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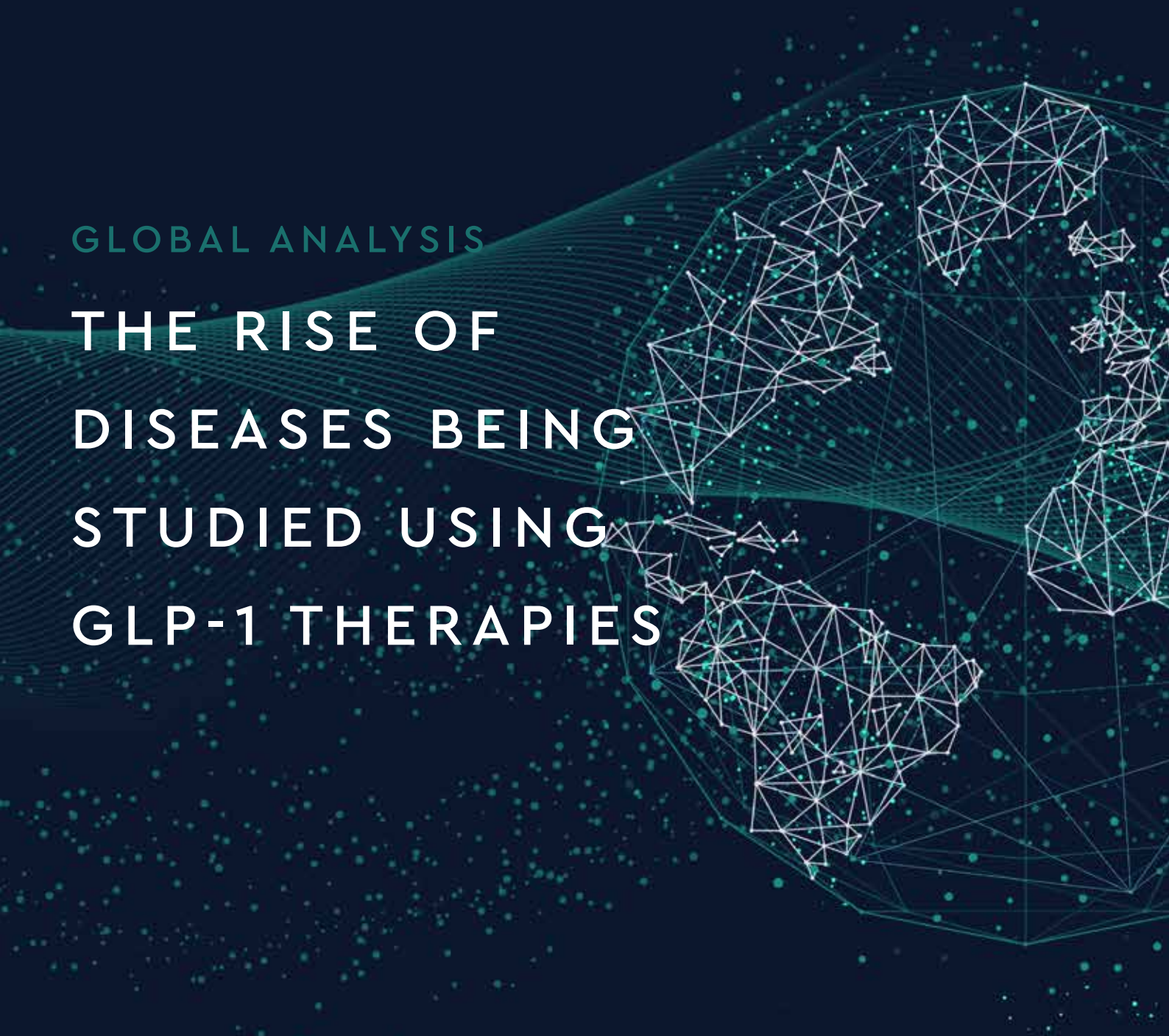
GLOBAL ANALYSIS

