slow recruitment, protocol amendments, added cohorts. Drift describes the registry, not how good a sponsor is.

Dormant targets: quiet, and revived

Choose **Dormant targets** in the same menu. Two lists. *Dormant now*: molecular targets with two or more company phase 2–3 trial starts since 2010, none in the last three full years, no active trial and no approved drug, listed by prior activity, with a bar per year, the highest phase reached, how the last trials stopped (efficacy or safety against business, enrollment or external reasons) and whether human genetics supports the target. *Revived*: targets that had three or more years without a start between two active years and came back with two or more trials, scored with the delayed-recognition coefficient from bibliometrics (Ke et al. 2015), applied here to trial starts instead of citations. The text above the table gives the backtest: of the targets dormant at 2018, how many had a new trial by now, by each signal. Click a target to open it in the landscape; export either list as CSV. A reading of the record, not a recommendation: that a target went quiet says nothing about why, and the stop reasons are the sponsors' own words, categorised.

Target map: fields of drug development

Choose **Target map** in the same menu. Every circle is a molecular target with three or more company phase 2–3 trials; size is the number of trials; colour is the field the Leiden algorithm assigns when targets are linked by the conditions they share trials in and the drugs that hit them both (the method CWTS Leiden uses to map the fields of science from citations). Nearness is similarity. Switch between **Fields** and the finer **Subfields**, pick a field to highlight it and see its targets and the conditions that define it, label all targets or only the largest, and type a target to find it. A dark rim marks a target that runs 40% or more of its trials in another field's conditions: a target already crossing fields, which is where new target–condition pairs usually come from. The table below the map lists the fields with their size, their trials per year and their largest targets; a second table lists the bridging targets. Download the map as SVG or the table as CSV.

Network: who shares a target

Choose **Network: who shares a target** in the same menu, or press **Network** in the header of a target or a company in the landscape. From a target, the map shows the companies with an active program on it (inner ring, circles coloured by their highest phase) and the other targets those companies work on (outer ring, squares). From a company, it shows the company's targets and the other companies on the same targets, with a table of the companies that share the most targets. Line width is the number of programs. Click a node to centre on it, a line to list the programs behind it, and **Download SVG** for a drawing you can place in a report. The layout is the same from week to week, so two maps can be compared. It is a map of who is where: targets come from Open Targets or an AI read of the registry text, so a missing line can mean a missing target.

Burden of disease: deaths and prevalence next to the trials

Choose **Burden of disease** in the same menu. The first table lists deaths in the EU-27 for the latest year by ICD-10 cause group (Eurostat, causes of death), next to the active company phase 2 and 3 trials whose diagnosis codes fall in the group, the distinct drugs they test, and trials per 10,000 deaths. Chapters come first with their sub-groups indented beneath; sort by deaths, by trials, or by the fewest trials per 10,000 deaths to find the crowded and the quiet corners. The second table switches to rare diseases: Orphanet's prevalence class for each disorder matched to the trials' MeSH conditions, with the trials and drugs counted. Both sources are CC BY 4.0, which is why they are here and the Global Burden of Disease study is not. The same figures appear on the trial card under *Burden of disease*. A count next to a count: a cause with many deaths and few trials may be an unmet need or a condition no drug is expected to change. Export either table as CSV.

Results reporting: who posts their results

Choose **Results reporting by sponsor** in the same menu. For each company, its finished phase 2 and 3 trials whose primary completion lies two years or more back, how many have results posted on ClinicalTrials.gov, and the same share for the trials that stopped early. The twelve-month norm comes from WHO, ICH E6(R3) and the UK rules; two years leaves a margin. A registry record, not a verdict: posting is required by law for some trials and not others, and journal publications do not count here. Export the table as CSV.

Where the targets come from

For drugs that Open Targets knows, targets and mechanisms come from there (marked **OT**). For newer drugs, often known only by a code name, an AI model reads the registry text and names the target and mechanism (marked **AI**). Phaseline then checks the reading: the official name stem of a drug (for example *-rasib* for KRAS inhibitors) overrides the AI, readings across a program's trials are combined by majority, and a drug from another company used in the trial (such as a standard checkpoint inhibitor in a combination) is not counted as the sponsor's own program. When the readings disagree, the target is left blank rather than guessed.

> AI readings can be wrong, especially for drugs that are only a few years old. Before a decision, open the trial and check the sponsor's own description.

How the landscape is made

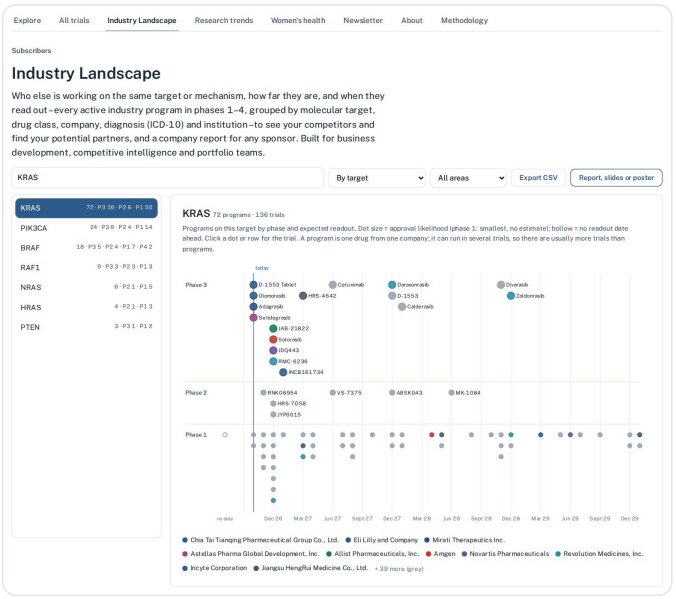
The Industry Landscape turns trials into **programs**: one per sponsor and investigational drug. A program's phase is the highest phase of its own trials; its next readout is the earliest ahead; its likelihood the best among its trials.

Telling the sponsor's drug from the rest

A trial lists every intervention: the investigational drug, but also comparators, placebo and background therapy. Phaseline reads each registry entry to keep the sponsor's own drug and leave out standard care. A drug from another company used in a combination, a checkpoint inhibitor added to a new agent, say, is not counted as the sponsor's program. When a university trial tests a company's drug, the trial joins the company's program, marked academic.

Targets and mechanisms

- Drugs known to Open Targets take their targets and mechanism from there (marked **OT**).
- Code-named or new drugs are read from the registry text by AI (marked **AI**). The drug's official name stem (for example *-rasib* for KRAS inhibitors) overrides the AI; readings across a program's trials are combined by majority; disagreement leaves the target blank rather than guessed.
- A few targets are checked by hand against the sponsor's own description (marked ✓).



The Industry Landscape for KRAS: programs by phase and readout.

Views

By target, by drug class, by sponsor, by diagnosis (ICD-10), by trial site, loss of exclusivity, academic-only programs and readout drift. A sponsor filter (all, industry, academic and other) applies to every view.

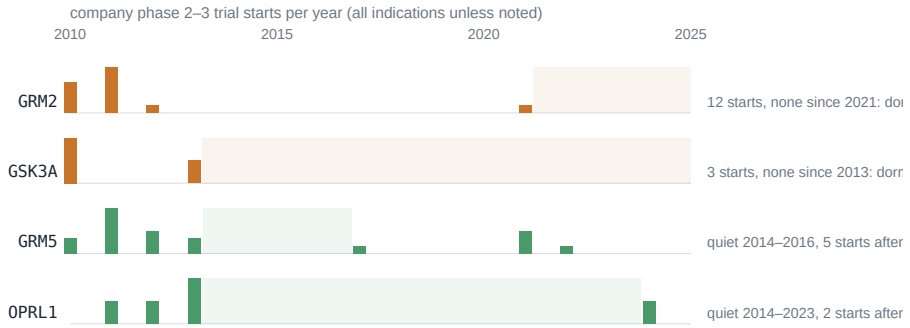
NIH funding behind the programs

Registry entries carry NIH grant numbers as secondary identifiers; Phaseline reads them for every active trial and looks the core projects up in NIH RePORTER (public domain): institute, organisation, activity code (R01, U01, P30 and so on), fiscal years, total awarded and whether the project is active. The trial card shows the grants. Centre core grants (P30), clinical and translational science awards (UL1), network and training grants are set in grey and labelled as such: they fund the institution's research capacity and are cited on many of its trials, so they say little about any one of them; 358 of the 2,079 linked trials cite only such a grant. Academic-only programs carry an "NIH-funded" mark when a project grant stands behind them (a grey "NIH centre grant" otherwise), with a count in the header: a university program with a running R01 or U01 behind it is differently placed from one without. Separately, the SBIR and STTR awards of the last five fiscal years, NIH's seed funding for small companies, are matched by organisation name to the companies sponsoring active trials and listed in the company report. No investigator names are read or stored. The coverage is American: NIH is the largest single funder of academic drug research, but a European grant leaves no trace here.

Academic-only programs

Phase 2 and 3 programs by non-commercial sponsors on a target that no company tests in an active registered trial (or, optionally, not beyond phase 1). Genetic support marks programs whose target is genetically linked to one of the trial's diseases. "No company" means none in the registry, companies may still work on the target in the lab.

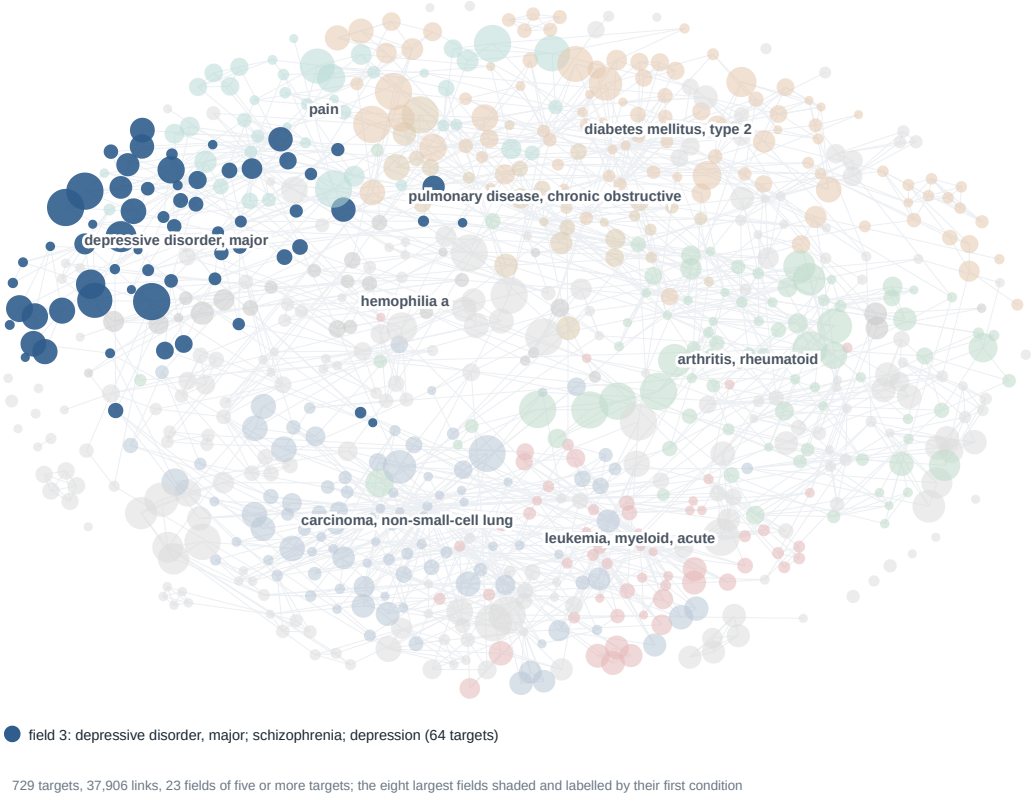
Dormant targets



Dormant and revived targets, read from company phase 2–3 trial starts per year (all indications). Orange: targets that had trials, then none for three or more years, and no approved drug. Green: targets whose quiet period ended with new trials. In a backtest at 2018, 55.0% of then-dormant targets had a new trial by now, 81.8% of those with five or more earlier starts.

In bibliometrics, papers that go uncited for years and are then rediscovered are studied under the heading of delayed recognition (van Raan 2004); Ke, Ferrara, Radicchi and Flammini (2015) gave the shape a coefficient. Phaseline applies the measure to company phase 2-3 trial starts per molecular target and year. The *Dormant targets* view lists the targets that went quiet, by prior activity, with the signals the record offers, and the targets that came back, scored. A backtest on the series cut at 2018 is shown with the lists: about half of the then-dormant targets had a new trial within eight years, more often when they had many earlier trials, and more often when the last trials stopped for efficacy or safety than for business reasons, which is worth pausing on: a failed drug is not a failed target. Genetic support made no difference in that test. Read it as the Trial blazer's counterpart: the blazer looks for pairs nobody has tried, this view for targets that were tried, left, and may have new reasons to be tried again.

Target map: fields of drug development



The target map: every target with three or more company phase 2–3 trials, linked by the conditions they share and the drugs that hit both, clustered into fields with the Leiden algorithm and laid out so that nearness is similarity. One field is shown in blue; the eight largest are shaded and named by their first condition. Open the view to zoom, colour by bridging share and export the SVG.

The *Target map* view is the landscape's target network looked at whole (the same network the Trial blazer, experimental, scores pair by pair), built the way CWTS Leiden maps the fields of science from citations (Waltman and van Eck 2012; Traag, Waltman and van Eck 2019; the method behind the OpenAlex topics). Trials do not cite each other, but two indirect measures of citation analysis carry over: two targets are coupled when they have trials in the same conditions, and co-cited when the same drug hits both. Every target with three or more company phase 2 and 3 trials since 2010 is a node; the links are association-strength weights on shared conditions and shared drugs; the Leiden algorithm sorts the network into fields and subfields; each field is labelled by the conditions most concentrated in it; the layout is force-directed, so nearness means similarity. Each target carries a bridging share, the fraction of its trials run in conditions whose home field is another cluster, which is the repurposing signal in network form. A backtest builds the map on trials to 2016 and reads forward: most target–condition pairs first tried since then crossed a field boundary, and targets that were already bridging crossed most. Read the fields as where the industry runs its trials, not as biology: a target lands in a field because of the company it keeps in the registry.

Network: who shares a target

The *Network* view draws the same programs as an ego network: from a target, the companies on it and what else they work on; from a company, its targets and who else is on them, with a table of the companies sharing the most targets. Circles are companies (darker for a later phase), squares are targets, line width the number of programs. The layout is radial and deterministic, so the drawing can be downloaded as SVG and compared from one week to the next. Read it as a map of attention, not of standing: a shared target says nothing about the drugs' chances, and a missing line can be a missing target in the source rather than an empty field.

Stopped trials

For each target, drug class, company or diagnosis Phaseline lists trials terminated, withdrawn or suspended since 2015, with the sponsor's stated reason sorted into one category. Rules come first; reasons the rules cannot place are read by AI.

Category	Typical wording	Share*
Business / strategic	"portfolio prioritisation", "sponsor decision", "funding"	32 %
Enrollment	"slow accrual", "insufficient recruitment"	32 %
Efficacy / futility	"futility at interim analysis", "lack of efficacy"	10 %
External	"COVID-19", "drug supply", "site closure"	8 %
Safety	"adverse events", "clinical hold", "benefit–risk"	4 %
Regulatory	"regulator request", "protocol change required"	3 %
Other / no reason given	anything else, or nothing written	12 %

* Of the 19,202 stopped trials in October 2026, all sponsors.

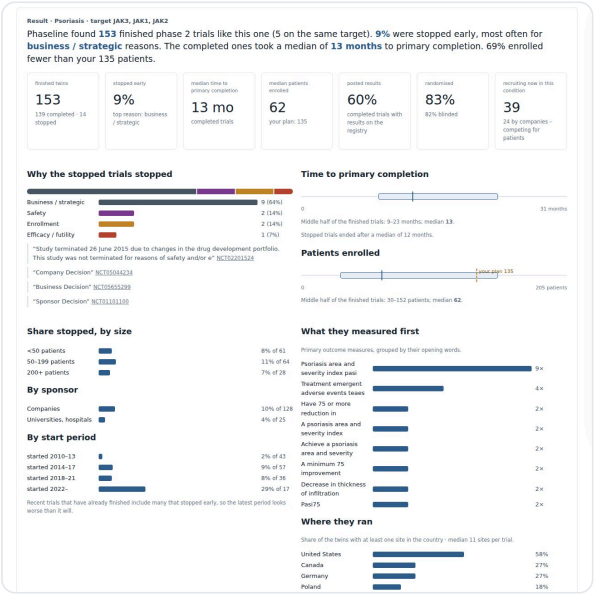
Negations are handled: "not due to safety concerns" does not count as safety, and praise of the drug ("favourable safety profile") is not a reason.

Sponsors are not obliged to explain a stop, and a business reason can follow disappointing data. The categories describe what was written, not what happened.

Design check: how did trials like yours go?

Before a trial starts, the most useful question is often the simplest: what happened to the trials that looked like this one? The **Design check** tab answers it from every interventional phase 2 or 3 drug trial on ClinicalTrials.gov that started in 2010 or later and has finished, more than 45,000 trials, completed or stopped, from companies, universities and hospitals. For the roughly half of them that posted results, it also reads the results themselves: how many participants dropped out and why, how many had a serious adverse event, whether the primary outcome reached p < 0.05, and how long the sponsor took to post. Those come from AACT, the Clinical Trials Transformation Initiative's database copy of the registry, the same data in a form that can be read as tables.

