RECOMPSIGNAL / VERSION 1.1

The 2026 Body-Recomposition Evidence Map

Weight loss is a number. Body composition asks what changed.

An evidence-first reference to 21 named therapies and programs, including 17 detailed study summaries and four watchlist entries.

WHAT IS NEW

Study-specific doses, clearer outcome ratings, new apitegromab and eloralintide coverage, published bimagrumab combination evidence and updated semaglutide context.

HOW TO USE THIS GUIDE

Read the population, comparator and duration before the result. Distinguish published studies, sponsor reports and registered trials. Use the linked Signal Cards for continuing updates.

STUDIED DOSES ARE NOT PRESCRIBING INSTRUCTIONS

Doses belong to the named study and formulation. They are not personal starting doses, approved regimens by default, or self-use protocols. No reconstitution, sourcing or stacking instructions are provided.

Explore the Signal Cards

Read the evidence change log

EVIDENCE MAP / SEPTEMBER 2026

Read the evidence, then the number

THREE DIFFERENT QUESTIONS

Maturity (M0-M5) describes development of an evidence base. Outcome strength describes support for a named outcome. Source tier describes where a claim comes from. None is a treatment recommendation.

OUTCOME STRENGTH

0: not established in reviewed evidence; 1: indirect/preclinical; 2: preliminary, abstract, sponsor-only or exploratory findings; 3: a published randomized trial/substudy; 4: consistent findings across controlled studies; 5: broad replicated evidence with substantial clinical/regulatory experience.

WHAT A SCORE DOES NOT MEAN

These editorial ratings are not a validated clinical grading system. A high lean-mass score can describe lean loss. Zero means not established in the cited evidence, not proof of no effect. Study registration alone receives no efficacy points.

SOURCE TIERS

A: regulatory/official. B: peer-reviewed randomized study or meta-analysis (conference abstracts explicitly marked). C: review/observational or small uncontrolled study. D: registered trial. E: sponsor report. F: preclinical research.

KEY DISTINCTIONS

DXA lean mass is not identical to skeletal muscle. Less lean loss is not muscle gain. Neither alone establishes better strength or daily function. Trial completion is not a results publication, and estimated dates can change.

Full methodology and rating rationales

SURMOUNT-1 DXA SUBSTUDY

Tirzepatide

M5 Evidence Maturity · Established | Approved · indication-specific

POPULATION

Adults with overweight/obesity without diabetes; 160 with baseline and end-of-study DXA.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

5, 10 or 15 mg subcutaneously once weekly; gradual escalation in the parent trial. Composition results pooled the active doses.

DURATION

72 weeks

REPORTED FINDING / STATUS

Pooled changes: body weight -21.3%, fat mass -33.9%, lean mass -10.9%. Approximately 75% of lost weight was fat and 25% lean tissue.

LIMITATIONS

Pooled DXA findings are not dose-specific muscle-preservation estimates. DXA lean mass includes non-muscle tissue.

OUTCOME EVIDENCE

Weight / fat / lean / function: 5/5 / 3/5 / 3/5 / 0/5. Weight: mature randomized obesity evidence. Fat and lean: published randomized DXA substudy. Function: this substudy does not establish a benefit.

Source tier B | Original study or registry

Signal Card and additional context

STEP 1 EXPLORATORY DXA ANALYSIS

Semaglutide

M5 Evidence Maturity · Established | Approved · indication-specific

POPULATION

140 adults from the STEP 1 obesity trial without diabetes.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

2.4 mg subcutaneously once weekly, following escalation, versus placebo.

DURATION

68 weeks

REPORTED FINDING / STATUS

Reported changes included fat mass -19.3% and lean mass -9.7% with semaglutide.

LIMITATIONS

The cited report is a conference-supplement abstract. These body-composition findings do not establish outcomes with oral semaglutide or 7.2 mg injection.

OUTCOME EVIDENCE

Weight / fat / lean / function: 5/5 / 2/5 / 2/5 / 0/5. Weight: mature obesity RCT evidence. Fat and lean: this card relies on an exploratory conference abstract. Function: not established by that analysis.

Source tier B - conference abstract | Original study or registry

Signal Card and additional context

PHASE 2 OBESITY TRIAL

Retatrutide

M4 Evidence Maturity · Advanced Clinical | Investigational · Phase 3

POPULATION

338 adults with obesity or overweight and a weight-related condition.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Target groups: 1, 4, 8 or 12 mg subcutaneously once weekly. Higher-dose groups used different starting doses/escalation schemes.

DURATION

48 weeks; primary endpoint at week 24

REPORTED FINDING / STATUS

At week 48, mean weight change was -24.2% in the 12 mg group versus -2.1% with placebo.