THE RISE OF DISEASES BEING STUDIED USING GLP-1 THERAPIES



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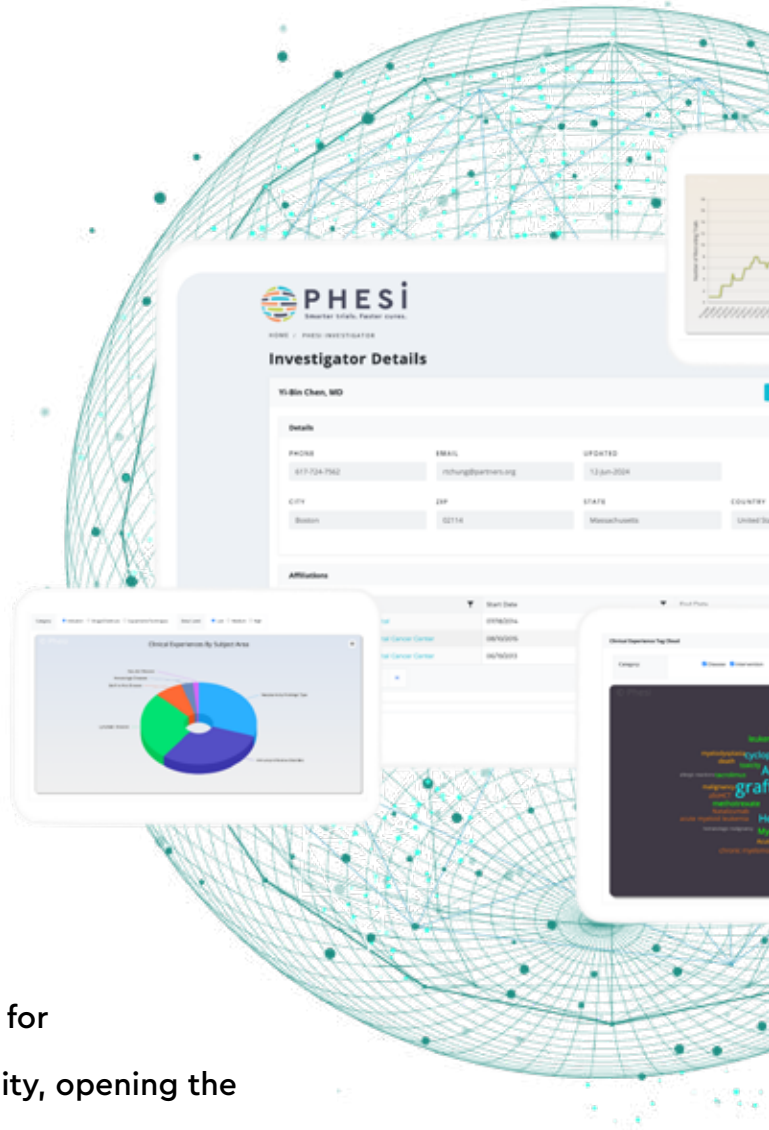
INTRODUCTION



GLP-1 use is rapidly expanding beyond diabetes management, driven by approvals for chronic weight management, increased media attention, and strong public demand. Phesi has undertaken a new global analysis into the disease areas being studied using GLP-1 therapies. The analysis shows the potential for patient benefits to extend far beyond obesity, opening the doors to a new era of multi-disease prevention and care.

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METHODOLOGY

A global analysis of 583 recruiting clinical trials or trials about to start involving GLP-1 receptor antagonists was undertaken using real-world data from Phesi's award-winning, AI-powered Trial Accelerator™. This included trials directly evaluating GLP-1s as interventions, as well as those exploring comorbidities and modulatory effects.

A Digital Patient Profile was constructed by analyzing 1,896,194 patients about to be treated by GLP-1 inhibitors from 69, 652 hospitals and clinics in 81 countries in the past 20 years. Creating a Digital Patient Profile forms the foundation of Phesi's patient-centric, clinical data science solutions and ensures a precise understanding of key characteristics specific to the indication and patient population under study including age, sex, comorbidities, outcome measures and concomitant medications. Phesi's Digital Patient Profiles are used extensively by world-leading pharma companies to accelerate clinical development success.