1. Open **Design check** and name the condition (pick a MeSH term from the list, such as *Psoriasis* or *Breast Neoplasms*; plain words like "breast cancer" also work), the phase and, if you like, the target, drug type, planned number of patients and planned months to primary completion.
2. Or open any active phase 2 or 3 trial and click **Find twins: how did trials like this go?** in its panel. The form is filled in from the trial.
3. Click **Find twins**.



Design check for a psoriasis trial with a JAK inhibitor: 153 finished twins, 9% stopped, 13 months to primary completion.

Part	What it shows
Summary	How many twins, how many were stopped early and the most common reason, time to primary completion and patients enrolled, set against your plan when you give one.
Why they stopped	The stopped twins by reason (efficacy, safety, business, enrollment …), with the sponsors' own words.
Time and size	The middle half and median of the months to primary completion and of the patients enrolled, with your plan marked.
Share stopped	By trial size, by sponsor type and by start period.
What they measured	The most common primary outcome measures.
Where they ran	The countries the twins used, and the median number of sites.
Competing for patients now	Active trials recruiting for the same condition, with the countries and hospitals that have most of them.
What the twins' posted results say	Among the twins that posted results on the registry: median dropout and its middle half, with the most common reason; the median share of participants with a serious adverse event; how many reported $p < 0.05$ on a primary outcome; and the median months from primary completion to posted results. Read from the registry's results tables (AACT). The same three figures appear per twin in the table.
How the drugs fared afterwards	For the twins' drugs: how many were later approved by the FDA (first approval, with the indication and the date), how many were not, and how many are still open. The median time from the twin's start to approval.
The closest twins	The 40 most similar trials with outcome, size, duration, dropout, serious adverse events, primary p-value and primary outcome, linked to ClinicalTrials.gov. **Export CSV** downloads them.

Twins share the phase and at least one condition term, rarer terms count more, or, when fewer than 30 do, a close parent term. A shared target, the same drug type and a similar size move a trial up the list.

> The design check describes what happened to similar trials. It is not a forecast for yours, and not regulatory advice. Recent trials that have already finished include many that stopped early, so the latest start period looks worse than it will.

How the design check is made

The design check answers one question: *what happened to trials like this one?*

The reference set

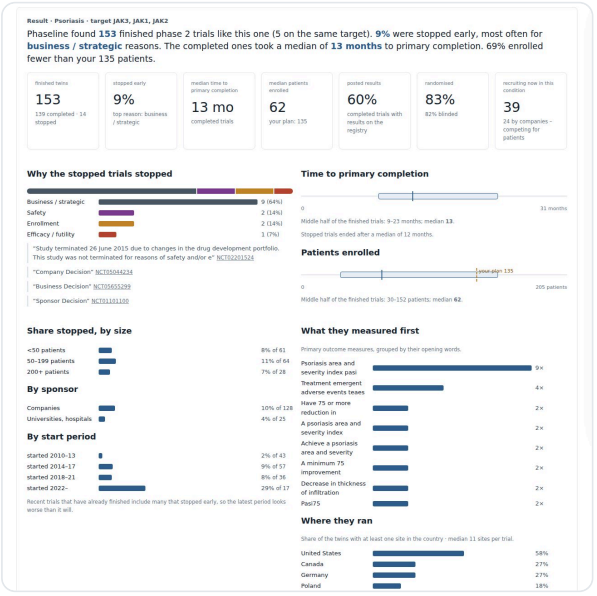
Every interventional phase 2 or 3 drug trial on ClinicalTrials.gov that started in 2010 or later and is now completed or terminated, from every sponsor, 45,903 trials in October 2026, refreshed weekly when older than six days. For each, the registry's own facts: MeSH condition terms and their parent terms, phase, sponsor type, start and primary completion, actual enrollment, randomisation and blinding, drug type, countries and number of sites, the first primary outcome measure, whether results were posted, and for terminated trials the stated reason and its category.

How twins are chosen

1. **Same phase** (phase 2/3 trials count for both).
2. **Shared condition.** At least one MeSH term in common; rarer terms count more than common ones (inverse document frequency). When fewer than 30 trials share a term, trials sharing a close parent term are added.

3. **Ranking.** A shared molecular target moves a trial up strongly; the same drug type and a size within half to double of your plan move it up a little.
4. The closest 200 form the twins. A sponsor filter can restrict them to companies or to universities and hospitals.

Free text works: "breast cancer" is read as *Breast Neoplasms*, "alzheimer" as *Alzheimer Disease*.



A design check for a phase 2 psoriasis trial.

Reading the result

Figure	Read it as
Stopped early	The share of twins terminated. Compare with the overall level for the phase (roughly one in five in the reference set).
Months to completion	Start to primary completion for completed twins; the middle half is the honest range.
Patients enrolled	Actual enrollment of completed twins. If most enrolled fewer than you plan, recruitment is the risk to examine.
By size, sponsor, period	Where stopping concentrates, by trial size, sponsor type and start period.
Endpoints	The primary outcomes the field actually used, useful for regulators' expectations and comparability.
Competing now	Active trials recruiting for the same condition, by country and hospital.

How the drugs fared afterwards

A finished trial is "completed" or "stopped" – but what you want to know is whether the **drug** made it. For every trial in the reference set, Phaseline looks up in Drugs@FDA whether a drug the trial tested, that was *not yet approved when the trial started*, has been approved since: for any use (**drug level**), and, from the approved label's indications text, for the trial's own condition (**indication level**). This is the same outcome the track record tests the approval likelihood on.

Outcome	Meaning
Approved	A not-yet-approved drug the trial tested was later approved by the FDA; the panel says as what and when, and whether for this condition or another use.
Not approved (so far)	The trial finished three years ago or more and no such approval exists.
Too recent to tell	Finished less than three years ago: the road from primary completion to approval is often that long, so these count as open, not failed.
Drug already approved	Every drug the trial tested was approved before it started: a new use of an old drug, whose outcome is not in question here.

The design check shows the share of decided twins that led to an approval, the median months from primary completion to approval and the approved drugs by name. Every phase 2 and 3 trial panel also shows, automatically, its ten closest finished twins with this outcome under *Trials like this one, and how they went*, with the share next to the trial's own approval likelihood, so you can judge the estimate against what actually happened to similar trials. Vaccines, cell and gene therapies (CBER products) are not in Drugs@FDA and get no outcome; name matching is by active ingredient and brand, with salts and the four-letter biologic suffixes stripped.

Three traps. **Recency:** among recent trials, the ones already finished are disproportionately those that stopped early, so the latest start period looks worse than it will. **Wording:** "business" stops include programs abandoned after weak data. **Registry quality:** dates and enrollment are what sponsors entered; some are wrong.

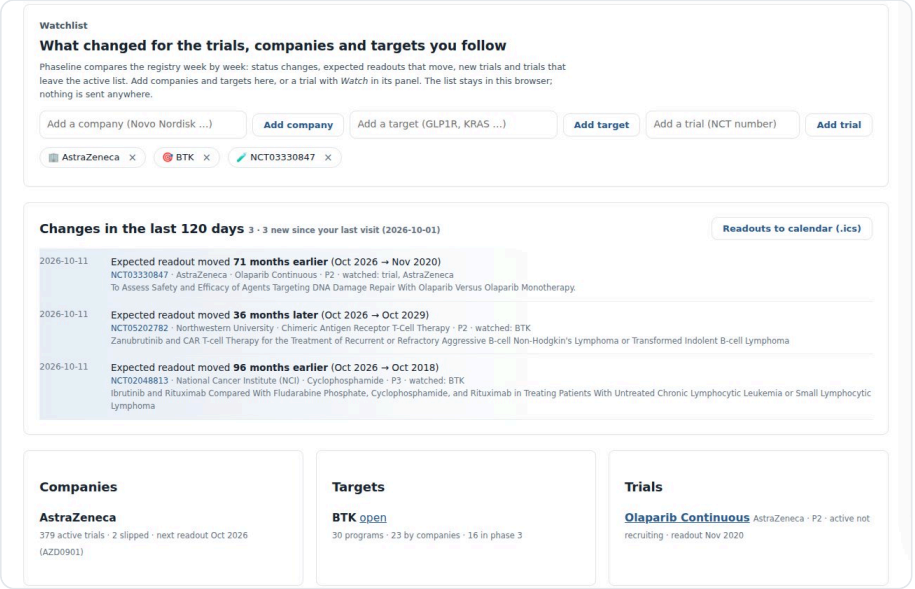
The reference set behind the design check is published as an open dataset with its code and a data dictionary: Kullman L, Research Square 2026, doi:10.21203/rs.3.rs-11447954/v1; data on Zenodo, doi:10.5281/zenodo.23514302 (CC0).

Watchlist and trial map

Watchlist

The **Watchlist** tab follows the trials, companies and targets you choose and shows what has changed in the registry since your last visit.

- **Save a trial with the star.** Every trial table has a star at the start of each row. One click saves the trial, another removes it, and the row does not open. The number beside *Watchlist* in the menu is what the current list holds.
- Add a **company** or a **target** at the top of the tab, or a trial by its NCT number. In any trial panel, **Watch trial** and **Watch** *company* do the same.
- **Several named lists.** At the top of the tab you choose the list, create a new one, rename it or delete it: one per indication, per competitor or per question. The stars save to the list chosen there. What you had saved before lists existed is in *My list*.
- **Changes** lists, newest first, status changes (for example recruiting → active, not recruiting), expected readouts that moved by four weeks or more, trials that entered Phaseline and trials that left the active list, and, from the registry history, a primary outcome replaced, planned enrollment cut, a completion date that moved again, a collaborator that came or went. Changes since your last visit are highlighted.
- Below, each company, target and trial has a short summary: active trials, slipped timelines, the next readout.
- **Readouts to calendar (.ics)** exports the coming readouts of everything you watch.



The watchlist: a company, a target and a trial, with what changed.

Analyse what you saved

Run the analysis reads the list as one portfolio. You choose the scope: the saved trials of the current list, those plus the active trials of the companies and targets it follows, or the saved trials of all your lists together.

- **What it is made of**: area, phase and kind of drug, each with its share in the list beside its share among all active trials in Phaseline.
- **Likelihood bands**: where the list's trials sit against the whole.
- **Coming readouts**: each company readout at its stated date and at its likely date (chapter 25), beside the company's cash runway where it files with the SEC. Dates after the runway ends are marked.
- **Targets, and how crowded they are**: programs, companies and phase 3 programs on each target in the list.
- **Signals**: genetic support, biomarker selection, a drug not yet approved for anything, a completion date that has slipped, each against Phaseline as a whole, and what the registry history records for these trials.

The set can be downloaded as CSV or printed. It is a description of the list, not advice, and it is computed in your browser from data already on the page.

FDA news in the watchlist and on the card

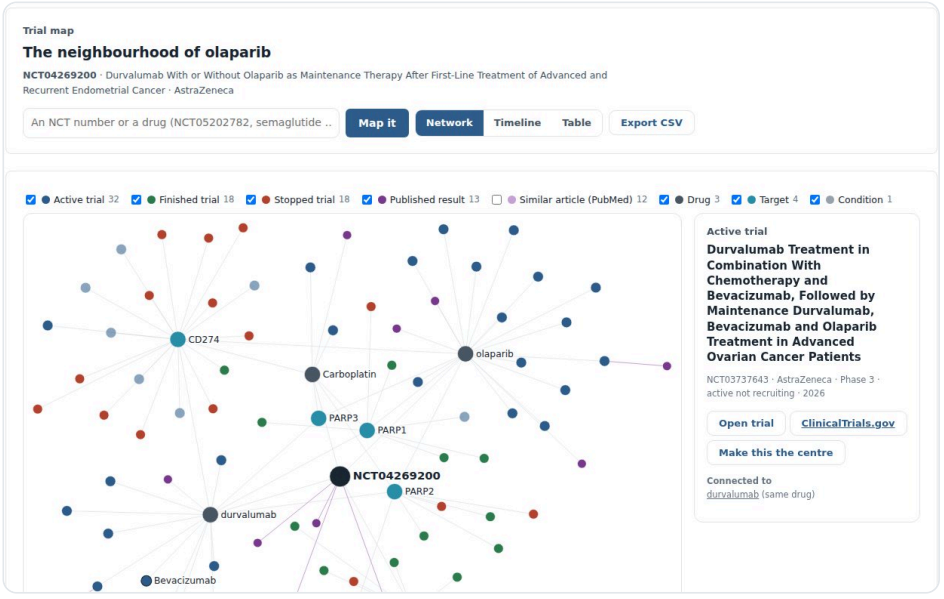
Every Monday Phaseline reads FDA's own feeds for drugs, biologics and press announcements and keeps what names a drug or a sponsor in the landscape: approvals, safety communications, advisory committee announcements, guidances. A drug match appears on the trial card as a line "FDA, from the agency's feeds" with a link to the page, and in the watchlist for anyone following the trial; a sponsor match appears in the watchlist for anyone following the company. The weekly briefing has a section "FDA this week". The feeds are same-day; Drugs@FDA, which marks approvals on the card, follows later.

> The lists are kept in your browser only: nothing is sent anywhere, and they do not follow you to another computer. The change log is rebuilt with every weekly update and keeps 120 days.

Trial map

The **Trial map** tab shows what surrounds one trial in the public record, in the spirit of the National Library of Medicine's Linked Discoveries, but with trials and articles together.

1. Open **Trial map** and type an NCT number or a drug (for a drug, the map starts from one of its active trials), or click **Map the neighbourhood** in any trial panel.
2. The map gathers active trials with the same drug, target or condition, the finished trials most like it, stopped trials on the same targets, published results for the trial and its drugs, and the articles PubMed lists as most similar to those results.
3. Switch between **Network**, **Timeline** and **Table**. Tick the boxes above the map to show or hide each kind of item.
4. Click a point for details and links to ClinicalTrials.gov or PubMed. **Make this the centre** rebuilds the map around that trial. **Export CSV** downloads everything on the map.



The trial map for olaparib: active trials (blue), finished (green) and stopped (red) trials, published results (purple) and similar articles (pale purple), linked through drugs, targets and conditions.



The same neighbourhood as a timeline: readouts ahead, finished and stopped trials behind, and when results were published.

Lines mean a shared drug, target or condition, or that an article reports a trial. How close two points are drawn is only a drawing aid. Similar articles are chosen by PubMed, not by Phaseline.

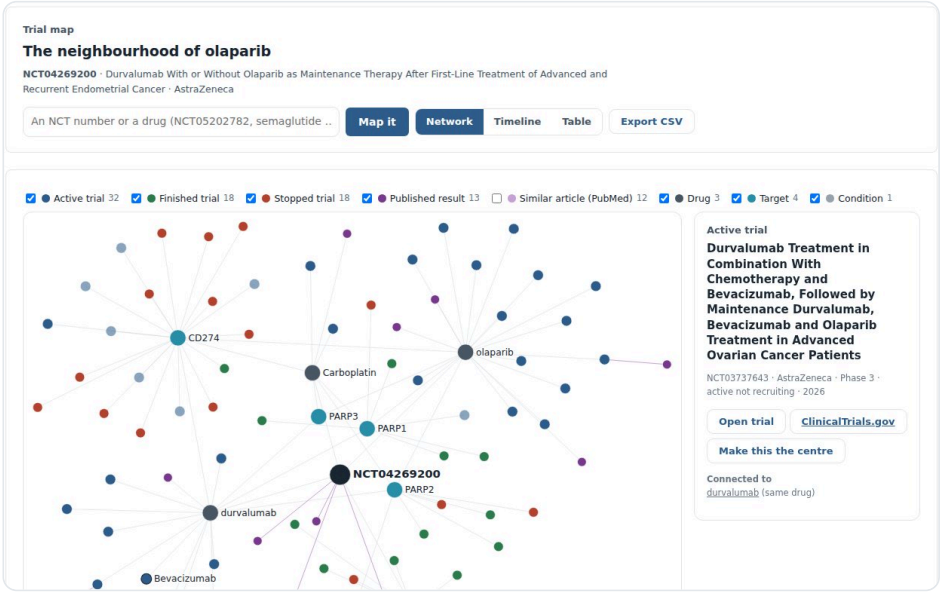
How they are made

Trial map

The map starts from one trial (or a drug, in which case one of its active trials) and gathers:

- up to 32 **active trials** sharing the drug (strongest), the target, or a MeSH condition term;
- up to 24 **finished trials** from the design check;
- up to 12 **stopped trials** since 2015 on the same targets;
- up to 14 **published results** for the trial and its drugs;
- for those results, up to 8 **similar articles** each, as listed by PubMed itself (NCBI E-utilities).

Each item is drawn with one line to what it shares with the starting trial, drug, target or condition, or to the trial an article reports. The layout is computed with a simple force simulation, so nearness is only a drawing aid. The timeline places active trials at their expected readout, finished trials at primary completion, stopped trials when they stopped and articles in their publication year.



The trial map for olaparib.

