

Southeast Asia and Pakistan Overview: The Emerging Hub for Clinical Trial Scale Up

(Southeast Asia: Indonesia, Malaysia, Philippines, Thailand, Vietnam)



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IQVIA Southeast Asia and Pakistan overview

Southeast Asia and Pakistan represent competitive regions for clinical development, combining large, diverse, treatment-naïve populations with improving healthcare infrastructure. These markets enable efficient patient recruitment and create vast opportunities to accelerate trial growth and innovation across multiple therapeutic areas. Proactive shift in regulatory frameworks, a maturing clinical trial ecosystem, and strategic national initiatives position this geography as a key hub for global research. With increasing site readiness and adoption of advanced technologies, the region is primed for high-quality, scalable clinical operations.

Site networks



Patient recruitment and contribution (2017–April 2025)*

COUNTRIES	NO. OF PATIENTS RECRUITED
Indonesia	261
Malaysia	948
Philippines	2,717
Singapore	474
Thailand	5,545
Vietnam	2,353
Pakistan	780

*Ph1-3b and Exts excluding vaccines and cFSP

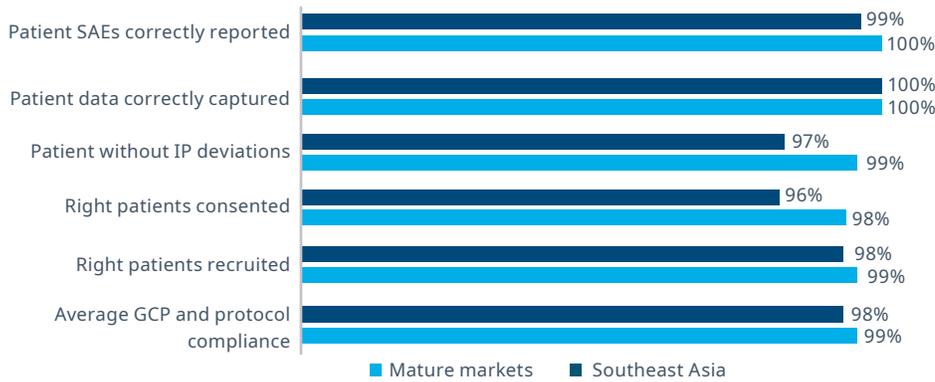
TA: Therapeutic area; EPO: Early Phase Oncology; CAGT: Cell & Gene Therapy; NASH: Nonalcoholic steatohepatitis; CNS: Central Nervous System; BS: Biosimilars; cFSP: Clinical Functional Service Provider

The presence of prime and partner networks in each location enables differentiated clinical trial execution, enhancing patient recruitment and trial outcomes.

Quality

IQVIA R&DS site quality and performance in Southeast Asia is on par with mature markets in the key quality parameters

Chart 1: IQVIA RDS site metrics for Southeast Asia (2020-2024)



SUCCESS FACTORS FOR OUTSTANDING SITE METRICS:

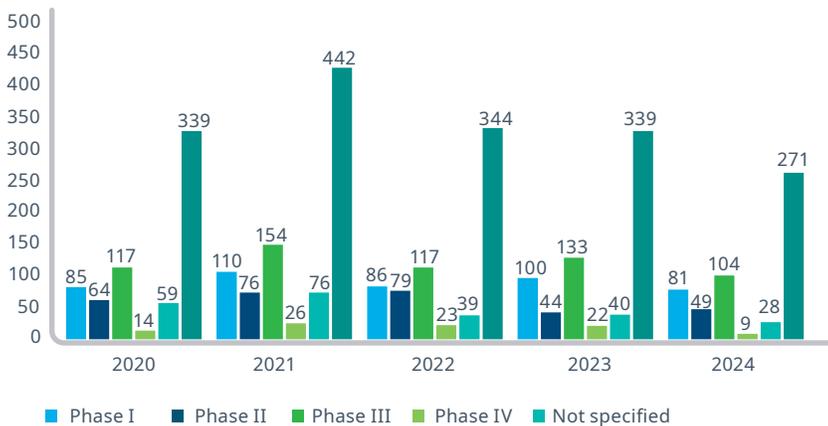
- Effective issue escalation
- Proactive risk management
- Oversight of audit inspections
- Cross functional quality plan
- Site inspection readiness
- Strong quality culture across the board

Source: IQVIA analysis of internal data sources

Clinical trial landscape

During 2020-2024, approximately 49% of all trials were local, whereby approximately 45% were phase I and II.

