

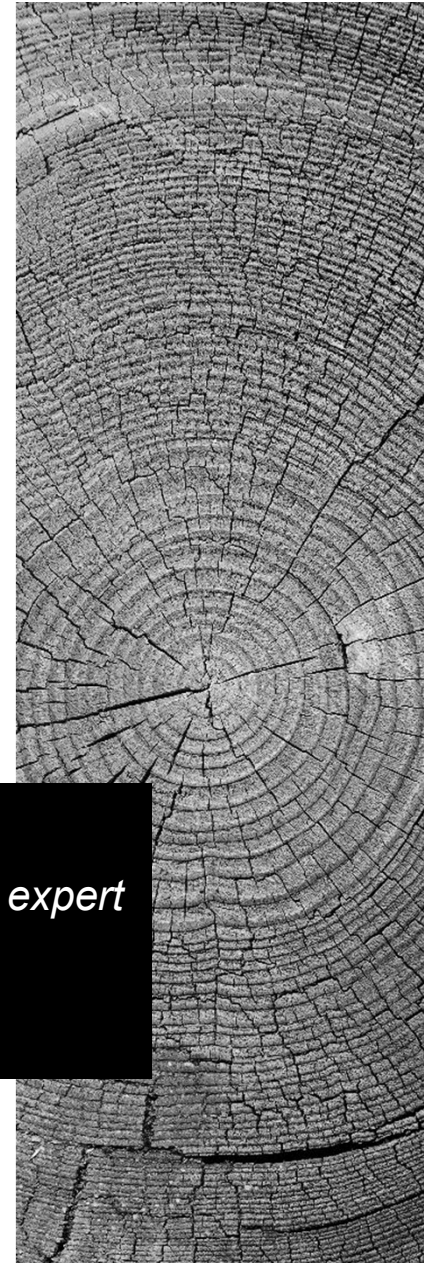


NEOASTIS

Precision Immunology & the "Refractory" Patient Profile — a Neoastis demo case

*AI-powered evidence
synthesis, amplified by expert
consulting.*

V 1.0 Oktober 2026



The commercial context: growth is slowing, unmet need is not

- Immunology faces slower 5-year growth, driven by biosimilar erosion
- Innovators are hunting residual unmet needs in established indications
- The refractory patient — cycling through therapies without sustained remission — is the largest untapped segment

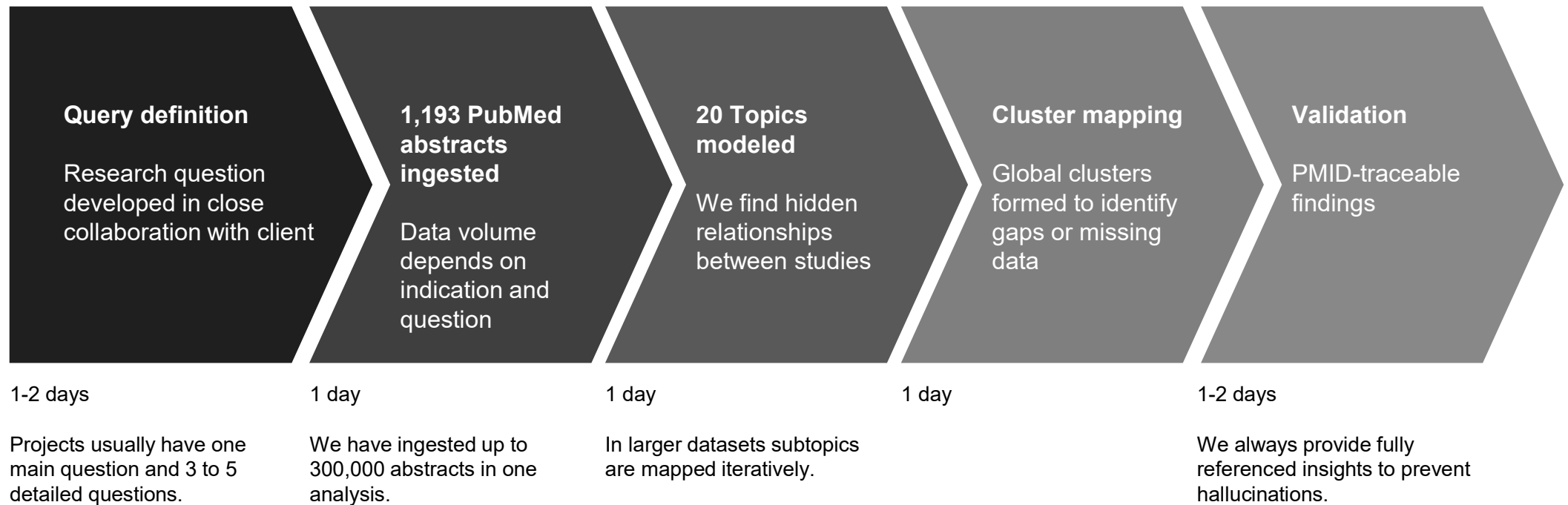
~2.8M refractory IBD patients globally (~40% of ~7M)