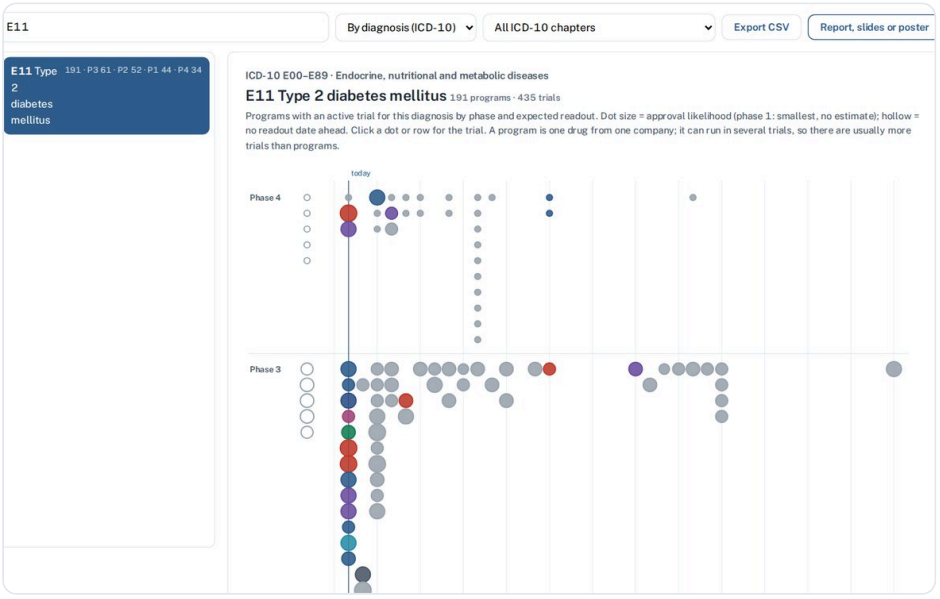
Watchlist

Every Monday the change log compares the new data with the previous week's and records, per trial: a **status change**, an expected readout that moved by **four weeks or more** (either way), a trial that **entered** Phaseline, and a trial that **left** the active list (finished, stopped or withdrawn) – and, from the registry history (chapter 11), a primary outcome replaced, enrollment cut, a completion date that moved again, a collaborator that came or went. The log keeps 120 days. The watchlist matches it against the trials, companies (with subsidiaries) and targets you follow.

Your list lives in your browser's local storage. It is never sent to Phaseline, does not follow you to another computer, and disappears if you clear the browser's site data.

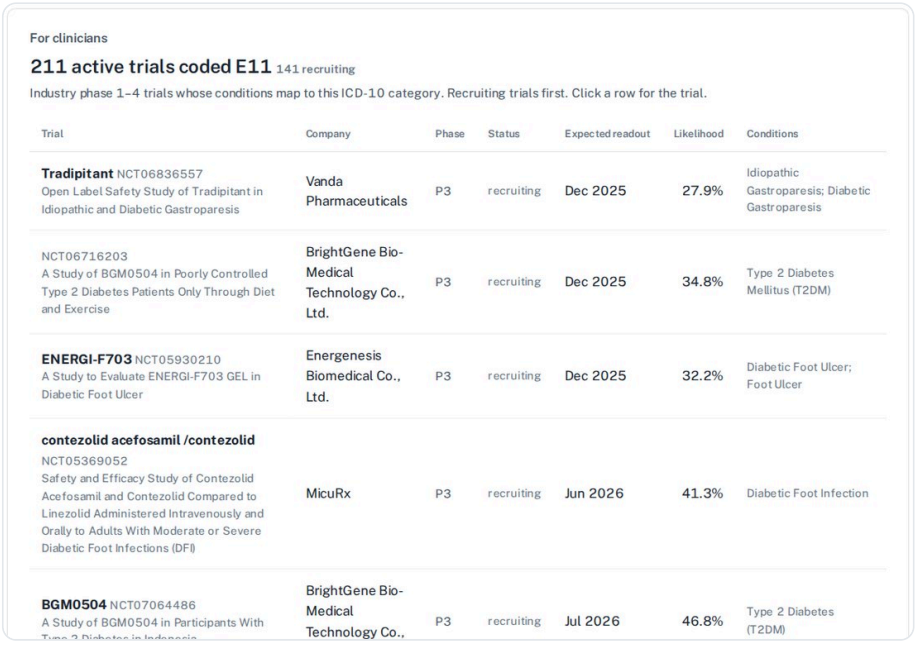
Diagnoses (ICD-10)

Clinicians, medical-affairs teams and anyone planning a trial think in **diagnoses**, and ICD-10 is the classification in force. Phaseline gives every active trial, and every trial stopped since 2015, the ICD-10 categories of the conditions it studies: three characters such as **E11** Type 2 diabetes mellitus or **C34** Malignant neoplasm of bronchus and lung.



The Industry Landscape by diagnosis, searched for E11: every program with an active type 2 diabetes trial, by phase and expected readout.

- In the Industry Landscape tab, choose **By diagnosis (ICD-10)**. Narrow to one ICD-10 chapter, or search for a code (E11, C50) or a word (psoriasis, heart failure).
- For each category you see the programs that test a drug for that diagnosis, a list of **all active trials** with recruiting trials first, and the trials that were **stopped** for that diagnosis, with the reasons.
- In the trial panel, an Industry user sees the trial's ICD-10 codes. Click a code to see every trial for that diagnosis.



"For clinicians": the active trials coded E11, recruiting first, with expected readout and approval likelihood.

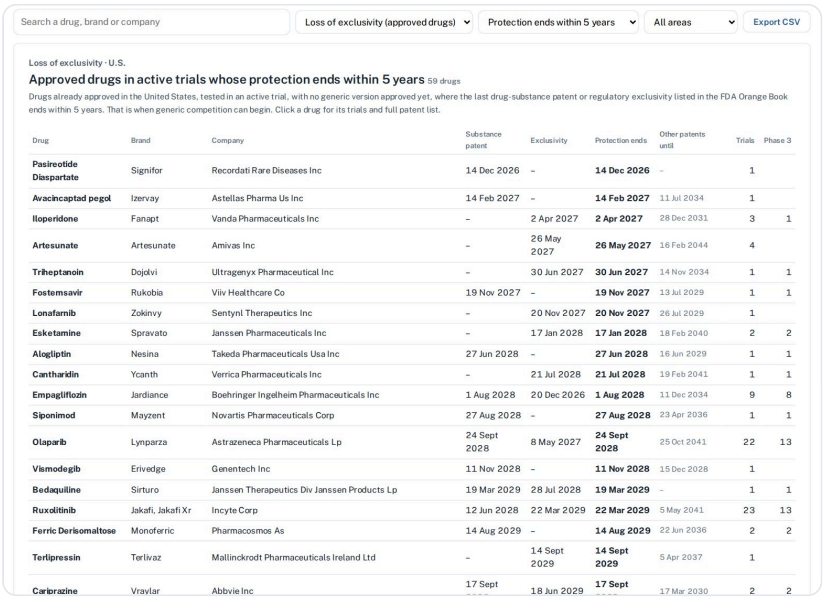
How the codes are made: each condition is first looked up in the Human Disease Ontology, an open ontology whose diseases carry curated ICD-10 cross-references. Conditions it does not know are coded by AI, and codes that do not exist

are discarded. The titles come from ICD-10-CM, which at the three-character level follows the WHO ICD-10 and the Swedish ICD-10-SE.

The codes are for finding and grouping trials, not a clinical coding of patients. Vague or composite conditions can be coded imprecisely; the registry entry is always the source.

Patents and loss of exclusivity

When a drug's patents and regulatory exclusivity run out, generic versions can enter the market and sales usually fall fast. For a company that sells the drug, a competitor or a business-development team, that date matters as much as a readout. Phaseline shows it for every drug in its trials that is already approved in the United States, from the **FDA Orange Book**, the official U.S. list of patents and exclusivity for approved drugs.

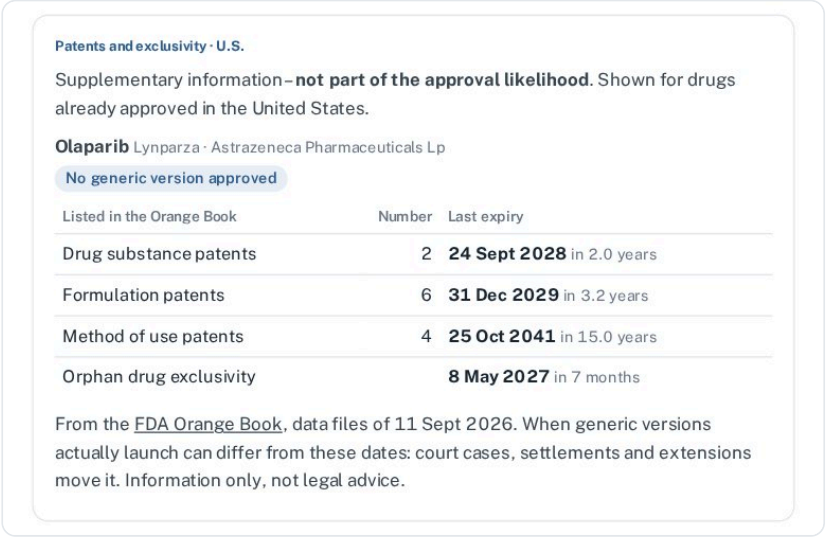


Drug	Brand	Company	Substance patent	Exclusivity	Protection ends	Other patents until	Trials	Phase 3
Pasireotide Diaspartate	Signifor	Recordati Rare Diseases Inc	14 Dec 2026	–	14 Dec 2026	–	1	
Avacincaptad pegol	Izervay	Astellas Pharma Us Inc	14 Feb 2027	–	14 Feb 2027	11 Jul 2034	1	
Iloperidone	Fanapt	Vanda Pharmaceuticals Inc	–	2 Apr 2027	2 Apr 2027	28 Dec 2031	3	1
Artesunate	Artesunate	Amivas Inc	–	26 May 2027	26 May 2027	16 Feb 2044	4	
Trilheptanoin	Dojolvi	Ultragenyx Pharmaceutical Inc	–	30 Jun 2027	30 Jun 2027	14 Nov 2034	1	1
Fostemsavir	Rukobia	Viiv Healthcare Co	19 Nov 2027	–	19 Nov 2027	13 Jul 2029	1	1
Lonafarnib	Zokinvy	Sentynl Therapeutics Inc	–	20 Nov 2027	20 Nov 2027	26 Jul 2029	1	
Esketamine	Spravato	Janssen Pharmaceuticals Inc	–	17 Jan 2028	17 Jan 2028	18 Feb 2040	2	2
Alogliptin	Nesina	Takeda Pharmaceuticals Usa Inc	27 Jun 2028	–	27 Jun 2028	16 Jun 2029	1	1
Cantharidin	Ycanth	Verrica Pharmaceuticals Inc	–	21 Jul 2028	21 Jul 2028	19 Feb 2041	1	1
Empagliflozin	Jardiance	Boehringer Ingelheim Pharmaceuticals Inc	1 Aug 2028	20 Dec 2026	1 Aug 2028	11 Dec 2034	9	8
Siponimod	Mayzent	Novartis Pharmaceuticals Corp	27 Aug 2028	–	27 Aug 2028	23 Apr 2036	1	1
Olaparib	Lynparza	Astrazeneca Pharmaceuticals Lp	24 Sept 2028	8 May 2027	24 Sept 2028	25 Oct 2041	22	13
Vismodegib	Erivedge	Genentech Inc	11 Nov 2028	–	11 Nov 2028	15 Dec 2028	1	
Bedaquiline	Sirturo	Janssen Therapeutics Div Janssen Products Lp	19 Mar 2029	28 Jul 2028	19 Mar 2029	–	1	1
Ruxolitinib	Jakafi, Jakafi Xr	Incyte Corp	12 Jun 2028	22 Mar 2029	22 Mar 2029	5 May 2041	23	13
Ferric Derisomaltose	Monoferric	Pharmacosmos As	14 Aug 2029	–	14 Aug 2029	22 Jun 2036	2	2
Terlipressin	Terlivaz	Mallinckrodt Pharmaceuticals Ireland Ltd	–	14 Sept 2029	14 Sept 2029	5 Apr 2037	1	
Cariprazine	Vraylar	Abbvie Inc	17 Sept	18 Jun 2029	17 Sept	17 Mar 2030	2	2

Loss of exclusivity: approved drugs in active trials, with no generic yet, sorted by when their protection ends.

Three places to find it

- **In the trial table**: the tag **Protected to 2032** marks trials with an approved drug that has no generic yet. Hover over it to see which drug and the exact date.
- **In the trial panel and the drug view**: how many patents cover the drug substance, the formulation and methods of use, when the last of each expires, which exclusivity periods are running (orphan drug, new indication, paediatric and so on), and whether generic versions have been approved.
- **In the Industry Landscape**: choose **Loss of exclusivity (approved drugs)** in the view menu. Pick 2, 3, 5 or 10 years, narrow to one area or search for a company, and click a drug for its trials and full patent list. **Export CSV** downloads the list.



Patents and exclusivity in the drug view: olaparib (Lynparza).

Protection ends is the later of the last drug-substance patent and the last regulatory exclusivity. Formulation and method-of-use patents often run longer and are shown separately, because they can still hold generics back for some uses or forms of the drug.

A listed date is not the day generics launch: court cases, settlements and patent-term extensions can move it either way. The Orange Book covers small-molecule drugs and some peptides; antibodies and other biologics come from the FDA Purple Book instead: licensure, exclusivity and biosimilars rather than patents. The data is updated monthly, and the date of the edition is shown with every list. Information only, not legal advice.

Evidence, guidelines, sites, trends and more: how they are made

Published results

For every drug in an active phase 2–4 trial Phaseline collects completed trials that posted results on ClinicalTrials.gov and publications in PubMed, and labels each *positive*, *negative*, *mixed* or *safety only*, with a one-line summary and a link. Abstracts are not reproduced. Labels can be wrong; always read the source.

Conference abstracts

Results are often presented at a meeting months before a paper appears, and the big conferences' abstracts are not in PubMed. Phaseline therefore also asks OpenAlex for abstracts in the supplement issues that carry ASCO, ESMO, ASH, AACR, ADA, AHA, ACC, EASL, EHA, ERS, EULAR, AAN and other meetings, that name the trial's registration number or its drug, and labels them like papers. They are marked *Conference abstract* with the meeting and year, link to the abstract's DOI and count in the earlier-results tally. The **Abstract** marker in the table, and the *Conference abstract* filter under Results, select trials with at least one. Abstract text is read to label and never stored. Coverage grows week by week: the search is time-boxed in the weekly run, so a trial's abstracts can appear a week or two after the abstract itself.

Results also appear as preprints on medRxiv and bioRxiv before peer review, and medRxiv requires the registration number in trial reports. Phaseline finds preprints that name an active trial or its drug (through OpenAlex), labels them the same way, and checks with the servers whether the preprint has since been published. A preprint is marked as such: not peer reviewed, numbers can change, and some are never published. Filter "Results in a preprint" lists the trials with one.

Clinical guidelines

Guidelines in PubMed that name a drug, or cite one of its earlier results (via OpenAlex), labelled *recommended*, *emerging*, *under investigation*, *mentioned* or *cites a study*. Being written into a guideline is a form of impact citation counts miss.

Patents and exclusivity

For drugs approved in the United States: the patents (drug substance, formulation, method of use) and exclusivity periods listed in the FDA Orange Book, and whether generics are approved. *Protection ends* is the later of the last substance patent and the last exclusivity. Biologics (antibodies, proteins, cell and gene therapies) come from the FDA Purple Book instead: first licensure, the reference product's twelve-year exclusivity, orphan exclusivity, biosimilars approved, and the number of patents the licence holder has listed (their expiry dates are not in FDA's file). A listed expiry is not the day generics launch.

Diagnoses (ICD-10)

Every active and stopped trial carries the ICD-10 three-character categories of its conditions, through the Human Disease Ontology or, failing that, AI; non-existent codes are discarded. Titles follow ICD-10-CM, which matches the WHO ICD-10 and the Swedish ICD-10-SE at this level. The codes support search; they are not a clinical coding of any patient.

Trial sites

Institutions that run active trials, matched to ROR so that different spellings merge. Sites listed without a name count only towards their country. **Only institutions are used**: investigators and contacts named in the registry are neither read nor stored, and Phaseline never profiles or ranks people. This is identity protection through aggregation, in the sense CoARA uses for open research infrastructures: visits are counted without identifiers, sponsors and institutions appear as aggregates.

Site record. The registry gives every location its own status, and two of them are outcomes: *withdrawn* (the site was opened but never enrolled anyone) and *terminated* (it stopped early). Phaseline counts an institution's listings in active trials by status, shows the share closed early against the share for all listings, by area, and, from the version history, the

activation time: days from "not yet recruiting" to the first update that shows the site recruiting. Read with care. The sponsor chooses sites and protocols, so an institution that gets hard protocols closes more sites through no fault of its own; a withdrawn listing can be the sponsor's decision; the status is only as current as the sponsor's last update, and activation is measured only for sites first listed before they opened. With fewer than ten listings the share says little. For the finished company phase 2-3 trials of the last five years the record goes further, because the outcome is known: per institution and area, the trials terminated and terminated for enrollment reasons are set against the number expected from the rates for their area and phase, the same field normalisation bibliometrics uses for citations, so that a cancer centre that takes hard phase 2 trials is not punished for the field it works in. A ratio near 1.0 means its trials ended as such trials usually do. Single-site trials are shown separately: there the fate of the trial can be attributed to the site. Used for what it is, it answers a practical question when choosing sites: has this hospital, in this area, opened and kept open the sites it was given, and did the trials it sat in run to the end more or less often than expected?