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KEY FINDINGS

The analysis shows more than 100 diseases are being studied using GLP-1 therapies. Interest is growing in GLP-1s as a broader modulatory pathway across indications including cardiovascular disease, polycystic ovary disease, osteoarthritis and multiple cancer (Table 1).

Table 1: Top 26 indications as defined by protocol where GLP-1 receptor antagonists are being studied	
Obesity	63
T2DM	33
T1DM	18
MASLD	15
Polycystic Ovary Syndrome	12
Prediabetes	11
Hypoglycemia	9
Chronic Kidney Disease	7
Endometrial Cancer	6
Cardiovascular Diseases	6
Alcohol Use Disorder	6
Glucose Metabolism Disorders	5
Pancreatic Cancer	5
Crohn Disease	4
Breast Cancer	4
Bariatric Surgery Candidate	4
Cystic Fibrosis	4
Binge Eating Disorder	4
Heart Failure	4
Prostate Cancer	3
Metabolic Syndrome	3
Insulin Resistance	3
Steroid-Induced Diabetes	3
Gestational Diabetes Mellitus	3
SOURCE: PHESI TRIAL ACCELERATOR™ ANALYSIS, AUGUST 2025	

"Scientific curiosity is increasingly centered on understanding how weight and metabolic factors intersect with other disease areas, including cardiovascular, inflammatory and neurological conditions," said Dr Gen Li, Founder and President, Phesi. "The data show a clear trajectory – GLP-1s began in diabetes, moved into obesity, and now we're seeing increasing application across a spectrum of diseases with shared risk profiles. The goal for the industry is not just treating obesity, but treating the entire constellation of conditions associated with it. GLP-1s are forcing a re-evaluation of how we define, diagnose and treat disease – prevention is emerging as the new blockbuster. With the right data, sponsors can target the right patients earlier, saving time, money and lives."

Phesi's analysis reveals that GLP-1 use is growing rapidly, with many patients presenting overlapping conditions, such as hypercholesterolemia and hyperlipidemia. This suggests GLP-1s are increasingly used to target systemic disease clusters rather than single indications. In some cases, GLP-1s are used adjunctively in non-obesity-related treatments (e.g. osteoarthritis), where initial findings suggest possible synergistic effects.

DIGITAL PATIENT PROFILE FOR GLP-1

Phesi's Digital Patient Profile (figure 1) provides sponsors with a statistical view of real-world patient attributes. Its construction is guided by a modal value approach helping to depict the most important characteristics of the disease while providing a consensus summary of the medical community's understanding of the depicted disease. It delivers precision insights to help sponsors optimize protocol design, forecast enrollment rate, select lead enrolling countries and investigator sites and generate digital twins to reduce patient burden and cycle times.