LIMITATIONS

Gastrointestinal events were dose-related; heart-rate increases were observed. Later phase 3 sponsor results must be read separately from this published phase 2 regimen.

OUTCOME EVIDENCE

Weight / fat / lean / function: 3/5 / 0/5 / 0/5 / 0/5. Weight: published controlled efficacy evidence plus later sponsor phase 3 reports. Fat, lean and function: the cited weight trial does not establish selective composition or functional benefit.

Source tier B | Original study or registry

Signal Card and additional context

PIVOTAL HIV-LIPODYSTROPHY STUDIES SUMMARIZED IN FDA LABELING

Tesamorelin

Evidence Maturity · M5 for approved indication | FDA-approved for HIV-associated lipodystrophy

POPULATION

Adults with HIV-associated lipodystrophy and excess abdominal fat.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Historical trials used tesamorelin 2 mg subcutaneously daily. Current product formulations are not automatically interchangeable with that historical trial dose.

DURATION

26-week main studies, with extension follow-up

REPORTED FINDING / STATUS

Two trials support abdominal-fat reduction and measured lean-mass increases, with minimal weight change, in HIV-associated lipodystrophy.

LIMITATIONS

Not a general weight-loss indication. Long-term cardiovascular safety is not established. Consult the formulation-specific label for approved prescribing information.

OUTCOME EVIDENCE

Weight / fat / lean / function: 4/5 / 4/5 / 4/5 / 0/5. Weight, fat and lean: replicated measurements in two indication-specific controlled studies; weight change was minimal. Function: benefit not established. These are not general weight-loss approval claims.

Source tier A | Original study or registry

Signal Card and additional context

SMALL INTRAVENOUS SAFETY PILOT

BPC-157

Evidence Maturity · M2 - Preliminary human | Not FDA-approved

POPULATION

Two adults who had previously received intravenous BPC-157.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

The pilot reported 10 mg intravenously on day 1 and 20 mg on day 2. These are observations from a tiny study, not an established clinical regimen.

DURATION

Short observation across three days

REPORTED FINDING / STATUS

No adverse effects were reported in the two participants during the observation period.

LIMITATIONS

No control group, two participants and brief follow-up cannot establish general safety, healing efficacy or recomposition benefit. No established clinical dosing regimen.

OUTCOME EVIDENCE

Weight / fat / lean / function: 0/5 / 0/5 / 0/5 / 0/5. No adequate human weight, fat, lean-mass or functional efficacy evidence is established by this safety pilot.

Source tier C | Original study or registry

Signal Card and additional context

BELIEVE RANDOMIZED PHASE 2 TRIAL

Bimagrumab

Evidence Maturity · M3 - Clinical | Investigational for obesity

POPULATION

507 adults with obesity/overweight and complications, excluding diabetes; nine groups.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Bimagrumab 10 or 30 mg/kg intravenously every 12 weeks; semaglutide 1.0 or 2.4 mg subcutaneously weekly; monotherapy and combination arms.

DURATION

48-week main period; open-label extension to week 72

REPORTED FINDING / STATUS

At week 48, the high-dose combination produced -17.8 kg weight change versus -14.2 kg with semaglutide 2.4 mg (treatment-regimen estimand). Combinations reduced lean-mass loss relative to semaglutide alone.

LIMITATIONS

Only 74.4% completed the main period. Muscle spasms, diarrhea and acne occurred. Functional measures were mixed/exploratory; preservation is not proven long-term functional benefit.

OUTCOME EVIDENCE

Weight / fat / lean / function: 3/5 / 4/5 / 4/5 / 2/5. Weight: published phase 2 RCT. Fat and lean: controlled findings in BELIEVE and the older diabetes trial. Function: exploratory, mixed findings; not confirmatory.

Source tier B | Original study or registry

Signal Card and additional context

COURAGE WEIGHT-LOSS PHASE

Trevogrumab

Evidence Maturity · M3 - Clinical | Investigational - Phase 2

POPULATION

Adults with obesity; sponsor table reports 599 participants across four analyzed groups.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Trevogrumab 200 or 400 mg with semaglutide 2.4 mg; triplet arm also included garetosmab 10 mg/kg. Trevogrumab is subcutaneous and garetosmab intravenous; the cited release does not specify their complete administration intervals.

DURATION

26-week weight-loss analysis; a separate maintenance period follows

REPORTED FINDING / STATUS

Sponsor reported reduced lean-mass loss with combinations versus semaglutide alone.