Trial trends

Where research trends count papers, **Trial trends** counts trial starts. For every phase 2–3 drug trial on ClinicalTrials.gov, finished ones from the design-check reference set, active ones from the weekly fetch. Phaseline takes the start month and compares the latest twelve months with the twelve months before, lagged a quarter because the registry fills in late. A *movement map* places each target, condition, drug type, therapeutic area or country by how many trials started now (right) and how much its share grew or shrank (up or down): top-left is small but rising, bottom-right is big but cooling. Below it, the rising and falling lists, two stream charts of how the mix of drug types and areas has shifted quarter by quarter since 2010, and a world map and table of where trials run now against three years ago. Every target, condition and country is shown, within every area. Starts are counted, not patients or money, and a target with a handful of trials can move a long way on the map from one start.

Orphan drug designations

What it is. Whether a tested drug holds an orphan designation in force at FDA or EMA, for which indication, since when, and whether FDA has approved it for the orphan indication, with the exclusivity date. **Type:** regulatory fact · per drug · from the agencies' own registers. **How.** FDA Orphan Drug Product designation database and EMA's orphan designations report, matched by substance name; orphan_designations.py.

Useful to: see which competitors have secured the seven (US) or ten (EU) years of market exclusivity in a rare indication and when it ends; judge whether a program is on the orphan path, with its fee waivers and protocol assistance; prepare a partnering or due-diligence question.

Use with care when: the designated indication is not the trial's (a designation is per drug and indication); the substance is code-named or spelled differently in the two registers, so the match is missed; a designation is old and the program quiet, since designations are cheap to obtain and many never lead to a trial; the drug is a broad oncology agent with a dozen designations, which says more about the sponsor's habits than about this trial.

Partner signals: Orphanet prevalence (is the disease rare at all); loss of exclusivity; the landscape on the target.

Drug status: new drug or new use

What it is. Whether a tested drug had an FDA approval for any use when the trial started (new drug) or every tested drug already carried one (new use: repurposing, a line extension, a combination of approved drugs). **Type:** registry and regulatory fact · per trial · size-independent. **How.** Drugs@FDA through openFDA, first original approval per substance; predict_app.py; the same definition as *novel_drug* in the finished-trials dataset.

Useful to: separate a competitor's true pipeline from its label extensions; find the new molecules in an indication; read the approval likelihood with the right base rate in mind, because new uses of approved drugs reach approval more often and tell you less about the mechanism.

Use with care when: the drug is a biologic licensed by CBER and so missing from Drugs@FDA, which can make an approved product look new; the drug is approved outside the US only; the registry's intervention names are codes or brand names that the lookup cannot resolve; the trial tests a new drug in combination with approved ones, which counts as a new drug.

Partner signals: loss of exclusivity for the approved drugs; the Orange Book and Purple Book records; earlier results for the same drug.

Target biology

A target symbol on a trial card (KRAS, MC4R, GLP1R) is only a name until something says what the gene's product does. For every target in Phaseline the card shows, under *Target biology*, what three open resources say: from **UniProt**, the protein name, the first sentences of the curated Function text and the subcellular location (CC BY 4.0, quoted with attribution); from **ClinVar**, how many alleles have been reported for the gene and how many are classified pathogenic or likely pathogenic, with the conditions ClinVar links to it (public domain); from **Reactome**, the pathways the protein is annotated to (CC0); and a link to the predicted structure in the **AlphaFold** database (CC BY 4.0). Three bulk files are read every Monday and nothing is fetched per trial. The same records feed the disease dossiers (chapter 21) and the target_biology tool for your own AI (chapter 24).

Read it as background, not evidence about the trial. None of it enters the approval likelihood. The symbol is Phaseline's own, from Open Targets or an AI reading of the registry text, so a wrong target gives the wrong biology; a symbol that is not a human gene (a channel family, a structure) has no entry. ClinVar counts measure how much has been reported, which follows how much a gene has been sequenced, not how important it is.

Who the trials include

Below the trends, a table answers a question WHO's 2024 guidance on good clinical trials puts first: whom do the trials leave out? For active company phase 2 and 3 trials, per therapeutic area, it shows the share that admit children (under 18), older adults (65 and over) or adults only, from the registry's standard age groups; the share open to one sex only; and the share with at least one site in a low- or middle-income country, using the World Bank's income groups (CC BY 4.0). The same age and sex facts filter the trial list under *Population* in All trials, and appear on each trial card as "Who may take part". Counted from the registry as entered; nothing here enters the likelihood.

Research vs trials

On the page of a target or a condition, the two trends meet: the change in PubMed papers on the topic set against the change in trial starts. The verdict in words – *the science is ahead of the trials*, *the trials are ahead of the science*, *moving together* – is only the sign and size of the two changes, and both are counts. It is a prompt for a question, not an answer to one.

Research trends and women's health

Research trends count new PubMed records on human studies per area and rank topics whose share grew most against two years earlier, publishing activity, not medical progress. Women's health gathers trials limited to women or on female-specific conditions; the matching can miss or misplace trials.

Trial trends

Where Research trends counts papers, **Trial trends** counts trial starts: which targets, conditions, drug types, therapeutic areas and countries are gaining phase 2–3 trials right now, and which are cooling. The latest twelve months are compared with the twelve months before, a quarter behind today because the registry fills in late.

- Choose what to compare, molecular target, condition, drug type, therapeutic area or country, and, if you like, limit it to one area and to company-led trials.
- The **movement map** places each item by how many trials started now (right = many) and how much its share grew or shrank (up = growing). Top-left is small but rising; bottom-right is big but cooling. Hover a bubble for the figures.
- **Rising and falling** lists the same items with starts now, starts then and the change in share.
- Two stream charts show how the mix of drug types and areas has shifted quarter by quarter since 2010.
- A **world map** and a table show where trials run now against three years ago, as the share of starts with at least one site in each country.

Every target, condition and country is shown, within every area. Starts are counted, not patients or money, and a target with only a few trials can move far on the map from a single start.

Regions: North America, Europe and China read the same way

The third tab under *Trends* sets the three regions beside each other with the same measures, for phase 2-3 drug trials started 2010 or later. A region is meant in two senses, and you switch between them: where a trial **runs** (it lists a site there), and where the company behind it has its **home**. The difference is the point. A Chinese company's phase 3 in the United States appears in one and not in the other.

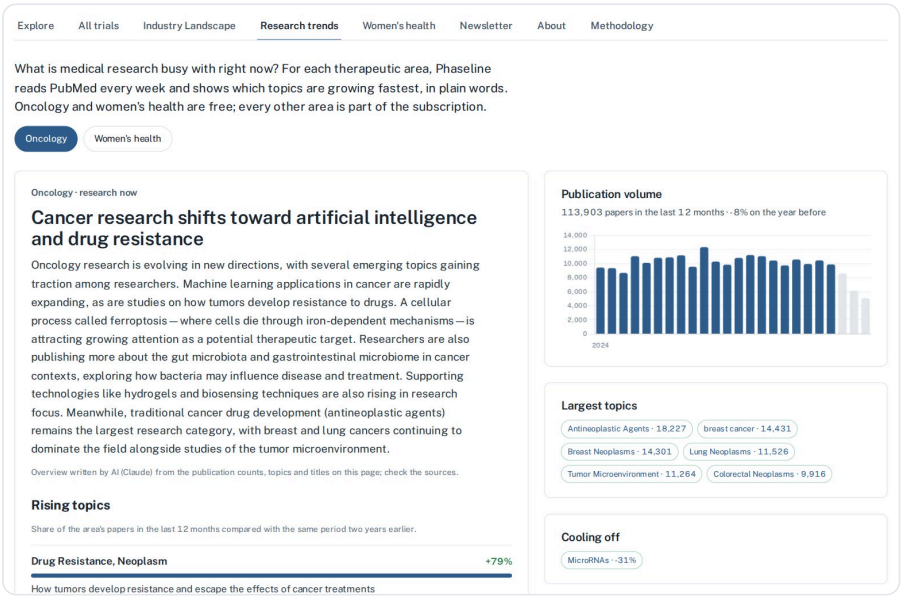
- **The three at a glance**: trials that run there since 2021, trials by companies at home there, the number of such companies, the share run in that region only, and how trials end.
- For the region you choose: **trials per start year**; **what is tried**, areas and kinds of drug against the world; **targets tried more there than elsewhere**; **where else the same trials run**, by period; **the companies at home there**, how many try only at home and how many also in the other regions; and **how it ends**: terminated, results posted, months to posting.

How it is made. North America is the United States and Canada; Europe the EU and EEA countries, the United Kingdom and Switzerland; China mainland China as the registry lists it. The registry does not give a company's home, so it is derived: a table of the largest multinationals; else the legal form in the company's name where it is telling (Inc. or LLC with a North American site; GmbH, AG, S.A., AB, plc with a European one); else the country where at least 60% of its single-country trials run; else the country holding at least half of all its trials. A company that cannot be placed is left out, and only the region is used.

Two cautions. China is China as seen through the US registry: the trials that sponsors chose to register on ClinicalTrials.gov, typically those with an eye on approval or partners abroad. And posting results there is a legal duty mainly for trials under US law, so a lower share for trials run only in Europe or China shows who the rule binds, not who withholds results.

Research trends and women's health

Research trends



Research trends for oncology: a plain-English overview, publication volume and the fastest-growing topics.

Pick an area to see what medical research is busy with right now. Each week Phaseline counts new PubMed papers per area and finds the topics whose share has grown most compared with two years earlier.

- A short overview in plain English, written by AI from the counts and titles on the page.
- **PubMed searches behind this page**, at the bottom: the exact searches that produced every number, each with a link that runs it in PubMed. Every rising topic also links to its own search.
- **Rising topics** with paper counts and growth. Where active trials in Phaseline mention a topic, a link filters the table on it.
- Monthly publication volume (the latest months are grey while indexing catches up), the largest topics, topics cooling off, and recent randomised trials and reviews.

Trends describe what is being published, which is not the same as medical progress.

Toward the clinic

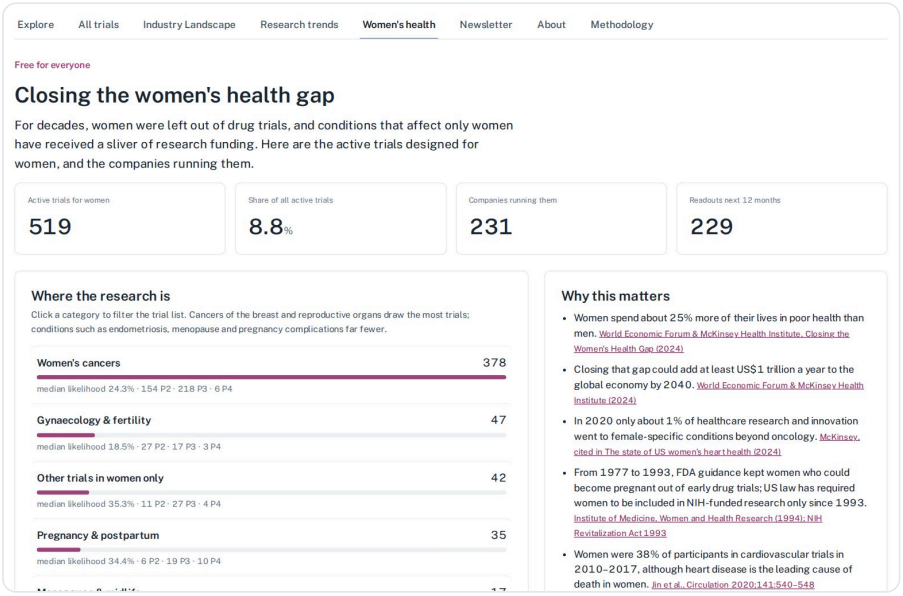
Below the trends for an area sits a panel that looks the other way: not what is being published now, but how old the basic research is that the area's drug trials rest on, and who did it. Phaseline takes the finished company phase 2 trials of novel drugs in the reference set behind the track record, finds each trial's primary report in PubMed, and walks the report's references two steps back in OpenAlex. Every work on that road is sorted by rule into basic research, clinical research, review, human genetics or other, from its MeSH terms, publication type, title and OpenAlex topic. No author names are read.

- **Years from basic research to trial start**: the trial's start year minus the median publication year of the basic works two steps back, with the middle half of the area's trials, and the distance to the oldest work a trial typically rests on. Across all areas the median road is about twelve years; oncology is shorter, haematology longer.
- **Basic share**: how much of what lies two steps behind a trial report is basic research, as against clinical research, reviews and genetics.
- **Company share**: how much of that basic research has a company among the author institutions. The fields and countries of the institutions follow.

- **Short and long roads**: approved drugs from the area with the shortest and longest roads, each with its trial start, the median and oldest basic year and its targets. Kinase inhibitors that followed a mutation discovery by a year or two sit at one end; receptor drugs resting on pharmacology from the 1970s at the other.
- **By target**: the same measures for every target in the area with at least three traced trials.

The panel is descriptive. In the study that produced it, drugs that were later approved and matched drugs that were not had about the same share of basic research behind them and roads of about the same length, so none of these measures enters the approval likelihood. The method is set out under *How this was measured* at the foot of the panel and in the methodology on the site.

Women's health



Closing the women's health gap: active trials designed for women, by category and company.

For decades women were left out of early drug trials, and conditions that affect only women receive a small share of research. This section brings together every active phase 2–4 trial designed for women, from companies, universities and hospitals, with the sponsor filter, across all areas: trials that enrol only women, and trials of female-specific conditions in gynaecology and fertility, pregnancy and the postpartum period, menopause, and cancers of the breast and reproductive organs.

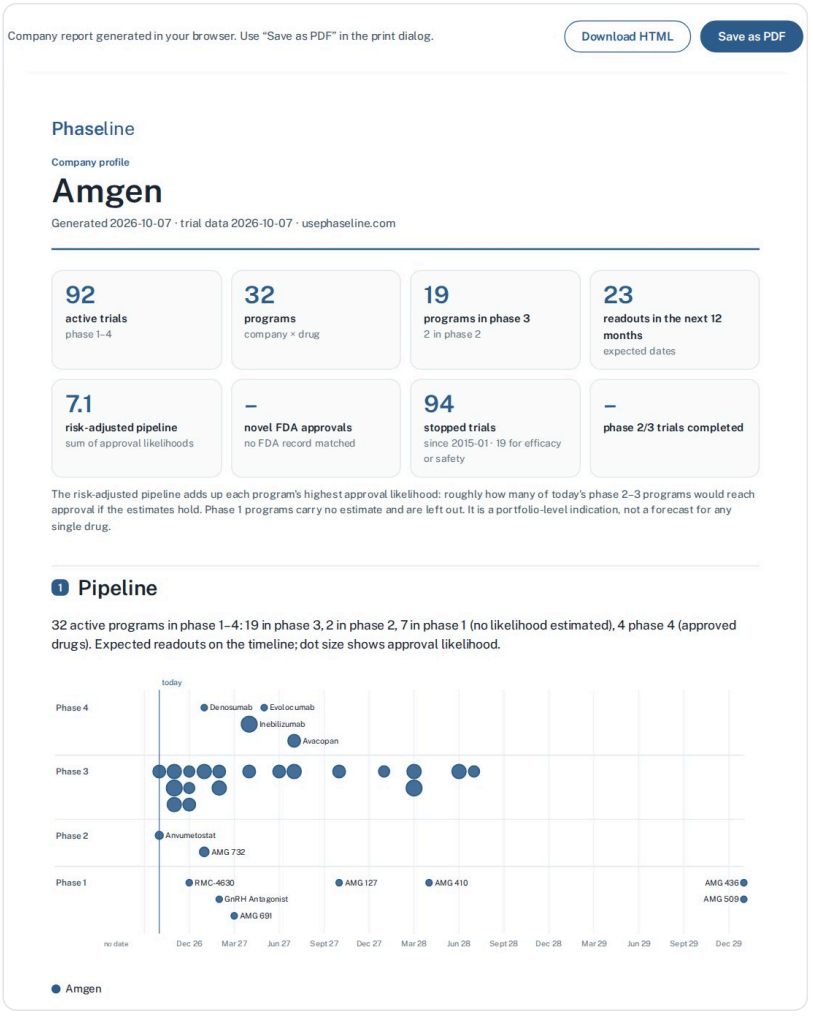
- **Where the research is**: trials per category. Click a category to filter the list.
- **Why this matters**: key facts, each linked to its source.
- **Companies advancing women's health**: sponsors with the most trials, their phases, best likelihood and next readout. Click a company to see its trials in the main table.
- The full list of trials, which open in the same detail panel as the main table.

The companies table maps who is doing the research.

Reports, slides, posters and exports

A company report gathers what the public record says about one company, in a document you can keep, share internally or bring to a meeting.

1. In the Industry Landscape tab, click **Company report**, start typing a company name and pick it from the list. (In the **By company** view there is also a button next to the company's name.)
2. Click **Generate report**. The report opens in a new tab.
3. Click **Save as PDF** (choose "Save as PDF" in the print dialog) or **Download HTML**.



The first page of a company report: key figures and the pipeline on a timeline.

Section	What it shows
Key figures	Active trials and programs, programs in phase 3, readouts in the next 12 months, the risk-adjusted pipeline (the sum of the programs' approval likelihoods), novel FDA approvals, stopped trials and the share of phase 2/3 trials completed compared with the industry.
1 Pipeline	Every active program with mechanism, target, phase, next readout and likelihood, and the upcoming readouts.
2 Therapeutic profile	Areas, drug types, targets, drug classes, ICD-10 diagnoses and conditions, now and in the trials started since 2015.
3 Competitors	Other companies' programs on the same targets, the most advanced first, and the companies that overlap most.
4 Track record	FDA approvals where the company is the applicant, new indications per year, trial completion, positive published results and guideline recommendations.
5 Setbacks	Trials stopped since 2015 with the sponsor's reason (efficacy and safety listed) and negative published results.