Phesi Digital Patient Profile: GLP-1 Patients		Digital Baseline Patient Characteristics	Data from Real World Sources	
			# pts	#cohorts
Demographic	Male	56%	543,929	2847
Demographic	Female	44%	557,821	2760
Demographic	Age (years) Mean ±SD	68.8 ±10.7	1,250,524	3762
Demographic	Weight (kg)	73.1 ±18.7	336,926	1897
Demographic	Height (cm)	167.3 ±9.1	18,733	290
Demographic	BMI ±kg/m2), Mean ±SD	29.6 ±19.7	515,778	2517
	Duration of diabetes	8.8 ±6.4	436,598	939
Race & Ethnity	White	72%	232,173	1224
Race & Ethnity	African	8%	234,732	1156
Race & Ethnity	Asian	16%	204,687	1038
Race & Ethnity	Hispanic	17%	228,201	913
Blood lipid	HbA1c (%)	8.0 ±1.3	639,144	2104
Blood lipid	HbA1c (mmol/mol)	65.1 ±13.4	85,697	338
Blood lipid	Total choleterol (mmol/L)	4.80 ±1.08	45,786	277
Blood lipid	Triglycerides (mmol/L)	2.46 ±2.40	56,567	254
Blood lipid	HDL-c (mmol/L)	1.31 ±0.39	79,062	292
Blood lipid	LDL-c (mmol/L)	3.01 ±1.11	102,294	346
	Fasting plasma glucose (mg/dL)	144.7 ±46.3	119,143	521
	Fasting plasma glucose (mmol/L)	8.79 ±2.96	136,024	866
	DBP (mmHg)	77.8 ±10.0	320,759	825
	SBP (mmHg)	132.8 ±16.9	347,676	884
	Heart rate (beat/minute)	77.90 ±11.8	49,377	180
	Body fat (%)	35.8 ±6.1	4,493	188
	Waist (cm)	106.6 ±13.6	89,159	573
Comorbidity	Hypertension	50%	336,937	265
Comorbidity	Dyslipidemia	50%	141,834	133
Comorbidity	Retinopathy	12%	105,366	97
Comorbidity	Diabetes	25%	94,974	71
Comorbidity	Neuropathy	11%	97,987	65
Comorbidity	Atrial fibrillation	9%	169,101	52
Comorbidity	Nephropathy	12%	51,314	48
Medication	Metformin	75%	135,750	212
Medication	OAD	26%	99,748	196
Medication	Sulfonylurea	33%	82,486	152
Medication	Antidiabetic medication	36%	174,062	147
Medication	Statin	64%	144,932	114
Medication	Insulin	18%	80,654	89
Medication	DPP-4 inhibitor	30%	69,320	83
Medication	Antihypertensive	37%	36,865	78
Medication	Calcium channel blocker	31%	138,476	78

FIGURE 1: PHESI DIGITAL PATIENT PROFILE FOR GLP-1 PATIENTS CREATED USING TRIAL ACCELERATOR™

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In this analysis, the Digital Patient Profile has been used to examine the correlation between different factors. Analysis of the data confirms that fasting plasma glucose concentration is correlated with HbA1c (figure 2) as shown in past studies. It also highlights that there is no apparent correlation between BMI and HbA1c (figure 3) – confirming that BMI is not always an accurate measure of health.