LIMITATIONS

Sponsor-reported analysis; do not infer an administration schedule absent from the source. Triplet tolerability/discontinuation concerns require separate consideration.

OUTCOME EVIDENCE

Weight / fat / lean / function: 2/5 / 2/5 / 2/5 / 0/5. Weight, fat and lean: sponsor-reported randomized findings. Function: no established benefit in this report.

Source tier E | Original study or registry

Signal Card and additional context

PLATEAU REGISTERED PHASE 2B TRIAL

Enobosarm

Evidence Maturity · M3 - Clinical | Investigational

POPULATION

Older adults receiving semaglutide; ongoing registered trial.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Oral enobosarm 3 mg once daily plus subcutaneous semaglutide, compared with semaglutide plus placebo.

DURATION

Registered treatment period: 476 days

REPORTED FINDING / STATUS

This is a registered regimen, not a result. The separate QUALITY findings summarized above are sponsor-reported.

LIMITATIONS

Do not transfer outcomes from QUALITY to PLATEAU or treat trial registration as confirmation of efficacy.

OUTCOME EVIDENCE

Weight / fat / lean / function: 2/5 / 2/5 / 2/5 / 2/5. Scores reflect the separately cited sponsor QUALITY report, not PLATEAU registration. Highest-strength ratings require published and replicated outcome evidence.

Source tier D | Original study or registry

Signal Card and additional context

REGISTERED PHASE 2B OBESITY TRIAL

Taldefgrobep Alfa

Evidence Maturity · M2/M3 - Developing clinical | Investigational - Phase 2b

POPULATION

Adults with overweight/obesity; estimated enrollment 150.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Subcutaneous active/placebo arms once weekly or once every four weeks. Milligram doses are not disclosed in the reviewed registry entry.

DURATION

Week 24 endpoints; estimated completion September 2026

REPORTED FINDING / STATUS

Weight, fat and lean-mass outcomes are planned; no posted results in the reviewed record.

LIMITATIONS

Estimated completion is not a promised results date. No established obesity dosing regimen can be inferred.

OUTCOME EVIDENCE

Weight / fat / lean / function: 0/5 / 0/5 / 0/5 / 0/5. Awaiting obesity outcome results. Planned endpoints and mechanism do not earn efficacy evidence points.

Source tier D | Original study or registry

Signal Card and additional context

REGISTERED PHASE 2A INSULIN-SENSITIVITY TRIAL

MOTS-c

Evidence Maturity · M2 - Preliminary human / active clinical development | Investigational

POPULATION

Adults with prediabetes and overweight/obesity; estimated enrollment 120.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Fixed-dose subcutaneous injection once daily; numerical dose not disclosed in the reviewed registry entry.

DURATION

12 weeks of treatment

REPORTED FINDING / STATUS

Insulin sensitivity is being studied; no results are posted.

LIMITATIONS

Registration does not establish human efficacy or an established dosing regimen. Estimated enrollment is not the number who completed treatment.

OUTCOME EVIDENCE

Weight / fat / lean / function: 0/5 / 0/5 / 0/5 / 0/5. Awaiting human efficacy results. Preclinical hypotheses are not evidence of a clinical recomposition benefit.

Source tier D | Original study or registry

Signal Card and additional context

ATTAIN-1 PHASE 3 TRIAL

Orforglipron (Foundayo)

M5 Evidence Maturity · Established | Approved · obesity/overweight indication

POPULATION

3,127 randomized adults with obesity without diabetes.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Trial formulation: oral orforglipron 6, 12 or 36 mg once daily versus placebo, with escalation. Trial milligrams must not be substituted for current commercial-label dosing.

DURATION

72 weeks

REPORTED FINDING / STATUS

Treatment-regimen weight changes: -7.5%, -8.4% and -11.2% across the three doses versus -2.1% placebo.

LIMITATIONS

Gastrointestinal adverse effects were common. Weight efficacy does not demonstrate selective muscle preservation.

OUTCOME EVIDENCE

Weight / fat / lean / function: 5/5 / 0/5 / 0/5 / 0/5. Weight: pivotal randomized trial plus regulatory evidence. Other scores: direct fat, lean and function benefits are not established by the cited primary report.

Source tier B | Original study or registry

Signal Card and additional context

PHASE 2 MARIDEBART CAFRAGLUTIDE TRIAL

MariTide

Evidence Maturity · M4 - Advanced clinical | Investigational - Phase 3

POPULATION

592 participants: 465 in obesity cohort and 127 in obesity with diabetes cohort.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Subcutaneous 140, 280 or 420 mg every four weeks; additional obesity arms tested 420 mg every eight weeks and escalation variants.