FDA approvals only, so far: approvals in the EU, China or Japan are not included. Subsidiaries of large groups are counted under the parent, and drugs filed by a partner appear under the partner. The report lists the company names it matched.

One place for reports, slides and posters

Open **Reports, slides and posters** from Explore (question card 5, or *Take it further* on any page) or from the Industry Landscape.

1. **What is it about?** Pick a topic, a target, drug class or diagnosis, and/or add up to 15 companies. Both are optional; the company list is kept in your browser.
2. **What should be in it?** Tick key figures, the companies' pipeline, the race, trial sites, stopped trials and the readouts of the next 12 months, and change the title if you like. You can add your own logo (PNG, JPG, SVG or WebP); it is placed on the slides and the poster, and kept in your browser for next time.
3. **Build:** *Report* gives the company report (one company) or the side-by-side report (several), as HTML or PDF. *Slides* downloads an editable PowerPoint file, one slide per part. *Poster* opens an A0 poster that you save as PDF, choose A0 or A1 in the print dialog.

With a topic and companies together – "our programs in the KRAS landscape" – the companies' own programs are outlined in the race. Every slide set and poster carries its sources and the note that the numbers are estimates; check them before you present.

Several companies side by side


Portfolio report generated in your browser. Use “Save as PDF” in the print dialog.

Download HTML | Save as PDF

Phaseline

Portfolio report

3 companies, side by side

● Amgen ● Eli Lilly ● AstraZeneca

Generated 2026-10-07 · trial data 2026-10-07 · usephaseline.com

3 companies — Amgen, Eli Lilly, AstraZeneca	683 active trials — phase 1–4	254 programs — 86 in phase 3	195 readouts in the next 12 months — busiest quarter 2026 Q4 (64)
39.9 risk-adjusted pipeline — sum of approval likelihoods	50% of trials in one area — Oncology	22 targets shared — by two or more of the companies	344 stopped trials — since 2015-01 · 122 for efficacy or safety

The report describes the companies' active trials side by side. It does not rate the portfolio, suggest weights or say what to buy or sell. The risk-adjusted pipeline adds up each program's highest approval likelihood: roughly how many of today's phase 2–3 programs would reach approval if the estimates hold. Phase 1 programs carry no estimate and are left out.

1 The companies side by side

Company	Active trials	Programs	In phase 3	Risk-adj. pipeline	Median P3 likelihood	Readouts, 12 mo	Next readout	Novel FDA approvals since 2010	P2/3 completed	Stopped since 2015
● Amgen	92	32	19	7.1	37%	23	Oct 2026 Dazodalibep · Phase 3	–	–	94 (19 eff./safety)
● Eli Lilly	212	87	23	13.1	36%	58	Oct 2026 Pirtobrutinib · Phase 3	–	–	103 (58 eff./safety)
● AstraZeneca	379	135	44	19.7	30%	114	Oct 2026 Olaparib Continuous · Phase 2	–	–	147 (45 eff./safety)

Median P3 likelihood: the middle approval likelihood of the company's active phase 3 trials. P2/3 completed: of the company's phase 2/3 trials started since 2015 that have finished, the share that ran to completion (completion is not the same as success); industry –. FDA approvals count original NDA/BLA approvals where the company is the applicant.

Risk-adjusted pipeline by company

AstraZeneca 19.7

The first page of a side-by-side report: key figures and the companies side by side.

Section	What it shows
Key figures	Active trials, programs, readouts in the next 12 months and the busiest quarter, the risk-adjusted pipeline, the share of trials in the largest area, shared targets and stopped trials.
1 Side by side	For each company: trials, programs, phase 3 programs, risk-adjusted pipeline, median phase 3 likelihood, readouts in 12 months, next readout, novel FDA approvals, completed trials and stopped trials.
2 Readout calendar	All expected readouts in the next 12 months on one timeline, with the approval likelihood; per quarter; and as a calendar file (.ics) for the next 18 months.
3 Concentration	Trials by area, programs by phase and drug type, the most frequent targets and ICD-10 diagnoses.
4 Overlaps	Targets and diagnoses that two or more of the companies work on, where one company's readout can say something about another's.
5 Setbacks	Stopped trials per company by reason, and those stopped for efficacy or safety.

The side-by-side report describes the companies' trials. It does not score the portfolio, suggest weights or say what to buy or sell.

Exports and files

Where	File	Contents
Landscape views	CSV	Programs, academic-only programs, drift or loss-of-exclusivity lists, with trial numbers
Stopped trials	CSV	Trials, dates, categories and reasons
Design check	CSV	The 40 closest twins with outcome, size, dates, design, endpoint, reason, and whether the drug was approved afterwards (as what, when, for this condition)
Trial map	CSV	Everything on the map, with links
Radar, reports, watchlist	.ics	Readouts as calendar events
Reports	HTML / PDF	Company, side-by-side and topic reports
Builder	.pptx / PDF	Editable slides (PptxGenJS) and A0 posters

Every row carries the NCT number or PMID, so you can always go back to the source.

Your own AI assistant as a reader

Phaseline is also a tool server for AI assistants (Model Context Protocol). Connected to Claude, ChatGPT, Claude Code or Cursor with your license key, it lets the assistant call the same data the site shows: search trials, open one with its likelihood and registry history, the landscape on a target or company, upcoming readouts, stopped trials, site records, burden of disease and the week's changes. The assistant reasons and drafts; Phaseline supplies dated, sourced facts it cannot find on its own, above all what a registry entry looked like before. Nothing returned by the server is written by a model. Address and set-up are in chapter 24 and on the About page.

Part II · 22

US and EU regulatory paths

Two reference pages kept outside the menu, at usephaseline.com/#us-path and #eu-path, for teams without a regulatory department: the road from IND to approval in five milestones, the FDA meeting types with their clocks and package deadlines, what FDA counts as substantial evidence of effectiveness (and when one trial is enough), ICH E8(R1) on study design, and the CMC and container-closure expectations. The second does the same for Europe: SME status and the fee incentives, scientific advice, the Clinical Trials Regulation timelines, orphan designation, PRIME and paediatric plans, the 210-day centralised procedure with its clock stops, conditional authorisation, the HTA joint clinical assessment, and a side-by-side table of the two systems. Every section links to the FDA, EMA or Commission page it is drawn from. Both pages are orientation, not regulatory advice.

Part II · 23

The weekly newsletter

Every Monday a new issue appears under the **Newsletter** tab. Read it on the site, or download it as a PDF to read later or print. Each issue has:

- the coming phase 3 readouts, nearest first, with their approval likelihood;
- FDA advisory committee meetings in the next six weeks, and timelines that slipped;
- the research trend of the week and the trial trend of the week;
- **protocol changes this week**: primary outcomes replaced after the start and planned enrollment cut, from the registry's own version history;
- a **research spotlight**: a new study about drug development, summarised in plain words;
- *The Perspective*: the week's lead story set against a passage from an American medical textbook of 1847.

Everyone can see the cover picture, which is also shared on LinkedIn.

Connect your own AI assistant (MCP)

Phaseline can be used as a set of tools inside your own AI assistant through the Model Context Protocol. Once connected, Claude, ChatGPT, Claude Code or Cursor can ask Phaseline for the facts while you talk to it: "which companies have phase 3 programs on KRAS and when do they read out", "how did the trials Karolinska sat in end", "what changed on NCT0… this month". The assistant reasons; Phaseline answers with counted, dated, sourced data, the same as on the site, and never with text a model made up.

- **Server address:** https://usephaseline.com/mcp. Transport: Streamable HTTP.
- **Your key:** add the header Authorization: Bearer <your Phaseline key>. Without a key the free areas are served, like the site. The key is validated on each call and stays on your machine.
- **Claude Code:** claude mcp add --transport http phaseline https://usephaseline.com/mcp --header "Authorization: Bearer <key>". Other clients: add a remote MCP server with the address and the header in their settings.
- **Tools:** search_trials, get_trial, landscape, upcoming_readouts, stopped_trials, site_record, burden_of_disease, weekly_changes, fda_news, target_biology and methodology. Ask the assistant to read *methodology* first; it explains what a likelihood is and is not.

Answers are limited to 50 rows per call; narrow the question for more. The data is the Monday update, like the site.

Investors, Deals and Labs

The views added in the autumn of 2026 turn Phaseline toward the people who finance drug development, and gather the research views in one place. All three are free, and all of them are descriptive: nothing in them enters the approval likelihood.

Investors: what the specialists hold, and what the companies have filed

The **Investors** view, **Finance** under *Data*, starts from the 39 life-science funds that file their holdings with the SEC every quarter (Form 13F). It shows which of the landscape's companies they hold, how many funds hold each one and with how much, how the held companies compare with the rest of the landscape in area, phase and readouts, and a network of the companies that the same funds tend to hold together. Select a company and its panel opens: the funds, the pipeline, the approval band of its lead trials, and then everything the company itself has filed with the SEC.

- **Cash against readouts.** From the company's latest 10-K, 10-Q or 20-F: cash and short-term investments, the annualised operating outflow, the runway that gives, and how many of its coming phase 2-3 readouts fall inside it. The table has a runway column and a filter for companies with a readout inside their runway. A rough figure by design: it ignores financing after the report date, milestones and plans.
- **Does the cash reach the readout, when the readout is late?** A registry date is a plan. From the version histories of about 4,000 finished industry phase 2-3 trials, Phaseline has tabulated how many months later than stated trials actually finish, by phase, by how far ahead the stated date lay, and by the sponsor's size. A small sponsor's phase 2 that states a date 12 to 24 months ahead finishes a median ten months after it; a large sponsor's phase 3, two months. Every coming readout therefore has three dates: *stated*, *likely* (stated plus the median delay of trials like it) and *late* (plus the upper-quartile delay). The panel sets each company's first readout against its cash three times and lists the companies whose cash reaches the stated date but not the likely one. In November 2026 the cash reached the first readout for 75% of companies at the stated date, 58% at the likely date and 42% at a late one. The delay is a base rate, not a forecast for the trial.
- **Press releases, PDUFA dates and agreements.** The 8-Ks of the last year with a press release, the first line of each; the PDUFA and target action dates the company has stated in them, the latest filing winning; and the licences, collaborations and acquisitions it has filed under item 1.01 in the last two years, with the counterparty. Across companies, the view opens with the regulatory dates ahead and the agreements of the last two years.
- **Complete response letters.** FDA's letters declining approval as submitted, published since July 2025: how many, what kinds of deficiency they raise (read from the section headings of FDA's template), how many of the applications were approved later and after how long, and each company's own letters on its panel.
- **Private financing.** The offerings biotech and pharma companies reported to the SEC on Form D: by month, the largest of the last year, and each company's own rounds. Amounts as stated at filing.
- **Companies built like this.** For the selected company, the five whose pipelines have the same shape: areas, drug types, target families, stage and runway. Companies no fund holds are marked, which is the point: a list of where to look next.

Deals: who ties up with whom

The **Deals** view draws the filed agreements as a network. Companies are nodes, sized by programs and coloured by main area (grey for a counterparty outside the landscape); agreements are lines coloured by kind; a bar per quarter shows the network as it stood then; filters by kind and area. Only connected groups of three or more companies are drawn; the agreements between two companies that touch no other are in the list. Below the network: what the acquired look like against the licensed and the rest of the landscape in programs, phase 3, fund holdings and runway; which areas and target families each kind of agreement goes for; the repeat counterparties; and the full list with a link to every filing. Only SEC filers' agreements are seen, so deals between two private or two non-US companies are missing, and about a quarter of the counterparties could not be read from the filing.

Labs: the research views

Labs, under *Insights*, gathers the views that come from Phaseline's research rather than from the registry's record of a single trial: dormant targets and the target map (chapter 12), toward the clinic (chapter 20), universities and hospitals (chapter 37), burden of disease (chapter 12), and **NIH exposure**, which reads the FY 2026 President's Budget for NIH, a 39 percent cut and a merger of the institutes into eight, against the trials Phaseline follows: which carry an NIH grant, by area, institute and mechanism, with the proposal's change for each mechanism; the targets whose programs most often carry a grant; and the companies with SBIR/STTR awards. The figures describe the request, not the appropriation.

Trial blazer (experimental): a way to find new paths

Most drug targets are tried in a handful of diseases and never in their neighbours. **Trial blazer**, under Labs, looks for the neighbours. When a target has worked in a finished trial in one disease, the diseases closest to it in the medical subject tree, where no company has tried the target, are places to look, the more so when human genetics links the gene to the disease. A score adds up that evidence for every target and disease, subtracts failures, and removes every pair a company has already taken into a trial.

- **A new list every month.** About a dozen pairs, one per target and one per disease, each with the trials that point there. The list stands for the month and is then kept, so that it can be checked against what companies went on to try; a pair that is later tried is marked.
- **Molecules waiting.** Where a molecule on the target has already been through phase 2 or 3 in people and has gone quiet (its last such trial completed, no results reported, nothing started since, not approved) it is shown beside the pair, with whether the company's annual report still names it. That is the shortest road from an idea to a trial.
- **An editorial read.** Before a list is published, pairs are removed where the closeness is only a position in the tree, where the direction of effect is wrong, or where the condition is a symptom or a complication. Every removal is recorded with its reason, and the view shows how many were removed and why.

Tested on the past, with only what was known at the start of 2016, about one in six of the 100 highest-ranked untried pairs was later taken into a company trial, against under one in a hundred for pairs drawn at random. That shows the ranking finds where companies go next. It does not show that the trials succeed.

> Read a pair as a question, not an answer. The method does not know whether a disease needs a target switched on or blocked, cannot see unpublished work, and a quiet molecule may have stopped for good reasons or be licensed elsewhere. Nothing here enters the approval likelihood.

Two reference pages that were in the menu until November 2026 remain reachable by address: the US and EU regulatory paths at usephaseline.com/#us-path and #eu-path (chapter 22), and the European perspective at #europe (chapter 37).

Part III

Reading the signals

Which signal answers which question, what besides the drug moves each one, worked readings and rules of thumb.

Choosing the right signal

Phaseline shows many figures about a trial, a drug, a target or a company. None of them measures "how good" the drug is. Each one measures something narrower, a date the sponsor entered, a count of papers, a published success rate adjusted for a few known factors, and each is affected by things other than the drug's prospects. This part is about using them well: deciding which signal fits the question, knowing what else moves it, and reading several together rather than one alone. It borrows a habit from research evaluation, where the same discipline has been learned the hard way with citation metrics: **triangulate**. A decision supported by quantitative evidence, by reading the primary documents and by expert judgment is robust; when the three disagree, the disagreement itself is the finding.

Three kinds of question

Most questions people bring to Phaseline fall into one of three groups, and the group decides how careful one has to be with the signals.

Question type	Example	What matters
Assessment – judging a competitor's chances or a field's prospects	"Will their phase 3 read out before ours, and will it work?"	Fairness. Factors besides the drug (area, phase, sponsor size, registry habits) must be accounted for, or the comparison measures the wrong thing. Use normalised signals and partner them.
Demonstration – making a case to a board, an investor or a partner	"Show that our target is under-served and the science is moving."	Honesty about what a figure shows. Counts and shares look impressive; say what they count. A reader who finds one overstated figure discounts the rest.
Planning – designing a trial, a watch list or a partnering list	"How many patients did trials like ours enroll, and how often did they stop?"	The reference set. The right comparison group matters more than any single figure; the design check is built for this.

Six things besides the drug that move a signal

1. **Therapeutic area.** Approval rates, trial sizes, durations and publication habits differ by area. Oncology trials fail more, run longer and publish more. The approval likelihood is area-normalised by construction; counts (papers, abstracts, trial starts) are not. Compare counts within an area, or use shares.
2. **Phase.** A phase 2 and a phase 3 trial of the same drug carry different base rates, different enrollment norms and different registry behaviour. The design check and the likelihood match on phase; the lists let you filter on it. Never compare a phase 2 likelihood with a phase 3 one and call the difference a signal.
3. **Sponsor size and experience.** Large companies register more consistently, update more often and run bigger trials; their registry entries slip less for ordinary reasons. The likelihood gives experienced sponsors a small lift. Slips and drift should be compared between sponsors of similar size.
4. **Registry coverage and quality.** Everything starts from what the sponsor entered on ClinicalTrials.gov. Some fields are kept current, some are not; some sponsors enter deliberately late dates to avoid slips; EU-only trials may not be there at all. A signal built on registry dates (readout, slips, enrollment cut) is only as good as the entry.
5. **Manipulation.** Few signals are gamed, but some can be: an estimated completion date set generously, a primary outcome written vaguely so that no "switch" is ever recorded, a stop reason labelled "business" after weak data. Signals that read the record as written cannot see through this; the partner signals and the documents can.

6. **Time.** Recent trials have had less time to accumulate papers, abstracts and slips; recently finished trials in the reference set are disproportionately the ones that stopped early; weekly slip tracking only began in September 2026. Where a figure depends on elapsed time, compare like periods with like.

Characteristics of the signals

The table marks which signals are already normalised for area and size, which are facts taken from a registry rather than estimates, which are hard to manipulate, and which depend on how much time has passed. A blank cell means "no" or "not applicable". Use it to pick partner signals that cover each other's weaknesses.