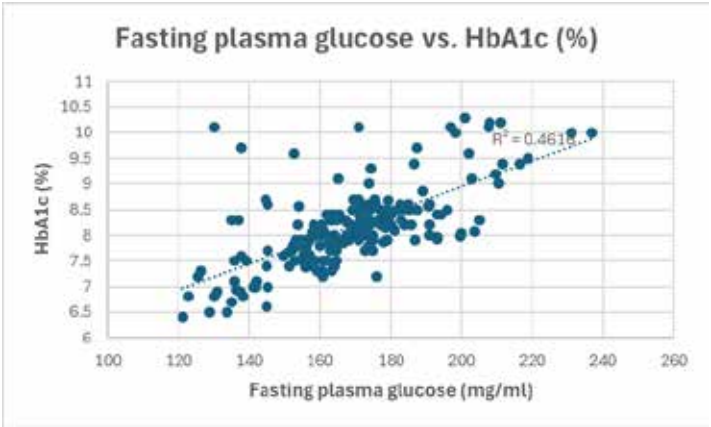

FIGURE 2: CORRELATION BETWEEN FASTING PLASMA GLUCOSE AND HBA1C

SOURCE: PHESI TRIAL ACCELERATOR™ ANALYSIS, AUGUST 2025

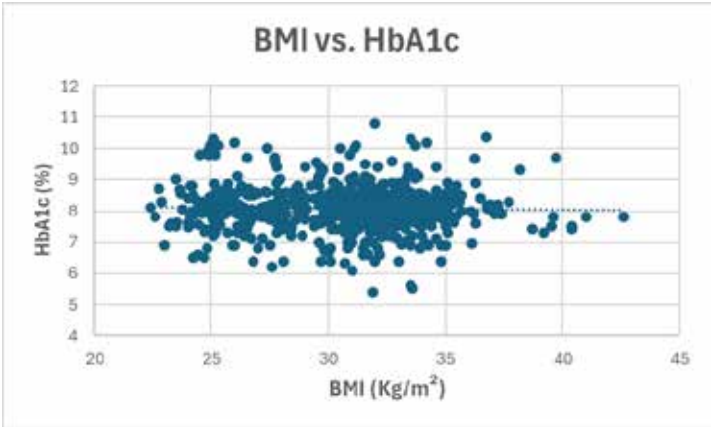

FIGURE 3: CORRELATION BETWEEN BMI AND HBA1C

SOURCE: PHESI TRIAL ACCELERATOR™ ANALYSIS, AUGUST 2025

IMPLICATIONS FOR OBESITY TRIALS

Examining how the uptick in GLP-1 activity is impacting obesity trials, the data shows that cycle times are increasing; the average duration of obesity trials has grown over the past two decades, with trials that used to take 10–20 months now often taking 25–45 months (figure 4).

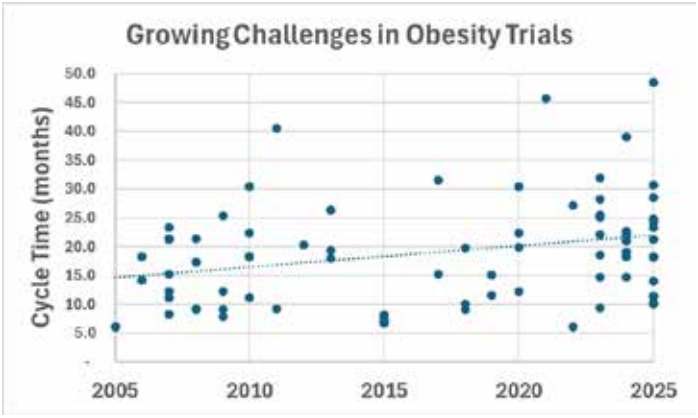

FIGURE 4: TREND IN CLINICAL TRIAL CYCLE TIMES FOR OBESITY-RELATED STUDIES BETWEEN 2005 AND 2025. SOURCE: PHESI TRIAL ACCELERATOR™ ANALYSIS, AUGUST 2025

The implications of these trends are significant for R&D, clinical trial design and healthcare strategies. GLP-1s exemplify the shift from siloed disease treatment to a holistic, patient-centered approach, where a single intervention could address multiple related conditions. Clinical specialisms will also be forced to adapt; as diseases like cardiovascular conditions, MASH and diabetes increasingly converge, physicians and trial designers must move beyond single-disease expertise to multi-indication decision-making. Operationally, clinical development organizations need to become smarter and data-driven to ensure portfolios and programmes remain viable against this evolving backdrop.

"GLP-1s have the potential to reshape how we think about disease prevention, not just treatment. And as GLP-1 usage grows, the volume of real-world data (RWD) is increasing rapidly," said Jonathan Peachey, Chief Operating Officer, Phesi. "This may present an a challenge to clinical development with competition and recruitment bottlenecks. But it also offers both an opportunity and a solution. Sophisticated clinical data analytics combining RWD and disease modelling will unlock insights that optimize clinical operations, reduce costs, drive down patient and investigator site burden, and enhance regulatory strategies. These insights will also afford sponsors and clinicians deeper understanding of longitudinal outcomes in treated patients and provide data that can be fed back into analysis. This is critical because we are at the early stages of understanding disease convergence, and hypotheses are still emerging that will require significant RWD to substantiate."

CONCLUSION

Using Digital Patient Profiles in clinical development provides the crucial foundation for sponsors to make faster, smarter decisions in a fast-evolving therapeutic landscape defined by GLP-1 convergence. With the source of real-world data growing rapidly, it's important that organizations across the biopharmaceutical and healthcare ecosystem work together to gain a better understanding of the relationship between different diseases to aid disease prevention as well as treatment and care.