DURATION

52 weeks

REPORTED FINDING / STATUS

Treatment-policy weight loss in the obesity cohort ranged from 12.3% to 16.2%, versus 2.5% with placebo.

LIMITATIONS

Results vary by cohort, dose and estimand. Gastrointestinal events were common. These phase 2 regimens do not define future approved dosing.

OUTCOME EVIDENCE

Weight / fat / lean / function: 3/5 / 0/5 / 0/5 / 0/5. Weight: published phase 2 RCT. Composition and functional advantages are not established by this weight-efficacy report.

Source tier B | Original study or registry

Signal Card and additional context

REDEFINE 4 PHASE 3 HEAD-TO-HEAD TRIAL

CagriSema

M4 Evidence Maturity · Advanced Clinical | Investigational · Phase 3

POPULATION

809 adults with obesity and one or more comorbidities; open-label trial.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Cagrilintide 2.4 mg plus semaglutide 2.4 mg versus tirzepatide 15 mg; both subcutaneously once weekly.

DURATION

84 weeks

REPORTED FINDING / STATUS

Sponsor efficacy-estimand weight loss: 23.0% vs 25.5%; treatment-regimen estimates: 20.2% vs 23.6%. CagriSema did not demonstrate noninferiority.

LIMITATIONS

These are two different estimands, not interchangeable results. The comparison does not establish superior lean-mass preservation.

OUTCOME EVIDENCE

Weight / fat / lean / function: 2/5 / 0/5 / 0/5 / 0/5. This card’s head-to-head result is sponsor-reported. Fat, lean and functional superiority are not established by that report.

Source tier E | Original study or registry

Signal Card and additional context

PHASE 2 SUBCUTANEOUS DIABETES TRIAL

Zenagamtide (amycretin)

Evidence Maturity · M4 - Advanced clinical | Investigational - Phase 3

POPULATION

262 adults with type 2 diabetes on metformin with or without an SGLT2 inhibitor.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

0.4, 1.5, 5, 10, 20 or 40 mg subcutaneously once weekly, with fixed escalation.

DURATION

36 weeks; 40 mg group had only four weeks at target dose

REPORTED FINDING / STATUS

Sponsor reported up to 14.6% mean weight loss in the 40 mg group, versus 2.1% placebo.

LIMITATIONS

Diabetes-population results are not an obesity-label estimate. Oral and injectable programs have separate timelines and are not interchangeable.

OUTCOME EVIDENCE

Weight / fat / lean / function: 2/5 / 0/5 / 0/5 / 0/5. Weight: sponsor-reported phase 2 results. Composition and function benefits are not established in the cited report.

Source tier E | Original study or registry

Signal Card and additional context

SYNCHRONIZE-1 PHASE 3 TRIAL

Survodutide

Evidence Maturity · M4 - Advanced clinical | Investigational - Phase 3

POPULATION

725 randomized adults with obesity/overweight and complications, excluding diabetes.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Subcutaneous treatment adjusted up to 3.6 or 6.0 mg once weekly versus placebo.

DURATION

76 weeks

REPORTED FINDING / STATUS

Treatment-regimen mean weight changes: -12.2% and -13.0%, versus -5.4% placebo.

LIMITATIONS

Gastrointestinal symptoms were frequent. Weight results do not establish lean-mass or functional benefit; completed CVOT follow-up is not proof of cardiovascular benefit.

OUTCOME EVIDENCE

Weight / fat / lean / function: 3/5 / 0/5 / 0/5 / 0/5. Weight: published phase 3 RCT. The cited report does not establish direct fat-selectivity, lean preservation or function benefits.

Source tier B | Original study or registry

Signal Card and additional context

EMBRAZE RANDOMIZED PHASE 2 TRIAL

Apitegromab

Evidence Maturity · M3 - Clinical | Investigational for obesity

POPULATION

102 randomized adults; primary analysis included 87 completers with week-24 DXA.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Apitegromab 10 mg/kg intravenously every four weeks plus weekly subcutaneous tirzepatide, escalated up to 15 mg, versus placebo plus tirzepatide.

DURATION

24 weeks

REPORTED FINDING / STATUS

Between-group difference: 1.9 kg less lean-mass loss (80% CI 1.2-2.7), with similar weight loss.

LIMITATIONS

Completer analysis, descriptive statistics and no multiplicity adjustment limit certainty. Less lean loss is not muscle gain or demonstrated functional improvement.

OUTCOME EVIDENCE

Weight / fat / lean / function: 3/5 / 3/5 / 3/5 / 0/5. Published phase 2 measurements support a lean-preservation signal, not added weight-loss efficacy or proven function.