Signal	Area-normalised	Size-independent	Registry fact (not estimate)	Hard to manipulate	Time-independent
Approval likelihood	●	●		●	●
Expected readout	●	●	●		
Slips and delay		●	●		
Primary outcome replaced	●	●	●		●
Enrollment cut	●	●	●		●
Genetic support	●	●		●	●
Biomarker-selected	●	●	●	●	●
Earlier results (▲ ▼ ◆)				●	
Conference abstracts and preprints				●	
Guideline mentions				●	
Trial twins: stopped early, approved	●	●	●	●	
Stop reasons		●	●		●
Loss of exclusivity	●	●	●	●	●
Trial trend: starts and share			●	●	
Research trend: papers and growth			●	●	
Readout drift by sponsor			●		
Results reporting record	●	●	●		
Site record (withdrawn and terminated listings, activation time)		●	●	●	
Orphan drug designations (FDA, EMA)	●	●	●		
Drug status: new drug or new use	●	●	●		
Dormant and revived targets (delayed recognition)		●	●		●
Target map: fields and bridging targets (Leiden)		●	●		●
FDA news matched to drugs and sponsors	●			●	
Burden of disease next to the trials		●	●	●	●
Who the trials include		●	●	●	●
Risk-adjusted pipeline	●			●	●

A signal that is "size-independent" does not grow just because a company or a field is big. A "registry fact" is read from the record as written and can be checked there in one click; an estimate is Phaseline's and carries the method's uncertainty. "Hard to manipulate" means the sponsor cannot move it by what they choose to write in the registry.

The signals, one by one

Each signal below is described the same way: what it is, how it is produced, what it is useful for, when to use it with care, and which other signals to read next to it. The methods behind them are in Part II; this chapter is about use.

Approval likelihood

What it is. Phaseline's estimate that a company-sponsored phase 2 or 3 trial's drug is eventually approved for that use. **Type:** estimate · population-level · area- and phase-normalised. **How.** The published phase-transition rate for the area and phase, adjusted within a narrow range for design and context, drug type and genetic support, capped at 90 % (chapter 10).

Useful to: rank programs within an area; place a trial against its area's base rate; add up a portfolio (risk-adjusted pipeline); explain, factor by factor, why one program looks better placed than another.

Use with care when: comparing across areas or phases, where the base rates differ and a higher figure may only mean an easier field; reading differences of a few points, which are within the method's noise; a trial has reported data the public record does not yet contain: the estimate knows nothing of interim results; the sponsor is a university or hospital, which gets no estimate; anyone wants a forecast for one trial rather than the odds for trials like it.

Partner signals: trial twins (what actually happened to similar trials); registry history (what has changed since the start); earlier results for the drug.

Expected readout

What it is. The month in which the primary outcome is due: the registry's primary completion date, or the study completion date when the primary date has passed with the trial still running. **Type:** registry fact · marked estimated or actual. **How.** Read weekly from ClinicalTrials.gov; the panel shows which date was used and why.

Useful to: build a calendar of competitor readouts; time a partnering approach or a financing; sort any list by what comes next.

Use with care when: the date is marked estimated and has not been updated for a long time, sponsors are not obliged to keep it current; the sponsor has a record of slips; results are needed, not completion, top-line results usually follow about three months after the primary date, and publication much later; an advisory-committee date is shown: the link is automatic and should be checked in the notice.

Partner signals: slips and delay; readout drift for the sponsor; "moved again" in the registry history.

Slips and delay

What it is. The number of times the estimated primary completion date has moved later, and the total delay in days. **Type:** registry fact · derived from version history. **How.** Weekly comparison of the date with the previous week's, plus the moves recorded in the registry's own version history back to the first entry (chapter 11).

Useful to: tell a stable programme from a drifting one; flag trials whose dates should not be taken at face value; compare sponsors' registry discipline (drift).

Use with care when: a single slip is involved, one move is ordinary, the pattern is the signal; sponsors are of different sizes, since big sponsors re-plan less visibly; a sponsor enters generous dates from the start and so never slips; the trial added a cohort or amended the protocol, which moves dates for good reasons.

Partner signals: enrollment cut and sites cut (recruitment trouble shows there first); the trial's own registry history timeline; stop reasons in the area (how often "enrollment" ends trials like this).

Primary outcome replaced, added or dropped

What it is. A change to the primary outcome measures after the trial started, read from consecutive registry versions. **Type:** registry fact · rule-based. **How.** A measure present in one version and absent in the next, with a new one

appearing, counts as replaced; rewordings and added time frames do not (chapter 11).

Useful to: find trials whose endpoint moved after the data started to come in; prepare questions for a partnering meeting; check your own programme's record before a regulator does.

Use with care when: the change has an ordinary cause, a regulator's request, a harmonisation across a programme, a correction of an entry error; the measure was written vaguely enough that a real change is invisible; the switch is used as a verdict: it is a reason to read the protocol history, not a conclusion about the drug.

Partner signals: enrollment cut (the two together in Phaseline's own study marked the trials most likely to be terminated); slips; the published study on registry signals linked from the Methodology.

Enrollment cut, enrolled fewer than planned

What it is. A fall of a fifth or more in the estimated enrollment after the start, or an actual count a fifth or more below the last estimate. **Type:** registry fact. **How.** From the version history, as above.

Useful to: see recruitment trouble before it becomes a stop; judge whether a trial is still powered for its endpoint; compare with the sizes trials in the design check actually reached.

Use with care when: the cut follows an interim analysis that allowed a smaller sample, a good reason; the trial was over-planned from the start; the sponsor's actual count is simply not yet entered.

Partner signals: patients enrolled in the design check; sites cut; stop reasons.

Genetic support

What it is. Whether the drug's target is genetically linked to the disease being treated, from Open Targets, with the gene named. **Type:** external fact · unknown when the target is unknown. **How.** Open Targets' genetic association evidence for target and disease (chapter 10; Minikel et al. 2024).

Useful to: favour programs on targets with human genetic evidence, which approve more often; find academic programs on genetically supported targets no company is testing; explain part of a likelihood difference.

Use with care when: the target is read by AI from a code-named drug, check the ✓ or OT marker; the disease is rare or poorly mapped, where absence of evidence is not evidence of absence; the mechanism is symptomatic or downstream, where genetics says little.

Partner signals: the target primer (what the target does); competitors on the same target; research trend for the target.

Earlier results for the drug (▲ ▼ ◆)

What it is. Counts of earlier positive, negative and mixed results for the drug, papers in PubMed, results posted on ClinicalTrials.gov, conference abstracts and preprints, each labelled from its abstract with a one-line summary. **Type:** count · AI-labelled. **How.** Chapter 18; the labels are words, never numbers, and every item links to its source.

Useful to: see at a glance whether a drug has a track record; read, in one place, what has been presented about it; spot a drug with several negatives still in trials.

Use with care when: the drug is new, so the count is small because little time has passed, not because results are poor; the field publishes heavily (oncology) and the count grows with the field; a label is used without reading the source: labels can be wrong; a preprint is counted: not peer reviewed, numbers can change.

Partner signals: guideline mentions (results that changed practice); conference abstract and preprint markers (how recent the evidence is); the trial twins' outcomes.

Conference abstracts and preprints

What it is. Results presented at the major conferences (via OpenAlex supplements) or posted on medRxiv and bioRxiv, that name the trial or its drug. **Type:** count · AI-labelled · marked as abstract or preprint. **How.** Chapter 18.

Useful to: see results months before the paper; find the first public data on a competitor; know that a readout has in fact happened when the registry still says "active".

Use with care when: coverage is still growing, a drug with none may simply not have been searched yet; the abstract is a trial-in-progress description, not a result; a preprint has since been published, the panel says so when the servers do.

Partner signals: earlier results; expected readout (an abstract before the primary date suggests an interim); research trend for the topic.

Guideline mentions

What it is. Clinical guidelines in PubMed that name the drug or cite one of its results, labelled recommended, emerging, under investigation, mentioned or cites a study. **Type:** count · AI-labelled. **How.** Chapter 18.

Useful to: show that a drug has entered practice; see how an established competitor is positioned; find the standard of care the trial will be compared with.

Use with care when: the guideline is old or regional; "mentioned" is read as "recommended"; the drug is new: guidelines lag approval by years.

Partner signals: loss of exclusivity (how long the established competitor stays protected); earlier results.

Trial twins: stopped early, months, enrolled, approved

What it is. For a planned or running trial, the 200 closest finished trials, same phase, shared condition, ideally the same target, and what happened to them: the share terminated, the time from start to primary completion, the actual enrollment, and the share whose drug was later approved. **Type:** reference-set statistics · registry facts plus Drugs@FDA. **How.** Chapter 14.

Useful to: size and schedule a trial against reality; judge an approval likelihood against what happened to similar trials; see where stopping concentrates (small trials, academic sponsors, certain periods).

Use with care when: the condition is rare, so the twins are drawn from parent terms and are looser matches; the comparison period is recent (finished trials are then disproportionately the stopped ones); the trials are vaccines or cell and gene therapies, which get no approval outcome; "approved" is read as "approved for this use" – the panel distinguishes drug level from indication level.

Partner signals: approval likelihood; stop reasons; competing trials recruiting now.

Stop reasons

What it is. For trials terminated, withdrawn or suspended since 2015, the sponsor's stated reason sorted into one of seven categories. **Type:** registry fact · rule-based with AI fallback. **How.** Chapter 13.

Useful to: see why trials on a target or in a class fail; estimate the recruitment risk in a field; prepare for the question "why did the others stop?".

Use with care when: the category is "business" – which includes programs dropped after weak data; a reason is read as a cause: sponsors are not obliged to explain; the share is compared across areas without noting that enrollment problems dominate in some and futility in others.

Partner signals: trial twins; enrollment cut; earlier results for the stopped drugs.

Loss of exclusivity

What it is. For US-approved drugs, the later of the last substance patent and the last exclusivity period in the Orange Book, or the Purple Book's licensure and exclusivity for biologics. **Type:** regulatory fact. **How.** Chapter 18.

Useful to: see when an established competitor becomes generic; time a new entrant against the market; find classes about to open up.

Use with care when: litigation, settlements and new formulations move the real date; biologic patent expiries are not in FDA's file; a listed expiry is read as the day generics launch.

Partner signals: guideline mentions (how entrenched the drug is); trial trend for the class (whether new entrants are coming).

Trial trend: starts and share

What it is. Phase 2–3 trial starts on a target, condition, drug type, area or country in the latest twelve months, compared with the twelve months before, as a count and as a share of all starts. **Type:** count · registry fact · lagged a quarter. **How.** Chapter 18.

Useful to: see where companies are putting money; find crowded fields and empty ones; show a board that a target is heating up.

Use with care when: the counts are small, so one sponsor's programme moves the trend; the registry has not yet filled in recent starts: hence the lag; shares are read without the count behind them.

Partner signals: research trend (is the science moving the same way?); competitors on the target; stop reasons in the field.

Research trend: papers and growth

What it is. New PubMed records on human studies for a topic in the last twelve months, and the change in its share of the area against two years earlier. **Type:** count · publishing activity. **How.** Chapter 18.

Useful to: see which topics the field is writing about; find science ahead of the trials; choose where to look for academic partners.

Use with care when: growth is from a small base; the topic's vocabulary changed (a renamed target looks like a new one); papers are read as progress: a controversy also produces papers.

Partner signals: trial trend; the research-vs-trials verdict; academic-only programs on the target.

Research vs trials

What it is. The two trends above for the same term, with a verdict in words: science ahead, trials ahead, moving together. **Type:** derived · sign and size of two changes. **How.** Chapter 18.

Useful to: open a question, why are papers rising while starts are flat?, and to find under-served targets for a pitch or a partnering list.

Use with care when: either trend is from small numbers; the verdict is read as an answer rather than a prompt; the term is matched differently in the two sources (a MeSH term in PubMed, a target symbol in the registry).

Partner signals: the two trends themselves; genetic support (whether the science has a human-genetic basis); stop reasons.

Readout drift by sponsor

What it is. Per sponsor, with subsidiaries: tracked trials, trials that slipped, total and longest delay. **Type:** aggregate of registry facts. **How.** Chapter 11.

Useful to: calibrate how much to trust a sponsor's dates; compare registry discipline among peers of similar size.

Use with care when: sponsors differ in size, a "Power Metric" in the research-evaluation sense: totals grow with the number of trials; delays have ordinary causes; it is read as a judgment of competence rather than of the registry record.

Partner signals: slips per trial; the sponsor's stop reasons; its risk-adjusted pipeline.

Results reporting record

What it is. Per sponsor, the share of finished company phase 2-3 trials, primary completion two or more years ago, with results posted on ClinicalTrials.gov. **Type:** registry fact · aggregate · size-independent as a share. **How.** Chapter 11; reporting.py.

Useful to: judge how much of a sponsor's finished work will ever be visible in the registry; prepare a due-diligence or partnering question; see whether stopped trials are reported as often as completed ones.

Use with care when: the sponsor runs mostly trials outside the US reporting obligation; results went to a journal and not the registry; the sponsor has few finished trials, so one or two change the share; the record is read as a judgment of science rather than of disclosure practice.

Partner signals: readout drift; earlier results for the sponsor's drugs; stop reasons.

Burden of disease next to the trials

What it is. Deaths in the EU-27 by ICD-10 cause group (Eurostat, latest year) and Orphanet's prevalence class for rare diseases, each placed next to the active company phase 2-3 trials that carry the matching diagnosis code or MeSH condition, with trials per 10,000 deaths as the ratio. **Type:** external open statistic · aggregate · a ratio, not a score. **How.** burden.py; Eurostat hlth_cd_aro and Orphadata, both CC BY 4.0. The Global Burden of Disease study and WHO's estimates are not used because their terms allow non-commercial use only.

Useful to: see where the trial count is thin against a large cause of death; frame an indication choice or a grant or partnering case in terms a reviewer recognises; check what Orphanet says the prevalence is before calling an indication rare.

Use with care when: deaths are a poor measure of burden for the condition (chronic pain, dermatology, most psychiatry); the cause group is a chapter because no finer Eurostat group covers the code; the Orphanet match came through a name and the trial's condition list is noisy; the ratio is read as a measure of need rather than of attention. Few trials per death can mean an unmet need or a cause where no drug is expected to help.

Partner signals: research trends for the same area; the ICD-10 landscape; NIH funding by category.

Who the trials include

What it is. Per area, the share of active company phase 2-3 trials admitting children, older adults or adults only, open to one sex only, and with sites in low- or middle-income countries. **Type:** registry fact · aggregate. **How.** Chapter 18; population.py and income_groups.py.

Useful to: place a planned trial's eligibility against its field; answer a regulator's or a funder's question on representativeness; find areas where older adults or children are routinely excluded.

Use with care when: age groups are read as actual enrolment, which they are not; a one-sex restriction reflects the disease (prostate, ovarian) rather than a choice; the country income group is taken for the patients' circumstances.

Partner signals: trial sites by country; the design check's enrolment figures; trial trends by country.

Risk-adjusted pipeline

What it is. The sum of a company's phase 2–3 programs' highest approval likelihoods: roughly how many of today's programs would reach approval if the estimates held. **Type:** derived from estimates · size-dependent. **How.** Chapter 10 and the company report.

Useful to: compare the depth of two pipelines of similar size; show how much of a portfolio sits in late phase.

Use with care when: companies differ in size, the sum grows with the number of programs; it is read as a valuation, which it is not; a single large program dominates it.

Partner signals: programs by phase; readout drift; loss of exclusivity for the marketed products.

Worked readings

Three short examples of reading signals together. The trials are composites, with figures of the kind Phaseline shows.

A phase 3 with two slips and an enrollment cut

A company phase 3 in a solid tumour shows an approval likelihood in the band above the oncology phase 3 base rate in its panel, lifted by biomarker selection and an experienced sponsor. The registry history shows the primary completion date moved twice (+14 months in all) and the estimated enrollment cut from 600 to 420 a year ago. The twins, 200 finished phase 3 trials in the same cancers, stopped early in 22 % of cases and led to an approval in 38 % of the decided ones. **Reading:** the likelihood says this is a reasonable programme for its field; the history says recruitment has been hard and the analysis may be smaller than planned; the twins say that trials like it do get through. In Phaseline's own study, enrollment cut plus a date that moved again was one of the strongest combinations ahead of termination. The right question for a partnering call is whether the cut followed an interim analysis or a recruitment problem, the record cannot tell, the sponsor can.

A phase 2 that looks better than its field

A small company's phase 2 in an autoimmune disease shows a likelihood one band above the immunology phase 2 base rate in its panel. The breakdown: genetic support for the target (the gene is named), randomised and blinded, biomarker-selected. The drug has one positive conference abstract and no papers. **Reading:** the lift is explained, factor by factor, and each factor has a published link to success, but the difference from the base rate is ten points, and the method's noise is a few. Read it as "well-placed for a phase 2", not as "likely to be approved". The partner signals to check are the twins' approval share for this disease and whether the abstract reported the primary endpoint or a secondary one.

A target where the science is ahead

On a target's page, research trend shows papers up 40 % on two years earlier, trial trend shows company starts flat at a 0.3 % share, and the verdict reads "science ahead". Academic-only programs lists two phase 2 trials at university hospitals, one with genetic support. **Reading:** this is a prompt, not a finding. Papers can rise for a controversy as well as for a breakthrough. The next steps are concrete: open the two academic trials, read their earlier results, check the stop reasons for earlier company attempts on the target (futility or business?), and look at the target primer for what the protein does. If those hold up, the pitch – "a genetically supported target the industry has not entered" – is one the signals support.