ABOUT PHESI

Phesi's patient-centric, AI-powered solutions deliver smarter trials and faster cures. Its award-winning Trial Accelerator™ platform draws on real-world data from 200 million patients across 195 countries and 4,000 indications. Using Digital Patient Profiles and the unique Patient Access Score, Phesi's precision insights help sponsors optimize protocol design, forecast enrollment rate and select lead enrolling countries and investigator sites to reduce patient burden and cycle times. From enabling Digital Twins and External Control Arms, Phesi is transforming the future of clinical development.

To learn more visit phesi.com

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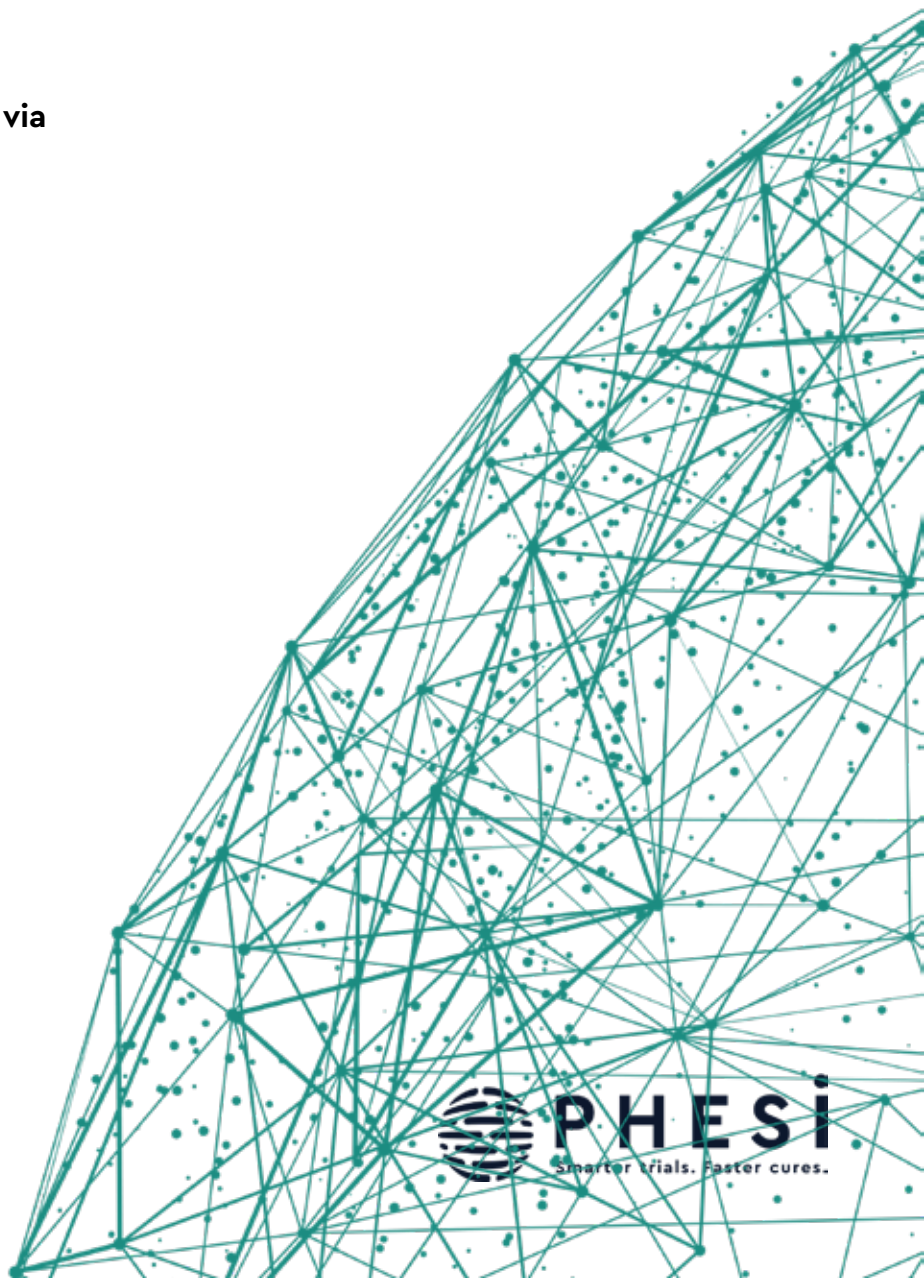