The client question

- How does the literature characterize the refractory IBD patient?
- What do they suffer from, and what challenges do treating physicians face?
- Which decision points in the therapy path matter, and where are the levers?

***"Questions a strategy team must answer before positioning decisions
— traditionally weeks of analyst work."***

From question to insight in days, not months

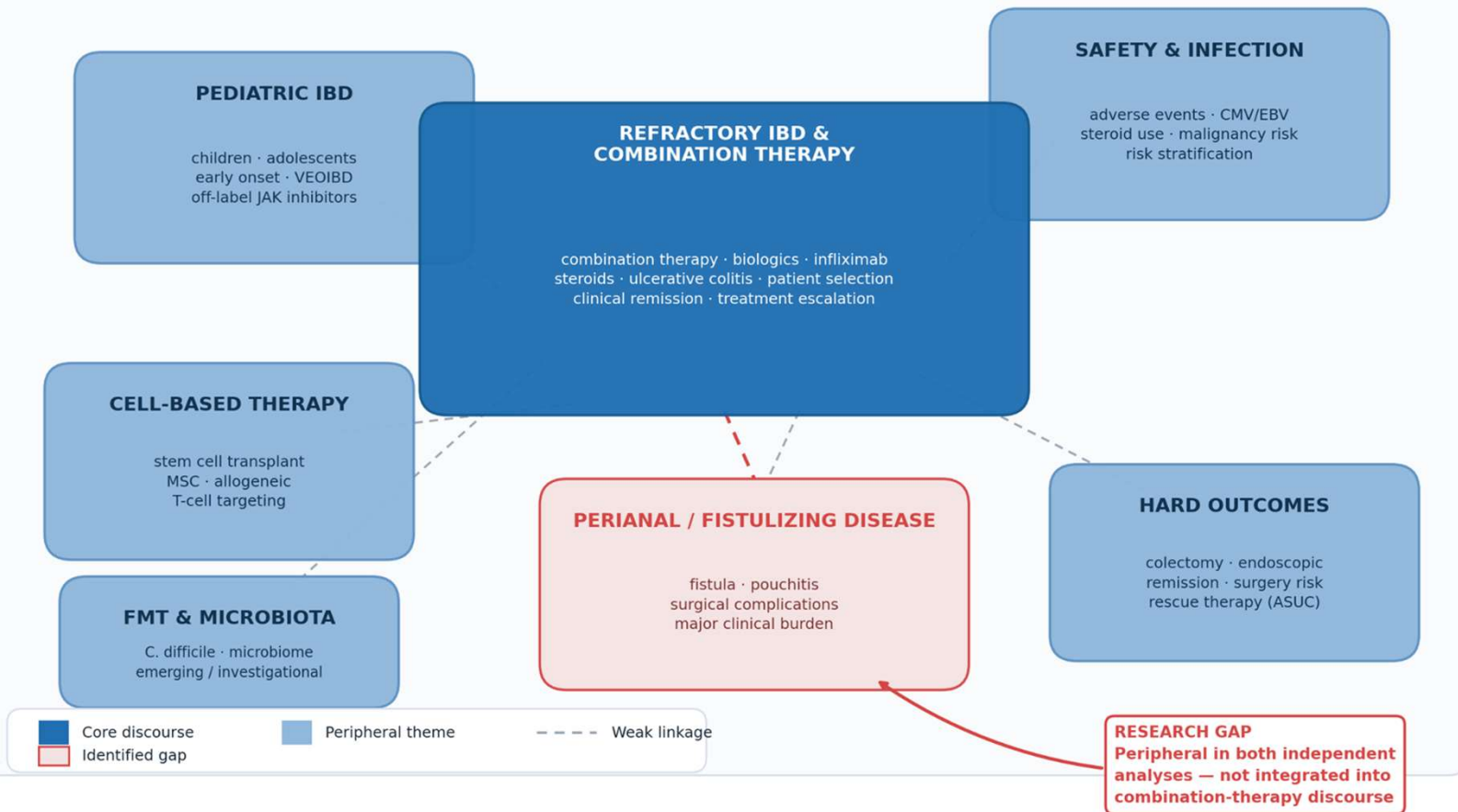


Source: Neoastis, pubmed

The refractory IBD landscape at a glance

The refractory IBD landscape: one core discourse, six peripheral themes

Schematic redrawn from Neoastis topic-model cluster maps (n = 1,193 abstracts) · proximity = topical relatedness · dashed line = weak linkage



Note: simplified representation of detailed cluster maps; Source: Neoastis, pubmed

Finding 1: Combination therapy is the center of gravity — and still off-label

- **Dual-targeted therapy:** 78% clinical response in refractory IBD (n=47, multicenter China)
- **VEGA trial:** guselkumab + golimumab superior to monotherapy in UC