The signals in pictures

Five figures drawn from the data as of the week this edition was built. They are here to show what each signal looks like across the whole of Phaseline, so that a single trial's figure can be placed, and to make the confounders of chapter 26 visible.

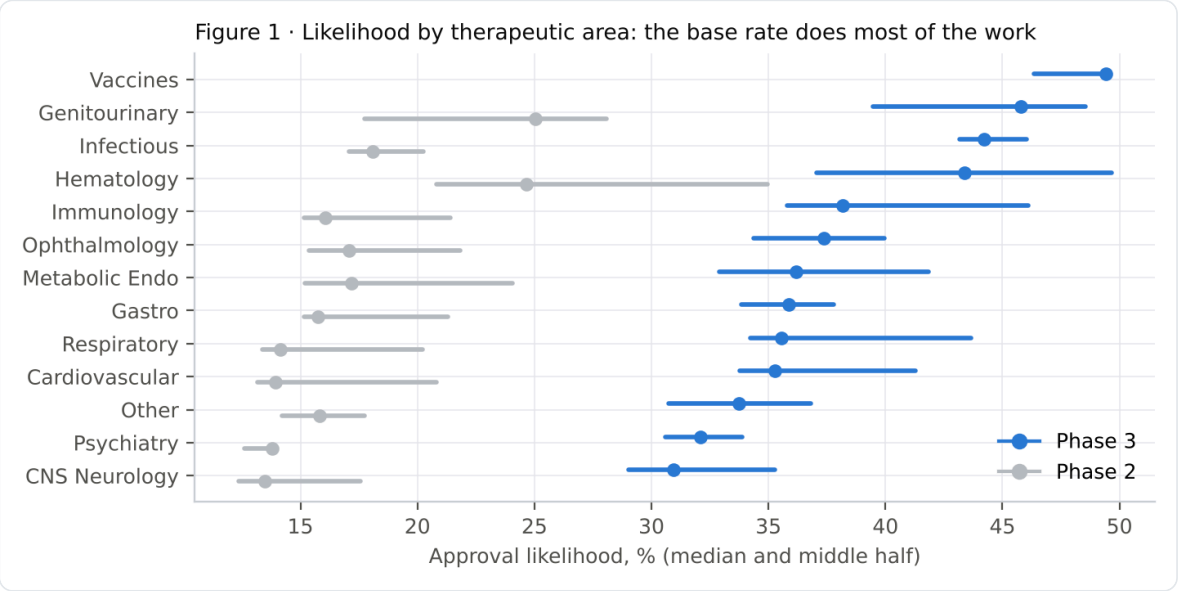


Figure 1. Approval likelihood of active company trials by therapeutic area: the median and the middle half, phase 2 in grey and phase 3 in blue. The spread between areas is larger than the spread within one; that is the base rate at work, and why a likelihood is only compared within an area and phase.

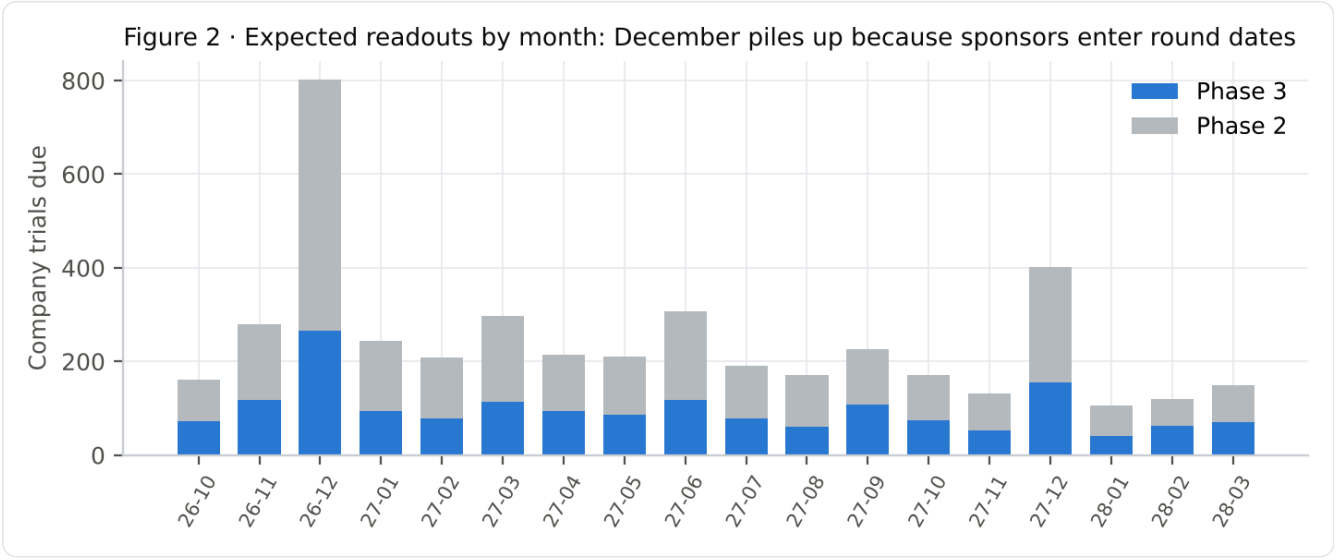


Figure 2. Company phase 2–3 trials due per month. The December spike is not a real clustering of results: sponsors enter year-end placeholders, and those dates move. A readout date in a round month, marked estimated, deserves less trust than one in March.

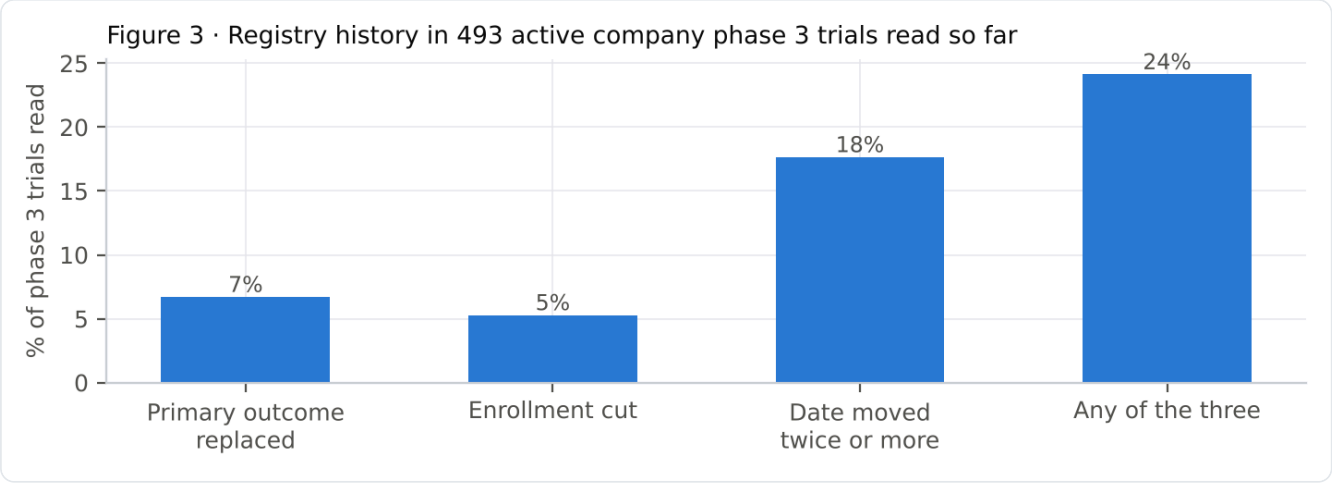


Figure 3. Among the active company phase 3 trials whose version history has been read so far, the share with each signal. A date that moved twice is common; a replaced primary outcome or an enrollment cut is not: which is what makes the rare ones worth a look. Coverage grows weekly; the percentages will settle as the read set grows.

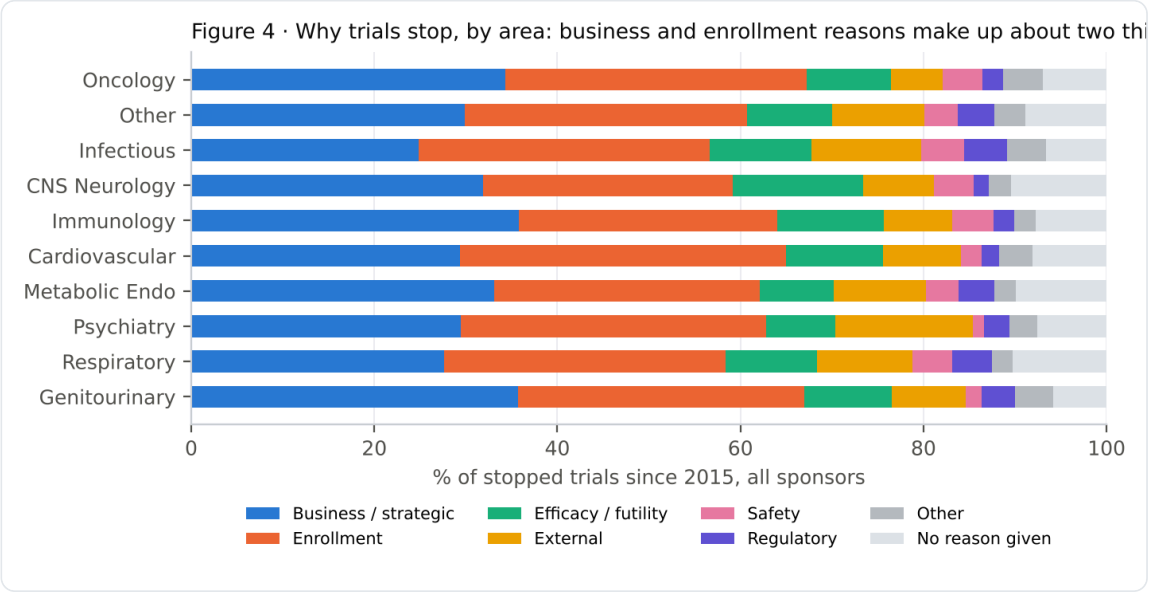


Figure 4. Why trials stopped since 2015, by area, all sponsors. Business and enrollment reasons together make up about two thirds everywhere; efficacy and futility stops are a larger share in oncology and cardiovascular disease than elsewhere. The "business" band includes programs dropped after weak data, which is why the category is read with care.

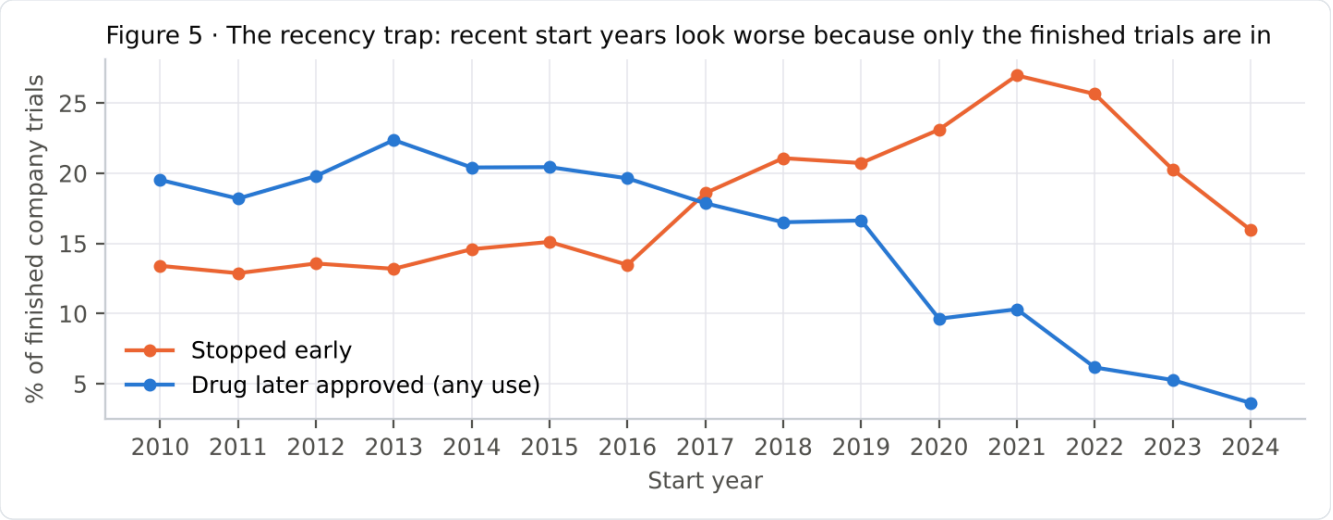


Figure 5. The recency trap in the design-check reference set: finished company trials by start year, the share that stopped early (orange) and the share whose drug was later approved (blue). Trials started after about 2019 look worse on both lines only because the ones that have finished are disproportionately those that stopped, and approvals take years. The design check's "too recent to tell" category exists for this reason.

Rules of thumb

1. **Ask the question first, then pick the signal.** A figure chosen before the question is articulated will be read as answering whatever question comes up.
2. **Use at least two signals that fail differently.** An estimate and a registry fact; a count and a share; a trend and a stop reason. The characteristics table in chapter 26 shows what each one is blind to.
3. **Compare like with like.** Same area, same phase, similar sponsor size, same period. Phaseline's filters exist for this.
4. **Treat registry facts as what was written, not what happened.** They are checkable in one click, which is their strength; they are entered by the sponsor, which is their weakness.
5. **Treat estimates as odds for trials like this one.** Rank with them, do not forecast with them, and remember the noise.
6. **Read the source before you repeat a label.** Every result, abstract, preprint and guideline links to its original. AI labels are words about a text, not the text.
7. **Prefer the simple signal when trust has to be built.** A count of trials that slipped is easier to show a sceptical reader than a normalised estimate, and easier to verify.
8. **Let disagreement do its work.** When the likelihood is high, the history is troubled and the twins are mixed, the disagreement is the finding; write it down as such.
9. **Keep the private world in mind.** Phaseline describes the public record. Interim data, money, manufacturing and strategy are invisible to every signal here.
10. **Date your reading.** Signals change every Monday. A reading is of the record on a given date; say which.

Part IV

Playbooks

Step-by-step routes through the site for the questions small drug-development teams ask most.

Scan a target in half an hour

You work on a target, say KRAS G12C, and need to know who else is there, how far they are and what has failed.

1. **Explore → type the target.** The target page shows the race: every program by phase and next readout.
2. **Industry Landscape → By target.** Search the target. Read the program table: sponsor, drug, mechanism, phase, readout, likelihood. Note the source tags (OT, AI, ✓) and open any AI-read code-named drug to check.
3. **Switch the sponsor filter to "All".** University trials on your target show where clinicians are taking it next, combinations, new indications.
4. **Scroll to "What has already been tried".** Filter by efficacy and safety. Open the stop reasons; note which mechanisms or combinations failed.
5. **Check Trial sites** under the table: which hospitals already run trials on the target, likely sites, and likely competition for patients.
6. **Open the most advanced competitor's trial.** Under the likelihood, *Trials like this one* shows what became of the drugs in similar finished trials; *Registry history* shows whether its primary outcome, enrollment or dates have changed along the way.
7. **Open the trial map** for the same competitor: its published results, similar articles and the finished trials like it.
8. **Export CSV** from the landscape and stopped-trial lists for your own file, and **add the target to your watchlist**.
9. For a document to share, open **Report, slides or poster** with the target as topic.

Ask of every competitor: what phase, when the readout, what has the drug already shown, has the timeline slipped, and has the protocol changed? The program row and trial panel answer all five.

Plan a phase 2 trial

You are drafting a phase 2 protocol and want to stress-test the plan against history.

1. **Design check.** Enter the condition (pick the MeSH term), phase 2, your target and drug type, planned patients and months to primary completion.
2. **Read the headline.** How many twins, what share stopped, and the most common reason. If enrollment dominates, recruitment, not efficacy, is your first risk.
3. **Read "How the drugs fared afterwards".** The share of decided twins whose drug was approved, and how long it took, is the base rate your plan is up against. Open the approved ones: what did their design look like?
4. **Compare your plan with the ranges.** If your months to completion fall below the middle half of the completed twins, your timeline is optimistic. If most twins enrolled fewer patients than you plan, check feasibility per site.
5. **Look at "By size".** If small trials in your field stop far more often, ask whether your size is enough.
6. **Read "What the twins' posted results say".** The median dropout tells you how many patients to add to the sample size; the leading reason tells you where they went. The share with a serious adverse event is the safety background your monitoring plan will be judged against. The share that reported $p < 0.05$ on a primary outcome is a rough measure of how often the field's trials hit their mark, and a field where few do is a field where endpoints may be the problem. In oncology, read dropout with care: the registry counts progression and death as not completing.
7. **Read the endpoints** the twins used. A primary endpoint the field rarely uses needs a reason.
8. **Read the stop quotes.** They are the sponsors' own words, often the most useful page in the check.
9. **"Competing for the same patients now"** shows which countries and hospitals are already busy with your condition. Cross-check in Trial sites.
10. **Export the 40 closest twins** and open the registry entries of the most similar completed ones: their eligibility criteria and site counts are worth copying, or avoiding.

The design check describes history. It does not certify a protocol and is not regulatory advice.

Prepare a partnering meeting

You meet a potential partner next week and want a fact base on them and on your field.