Source tier B | Original study or registry

Signal Card and additional context

PHASE 2 RANDOMIZED OBESITY TRIAL

Eloralintide

Evidence Maturity · M3 - Clinical | Investigational for obesity

POPULATION

263 adults without type 2 diabetes.

DOSES STUDIED - NOT A DOSING RECOMMENDATION

Subcutaneous 1, 3, 6 or 9 mg once weekly; separate groups escalated from 6 to 9 mg or 3 to 9 mg.

DURATION

48 weeks

REPORTED FINDING / STATUS

Efficacy-estimand weight reduction was approximately 20% in the 9 mg group versus 0.4% placebo.

LIMITATIONS

Nausea and fatigue varied by regimen. The recruiting ENLIGHTEN-2 phase 3 trial is a separate program, not phase 3 efficacy proof.

OUTCOME EVIDENCE

Weight / fat / lean / function: 3/5 / 0/5 / 0/5 / 0/5. Weight: published phase 2 RCT. Direct lean preservation or functional advantage is not established by this report.

Source tier B | Original study or registry

Signal Card and additional context

EVIDENCE MAP / SEPTEMBER 2026

Formulations and comparisons

SEMAGLUTIDE FORMULATIONS

Current Wegovy prescribing information includes oral tablets and the 7.2 mg injection strength. STEP 1 composition findings relate to the 2.4 mg weekly injection regimen; do not transfer them to every formulation.

Current Wegovy prescribing information

SURMOUNT-5

The direct comparison studied maximum tolerated weekly tirzepatide 10/15 mg versus semaglutide 1.7/2.4 mg in 751 adults without diabetes for 72 weeks. Mean weight reduction was 20.2% versus 13.7%. It did not test oral or 7.2 mg semaglutide or establish superior muscle preservation.

Original head-to-head publication

ORFORGLIPRON

Foundayo received FDA approval April 1, 2026. The ATTAIN-1 research formulation and trial doses are study context; use the current commercial product label for prescribing information, not a conversion inferred from trial milligrams.

FDA approval announcement

CURRENT PIPELINE

Retatrutide phase 3 sponsor reports, MariTide phase 3 development and zenagamtide route-specific programs belong alongside the published studies. These do not automatically establish composition selectivity. Read current card sources rather than treating a future milestone as a result.

EVIDENCE MAP / SEPTEMBER 2026

Four additional watchlist entries

GARETOSMAB

The COURAGE triplet arm included garetosmab 10 mg/kg with trevogrumab and semaglutide. The cited report does not provide a complete administration schedule. Sponsor findings and triplet tolerability cannot be treated as monotherapy efficacy or an approved combination.

COURAGE sponsor report

CJC-1295

Randomized pharmacology studies measured GH and IGF-1 responses in healthy adults. They do not establish a body-recomposition regimen or long-term benefit. Full dose-arm details are not reproduced here; endocrine changes are not proof of fat loss, muscle preservation or function.

Original human pharmacology study

GHK-CU

No established clinical dosing regimen for whole-body recomposition is identified in this guide. Skin, wound or mechanistic evidence cannot be transferred to systemic muscle-preservation claims. No efficacy rating is assigned here.

TB-500 / THYMOSIN BETA-4

These names should not be treated as interchangeable products. A dose studied for a defined thymosin beta-4 formulation or indication does not establish a regimen for a product sold as TB-500. No established recomposition dosing regimen is identified here; no efficacy rating is assigned.

These last two entries mark evidence gaps, not claims that all possible studies have been excluded.

EVIDENCE MAP / SEPTEMBER 2026

Keep muscle and function in view

RESISTANCE EXERCISE AND NUTRITION

These are comparator categories, not additional peptide/drug entries. Evaluate studies that actually measured strength, function or lean mass, and distinguish a general lifestyle intervention from an adjunct tested with a specific medicine.

CREATINE

Creatine is not counted among the 21 therapy/program entries in this guide. This edition does not assign a dose or a GLP-1-specific muscle-preservation claim. Such claims require separately cited evidence rather than extrapolation from general sports research.

QUESTIONS WORTH ASKING

Was the endpoint measured directly? How many participants completed it? Was the analysis prespecified? Was the comparator active or placebo? Did the intervention improve function, or only change a scan? Were benefits and adverse effects assessed over an adequate period?

FOLLOW THE EVIDENCE

The site links to original sources and labels sponsor reports and registries separately. Check the change log when revisiting a result; sources and development timelines can change.

Muscle-preservation hub

Evidence updates

RecompSignal | Real Evidence. Better Outcomes.

Educational information only - not medical advice.

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