- **Advanced Combination Therapy (ACT)** increasingly framed as the rescue strategy for difficult-to-treat IBD — but use remains off-label

Finding 2: Small molecules are changing the refractory equation

- **Upadacitinib:** 60–62% steroid-free remission in highly refractory CD (98% prior anti-TNF, 59% ≥ 3 advanced therapies); week-12 remission predicts durability
- **JAK inhibitors + S1P modulators** as oral alternatives after biologic failure
- **Rescue therapies for ASUC** (tacrolimus, cyclosporine, infliximab) with comparable short-term efficacy

Finding 3: The field is moving from "what to use" to "who will respond"

- **Biomarkers emerging:** IL17/IL23 mucosal transcripts predict non-response; NET-associated genes (AQP9, FPR1, FPR2); lipidomics & microbiome profiling
- **Mechanisms of refractoriness mapped:** JAK-STAT upregulation, TIM3/Gal-9 immunometabolism, myeloid cell activation, SLC22A4/5 polymorphisms
- **Pediatric refractory IBD** emerges as a distinct entity (thalidomide, off-label JAK inhibitors, upadacitinib data)

Source: Neoastis, pubmed PMID 36384462, 42370017, 40394475, 40871445, 42309263, 36061955, 21695374, 40876844, 42710363, 41351687, 38134405, 40860936