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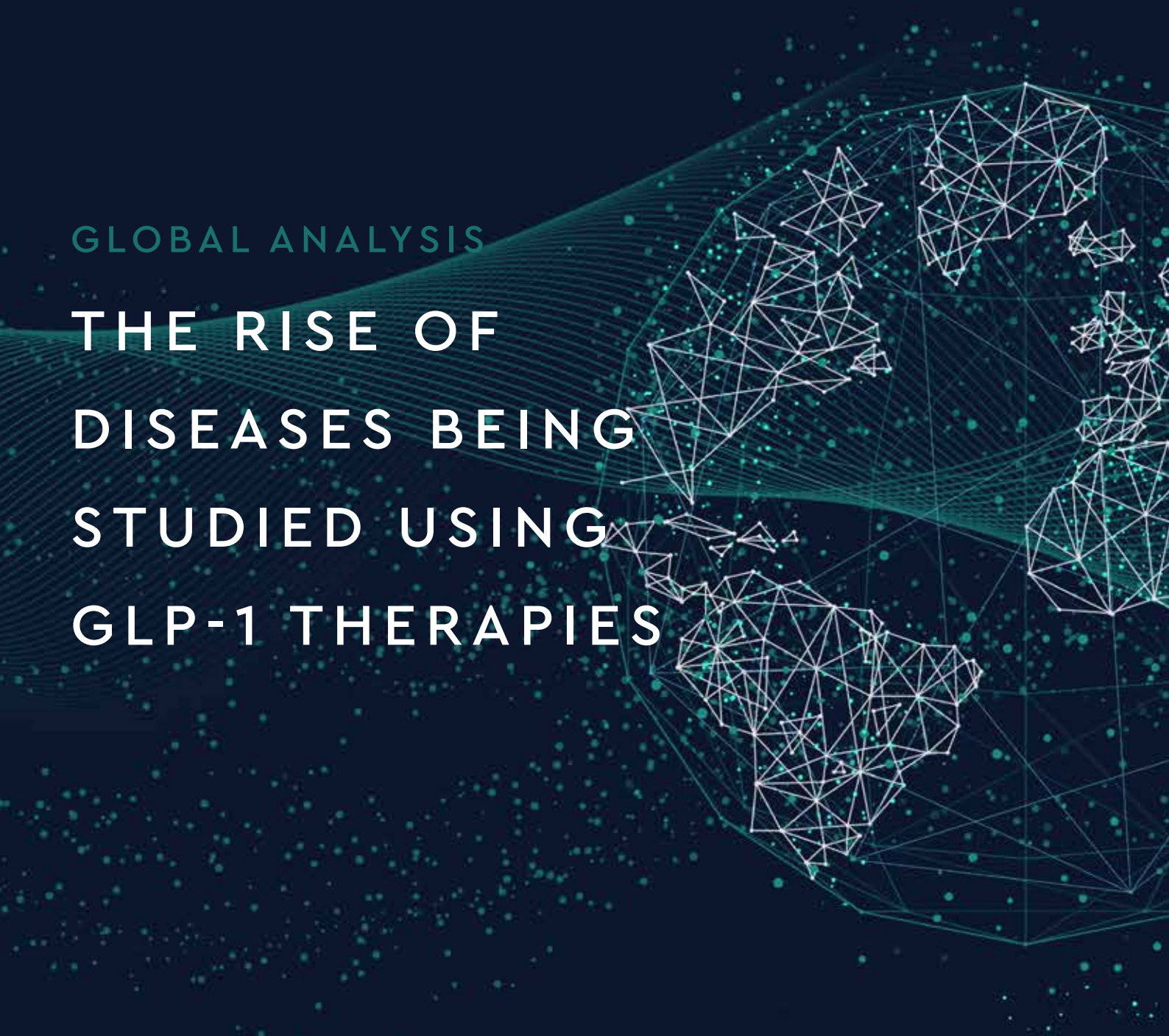

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