1. **Company report** for the partner: pipeline with readouts, therapeutic profile, competitors on the same targets, FDA approvals, trial completion against the industry, stopped trials. Save as PDF.
2. **Side by side** (up to 15 companies): the partner, its peers and you. The joint readout calendar and the shared targets show where you fit.
3. **Slides.** Build editable PowerPoint slides for the target or the companies, and edit them into your own deck.
4. **Trial map** of the partner's lead program, to see the evidence around it.
5. **Watch the partner** in the watchlist so status changes before the meeting reach you.

The **risk-adjusted pipeline** in reports is the sum of the phase 2–3 programs' highest approval likelihoods: roughly how many of today's programs would reach approval if the estimates held. It is a portfolio-level indication, not a valuation.

Reports describe trials; they do not rate a company or say what to buy or sell.

Part IV · 34

Find academic science to partner with

You look for programs to license or co-develop, or an unoccupied field.

1. **Industry Landscape → Academic-only programs.** Start with "No company on the target" and tick *only with genetic support*.
2. Narrow by **area** or search a disease. Sort mentally by phase 3 first, then readout.
3. For each candidate, open the trial: conditions, design, sites, earlier results for the drug.
4. Switch to "No company beyond phase 1" to include targets where industry is only starting.
5. Open the **trial map** for a promising program: published results and PubMed's similar articles show who else publishes on it.
6. Export the list. The sponsoring institution's technology-transfer office is the usual first contact.

Many academic-only programs test old, approved drugs in a new use. They can still be valuable, for a new formulation, a combination or a rare disease, but the patent position is different. Check the drug panel for Orange Book data.

Keep watch, week by week

1. Add your **competitors**, your **targets** and the **trials** that matter to the watchlist.
2. Every Monday after the update, open the watchlist. New changes since your last visit are highlighted.
3. For a moved readout, open the trial: has it slipped before? The **registry history** in the panel counts every move since the entry was first posted; **readout drift** gives the sponsor's pattern.
4. For a **primary outcome replaced** or an **enrollment cut**, open every version on ClinicalTrials.gov and read what changed in the sponsor's own words before drawing a conclusion.
5. For a trial that left the active list, look for its result: posted results on ClinicalTrials.gov, a press release, the trial's published results in Phaseline after a few weeks.
6. Export the watched readouts to your calendar.
7. Sign up for the **Phaseline weekly** letter for the coming phase 3 readouts, advisory meetings, slipped timelines and the week's protocol changes across all areas, and the trial trend of the week.

For CROs, consultants and investors

- **Find sponsors who will need help.** In the landscape, by sponsor, filter companies by area: small companies with phase 2 programs and readouts ahead are planning their next trial.
- **Feasibility.** The design check gives realistic durations and enrollment for a client's indication, and the competing trials by country and hospital.
- **Site selection.** Trial sites by target, diagnosis or country: institutions with experience in the field, and how busy they already are.
- **Client briefings.** Company reports, side-by-side reports and slides give a sourced fact base in minutes.
- **Where the market is going.** Trial trends shows which targets, conditions and countries are gaining trial starts and which are cooling, and the country map shows where recruitment is moving.
- **Track clients.** Watch their companies; status changes and slips arrive weekly.

Investors: diligence on a company

An investor in a biotech or pharma company asks the same questions as the company's competitors, from the other side of the table. The company report (chapter 21) is built for that reading, and its diligence section puts first what a reader should see first.

- **What the record implies.** For each phase 2–3 program the report takes its likelihood band and the share of the backtest's trials in that band that were later approved, and adds them up with their intervals: "2.1 to 3.4 approvals of 9 programs if the record holds". A range, not a number, for the reasons in chapter 10.
- **Concentration.** How many programs rest on the same target. Three programs on one target are one bet, not three.
- **Registry warning signs.** Enrollment cuts and replaced primary outcomes, which preceded terminations in Phaseline's study of 4,000 finished industry trials, and repeated slips and site cuts, which did not predict termination but do predict delay.
- **Readouts that have come and gone.** Trials past their expected primary completion that are not marked complete: often a registry lag, sometimes the first public sign of a delay.
- **Competitors and setbacks.** Who else is on the same targets, which of the company's trials were stopped and why, negative published results, and the FDA record as applicant.
- **Catalysts.** The readout calendar as an ICS feed, for the company or a portfolio of companies (chapter 21).
- **Cash against readouts.** Section 1c of the report, and the selected company in the *Investors* view, show what the company's latest SEC report says it holds in cash and short-term investments, its annualised operating outflow, the runway that gives, and which of its coming phase 2-3 readouts fall inside it. The Investors table has a runway column and a filter for companies with a readout inside their runway. Treat it as a first question, not an answer: a company can extend its runway with one offering, and the figure knows nothing of milestones or plans.
- **Companies built like this.** The selected company in the *Investors* view lists the five companies whose pipelines have the same shape: the same therapeutic areas and drug types, related targets, a similar stage and a similar cash runway. Companies no specialist fund holds are marked "none". Use it to widen a search from one company the funds like to others built the same way; the list says where to look, not what to buy.
- **Regulatory dates and agreements.** The Investors view opens with the PDUFA and target action dates the companies themselves have stated in press releases filed with the SEC, the latest filing winning, so an extension replaces the earlier date; FDA publishes no such calendar, so the companies' own statements are the only public source. Below them, the licences, collaborations and acquisitions filed under item 1.01 in the last two years, with the counterparty. Both also appear on the company's own panel and in section 1c of its report.
- **NIH exposure** (Labs). The FY 2026 President's Budget for NIH, a 39 percent cut and a merger of the institutes into eight, read against the trials Phaseline follows: which carry an NIH grant, by area, institute and mechanism, with the proposal's change for each mechanism; the targets whose programs most often carry a grant; and the companies with SBIR/STTR awards. The figures describe the request, not the appropriation.

- **Deals.** Under *Data*, the licences, collaborations and acquisitions the landscape's SEC filers have filed in the last two years, as a network: companies sized by programs and coloured by area, agreements coloured by kind, a bar per quarter to show the network as it stood then, and filters by kind and area. Below it, what the acquired look like against the licensed and the rest of the landscape, which areas and target families each kind of agreement goes for, the repeat counterparties, and the full list with a link to every filing. Only SEC filers' agreements are seen.
- **Complete response letters.** The Investors view lists FDA's published letters declining approval, what kinds of deficiency they raise and how many of the applications were approved later; the company's own letters appear on its panel and in its report.
- **Private financing.** The Investors view shows the private offerings biotech and pharma companies reported to the SEC on Form D, by month and the largest of the last year, with the companies in the landscape marked; a company's own rounds appear on its panel and in its report. Amounts are as stated at filing.
- **What the company has filed.** The same section lists the press releases the company filed with the SEC as 8-Ks in the last year, with the first line of each and a link to the filing. It is the company's own word as filed, which makes it a quick way to check what it said about a trial against what the registry shows.
- **What the specialists hold.** The *Investors* view (free) reads the latest Form 13F of some forty life-science specialist funds from SEC EDGAR and matches their holdings to the landscape: which companies with active trials the specialists hold and how many of them, what those companies have in common on what Phaseline measures (a tilt, not a reason), which companies share holders, and each fund's book within Phaseline. US-listed companies only, long positions, up to 45 days after the quarter end. Ownership is description; it never enters the likelihood.

Everything in the report is from public sources and is descriptive. Phaseline gives no view on valuation, share prices or what to buy or sell, and the likelihood bands are population-level estimates, not forecasts for a company.

For clinicians, patient organisations and universities

- **Which trials recruit for this diagnosis?** Industry Landscape → By diagnosis (ICD-10), and search a code such as E11 or C34 or a word such as psoriasis. Recruiting trials come first.
- **Where?** Trial sites shows hospitals by country; each trial links to ClinicalTrials.gov, where the site list and contacts are.
- **What has been tried?** Stopped trials for the diagnosis, with reasons, and published results for each drug.
- **Women's health** gathers trials designed for women across all areas.

The European perspective

The *European perspective* (free; kept outside the menu at usephaseline.com/#europe) puts the industry's claim that Europe is losing the trials against the registries. For the company phase 2–3 trials that started each year since 2012 it shows the share with at least one site in Europe, the United States and China, the share run in one region only, and the same by therapeutic area, drug type and European country, with the nine companies whose chairs signed the open letter of September 2026 shown on their own trials. CTIS adds the EU-only trials authorised since 2023 that ClinicalTrials.gov does not carry, which account for most of the apparent fall in Europe-only trials. The claims are quoted with their sources; the figures are the registries'. For an investor the tables say where the activity is by area and country; for a region or a science park they are the record behind the policy argument.

Universities and hospitals: who writes the trial literature

The *Universities* view (free) starts from the publications that belong to Phaseline's trials, worldwide: the papers that name a trial's NCT number, the papers found by NCT for the active trials, and the primary reports of the reference set's phase 2 trials. For every university, hospital, institute or agency among their author institutions it shows how many of those publications it appears on and for which trials, areas, phases and sponsors; how often the corresponding author sits there; the share of its publications with a company among the author institutions; and the dual affiliations, authorships that carry both the institution and a company, as a share of its authorships. Pick a country in the rail to see its institutions, and sort the table by any column. Everything comes from OpenAlex and is counted per institution; no author name or id is read. There is no person level, by design: Phaseline is not a register for looking up researchers, and an institution that wants to know which of its groups write with industry can read its own profile here and ask inside its own walls.

Phaseline is not a tool for deciding a patient's treatment and is not medical advice. Eligibility is decided by the trial team.

Part V

Reference

Limits, the forecast record, a table of the numbers, the glossary, and how to reach us.

Limits, good practice and the forecast record

Limits to keep in mind

- **Registry quality.** Dates, enrollment and statuses are what sponsors entered, and many are updated late.
- **Coverage.** ClinicalTrials.gov, and since October 2026 the EU register CTIS for company phase 2 and 3 trials; trials registered only elsewhere are missing.
- **Fair use.** A key carries a daily allowance of landscape loads, unlocks and assistant (MCP) calls, generous for a person at work and tight for a script copying the data. Reaching it returns a plain message and resets the next day; the Terms describe it.
- **Targets.** About half of programs have a known target; AI readings of new drugs can be wrong.
- **Estimates.** The likelihood is population-level and blind to private information.
- **Labels.** Stop categories and result labels describe what was written.
- **Time.** Slip tracking and the change log started in autumn 2026; history grows weekly.

Good practice

1. Before a decision, open the source, every item links to it.
2. Treat AI-marked readings as leads, not facts.
3. Compare numbers with each other and with base rates rather than reading one in isolation.
4. Note the data date when you quote a figure.
5. Tell us when something is wrong: the feedback form or the contact page, with the NCT number.

The forecast record

A likelihood is only worth what its record shows. Since October 2026 every Monday's forecasts, the likelihood, the expected readout and the signals present, are logged and never rewritten, and a scoring pass resolves what the registry has since settled: readout dates against the actual date, termination against the signals, likelihoods against FDA decisions made after the forecast. The record is on the About page. It is short to begin with and says so; read it as it grows, and prefer it to any claim made here.

Part V · 39

The numbers at a glance

The Methodology tab on the site explains each part. In brief:

Number	How it is made	Main sources
Approval likelihood	Published phase-transition rates for the trial's area and phase, nudged up or down within a narrow range for design (randomisation, blinding, size, biomarker selection, sponsor experience), drug type and genetic support. The trial panel shows the direction of each adjustment.	Wong et al. 2019; Zhou et al. 2025; Minikel et al. 2024
Readout	Primary completion date from the registry; slips tracked weekly; FDA meetings from the Federal Register.	ClinicalTrials.gov; Federal Register
Genetics	Drug → target (Open Targets) matched with genome-wide association evidence for the disease.	Minikel et al. 2024; Open Targets
Earlier results	PubMed abstracts labelled by AI; registry results labelled by their p-values.	PubMed; ClinicalTrials.gov
Competitors and Industry Landscape	Programs (company × drug) grouped by molecular target; targets from Open Targets or read from the registry by AI and checked against drug-name stems. Stopped trials with the sponsor's stated reason, categorised by rules or AI. Not part of the score.	Open Targets; ClinicalTrials.gov
Diagnoses (ICD-10)	Conditions matched to ICD-10 categories through the Human Disease Ontology, or coded by AI where it has no match; invalid codes discarded. Not part of the score.	Disease Ontology (CC0); ICD-10-CM
Company reports	The company's programs, competitors and stopped trials from the Industry Landscape, plus FDA approvals where it is the applicant and its phase 2/3 trial history since 2015.	openFDA Drugs@FDA; ClinicalTrials.gov
Clinical guidelines	Guidelines indexed in PubMed that name the drug, or that cite a study of it (citations from OpenAlex), labelled by AI. Shows when research has reached clinical practice, an impact beyond citations. Not part of the score.	PubMed; OpenAlex

All data comes from open sources whose licences allow commercial use, and every source is credited on the site. No machine-learning model produces any score: AI helps read registry text, abstracts and stop reasons, write the trend overviews and translate questions into filters.

21

Glossary

Academic sponsor	University, hospital, government body or foundation leading a trial.
Approval likelihood	Phaseline's estimate that a drug in a company phase 2–3 trial is eventually approved for that use, shown as a band (under 5 % to over 45 %), never as a number with decimals.
Base rate	The published historical success rate for an area and phase.
Biomarker selection	Enrolling only patients with a measurable characteristic (a mutation, a protein level) expected to predict response.
Biologic	A drug made from or by living cells: antibodies, proteins, vaccines, cell and gene therapies.
Blinding (masking)	Hiding who receives which treatment from patients and/or investigators.
Drift	Slips added up per sponsor.
Home (of a company)	The region a company belongs to in the Regions view. Not in the registry; derived from a table of large multinationals, the legal form in the name, and where the company runs its single-country trials.
Likely readout	The stated readout date plus the median delay of finished industry trials of the same phase, horizon and sponsor size. The late date adds the upper-quartile delay instead.
Quiet molecule	A drug whose last phase 2-3 trial was completed, with no results reported, nothing started since and no approval. Shown beside Trial blazer's pairs.
Endpoint	An outcome a trial measures; the primary endpoint decides success.
Enrollment	The number of patients planned (anticipated) or included (actual).
Exclusivity	A period of market protection granted by a regulator, separate from patents.
Futility	An interim finding that the trial cannot reach its goal.
Genetic support	Human-genetic evidence linking a drug's target to the disease (Minikel et al. 2024).
ICD-10	The WHO classification of diseases; three-character categories such as E11 or C34.
MeSH	Medical Subject Headings, NLM's controlled vocabulary; ClinicalTrials.gov assigns it to conditions.
Modality	The kind of drug: small molecule, antibody, protein/peptide, cell, gene or nucleic acid.
NCT number	The ClinicalTrials.gov identifier, NCT followed by eight digits.
Orange Book	FDA's list of approved small-molecule drugs with their patents and exclusivity.
PMID	The PubMed identifier of an article.
Primary completion	The date the last patient is examined for the primary endpoint.
Program	One sponsor's work on one investigational drug across its trials.
Randomisation	Assigning patients to treatments by chance.
Readout	When top-line results of a trial are expected.

Risk-adjusted pipeline	The sum of a company's phase 2–3 programs' highest approval likelihoods.
ROR	Research Organization Registry, an open list of research institutions.
Slip	A week in which a trial's estimated primary completion moved later; in the registry history, any version in which it moved later by a month or more.
Precedents	The closest finished twins of an active trial, with whether their drugs were later approved.
Outcome switch	A primary outcome measure replaced after a trial started, as read from the registry's version history.
Target	The molecule in the body a drug acts on.
Terminated / withdrawn / suspended	Stopped after enrolling / stopped before enrolling anyone / paused.
Trial trends	Phase 2–3 trial starts in the latest twelve months against the twelve before, by target, condition, drug type, area and country.
Conference abstract	A result presented at a medical meeting and published in a journal supplement, found through OpenAlex; not in PubMed.
Twin	A finished trial similar to the one you describe in the design check, or to an active trial in its panel.
Target biology	What UniProt, ClinVar and Reactome say about the gene behind a target symbol, shown on the trial card; descriptive, outside every score.
Target map	The landscape's targets clustered into fields by the Leiden algorithm on shared conditions and shared drugs, after CWTS Leiden's citation-based classification of science.
Bridging target	A target that runs a large share of its trials in conditions belonging to another field of the target map; where new target–condition pairs tend to come from.
FDA news	Items from FDA's drugs, biologics and press feeds, classified by rule and matched to drugs and sponsors in the landscape.

Part V · 41

Questions, privacy and contact

Who runs Phaseline? Lars Kullman, Sweden, as an independent side project. The aim is equal access to the same overview of clinical trials for everyone, to help research move faster.

What does it cost? Nothing. Everything is open to everyone, with no account. If that changes, it is announced on the site and in the weekly letter well before it does.

What is stored about me? Nothing that identifies you. Visits are counted per day without cookies or IP addresses. Your watchlist, sponsor filter and similar settings stay in your own browser. The feedback and newsletter forms store only what you enter. The privacy page has the details.

How fresh is the data? Rebuilt every Monday; the data date is on the site.

Can I quote Phaseline? Yes, cite "Phaseline (usephaseline.com), data of [date]" and the underlying source for each item.

Something is wrong or missing? Use the feedback form on the site or the contact page (usephaseline.com/#contact), and include the NCT number or PMID.

Part II of this guide shows each screen step by step; the methodology page on the site and the track record PDF give the method in brief and its validation.