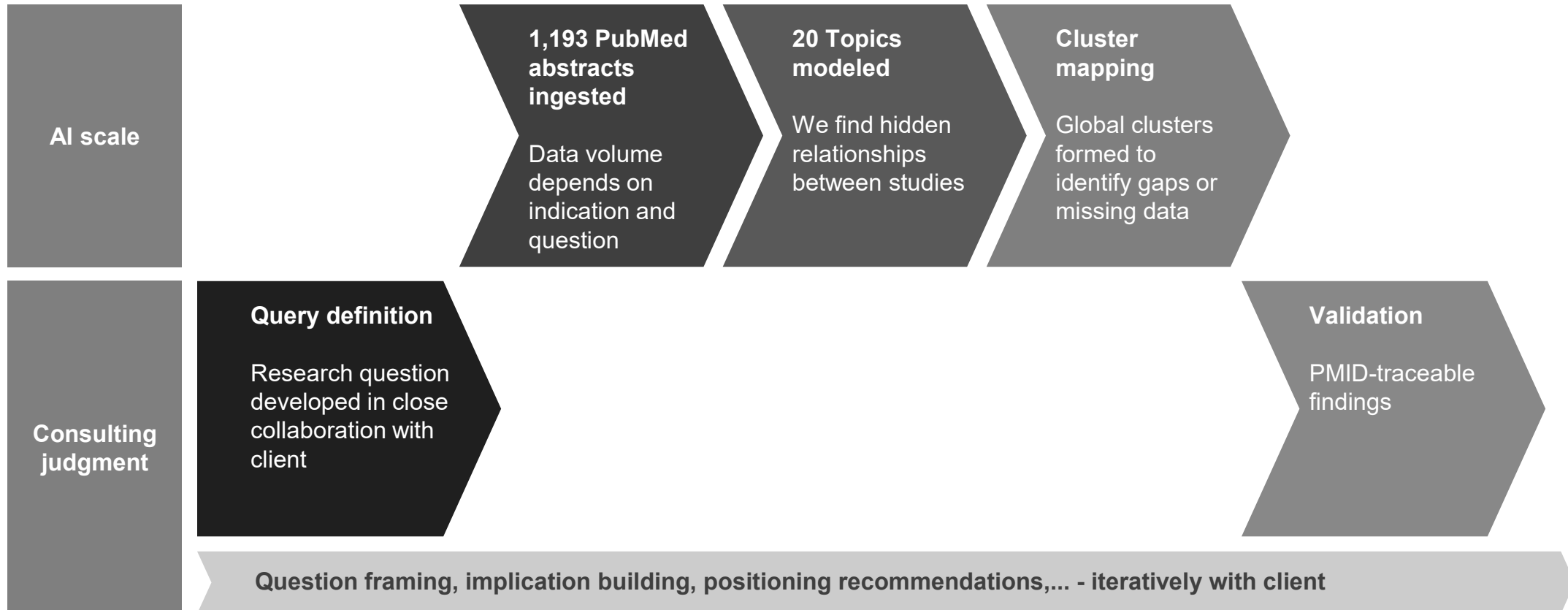
The decision point: patient selection for combination therapy

Factor	Favors Combination Therapy	Argues Against Combination Therapy
Disease severity	Moderate-to-severe, refractory	Mild disease
Prior therapy	Failed multiple advanced therapies	Steroid-responsive, non-refractory
Steroid dependence	Steroid-dependent or refractory	Non-steroid-dependent
Concomitant IMID/EIM	Active EIM or IMID	No extraintestinal manifestations
Age	Younger patients (selected)	Older patients (infection risk)
Disease complications	Fistulizing, stricturing, high-risk	Uncomplicated, low-risk
Treatment setting	Specialized IBD centers	Community settings
Safety profile	Favorable risk-benefit	Prior lymphoma, PML risk, serious infections
Patient preference	Willing to accept off-label use	Preference for established therapies

The literature supports directional factors — not validated criteria. The gap between evidence and decision is exactly where structured synthesis + expert consulting creates value.

Source: Neoastis, pubmed

Why Neoastis: AI scale × consulting judgment



AI finds the signal in 1,000+ papers; consulting turns it into a decision.

Source: Neoastis, pubmed

What we would do for you

- Adapt this demo to your indication/asset in 2–3 weeks
- Deliverables:
 - landscape map,
 - decision-point analysis,
 - gap & whitespace identification,
 - positioning implications —
 - all in long form (deep-dive presentation) and short form (leadership summary)

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