Chart 2: Number of active and completed clinical trials in Southeast Asia (2020-2024) (N=1,735)



Total number of trials are 1,735 (877 global and 858 local trials)

Chart 3: Study phase breakdown ratio of trials (2020-2024)

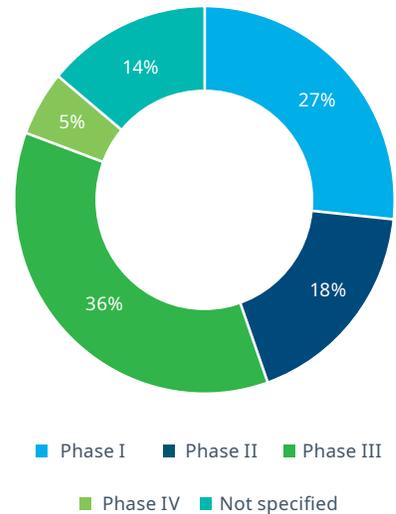
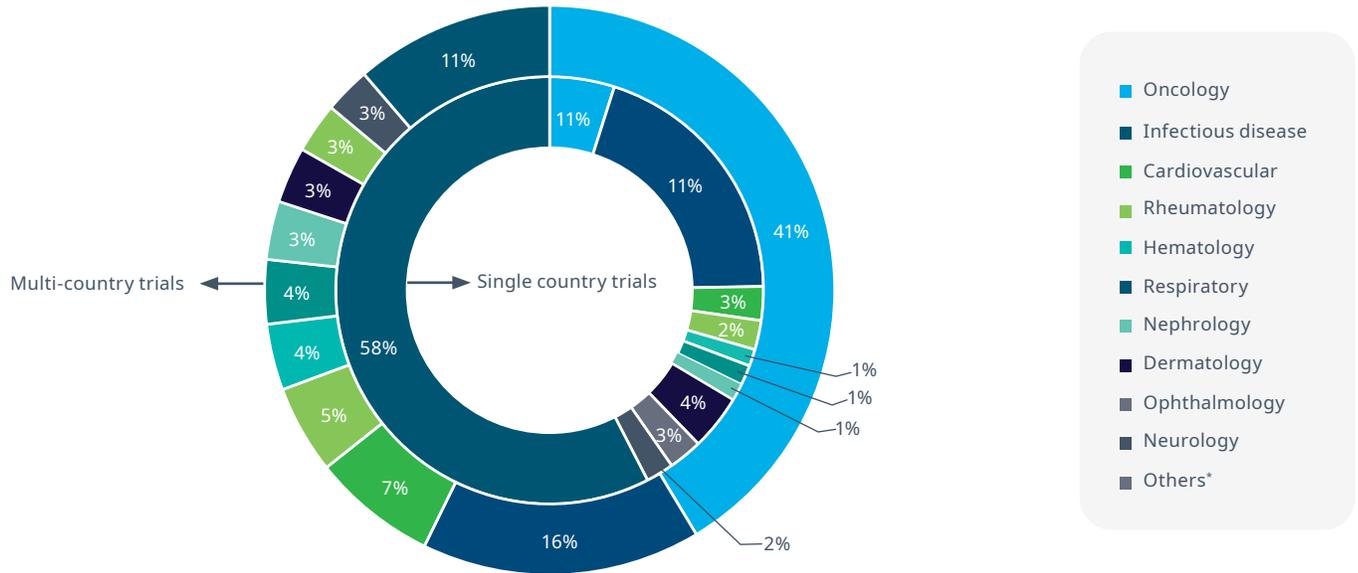


Chart 4: Therapeutic area breakdown of clinical trials in Southeast Asia (2020-2024) single country vs. multi-country trials



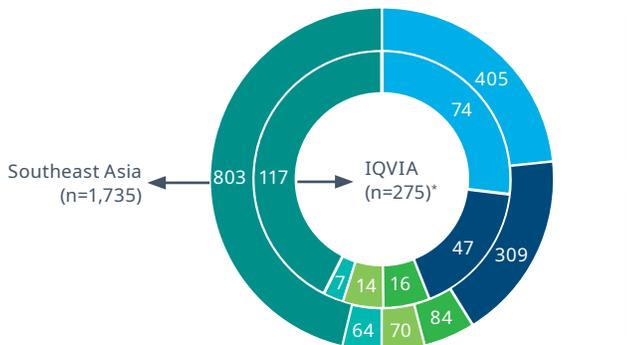
Oncology and infectious disease were the top therapeutic areas

*Others include Hepatology, Psychiatry, Women's Health/Sexual health, Acute care, Allergy/Immunology, Orthopedics, Transplantation, Medical genetics and other trials are related to safety and efficacy, bioavailability, pharmacokinetic and comparison studies etc.

IQVIA footprint

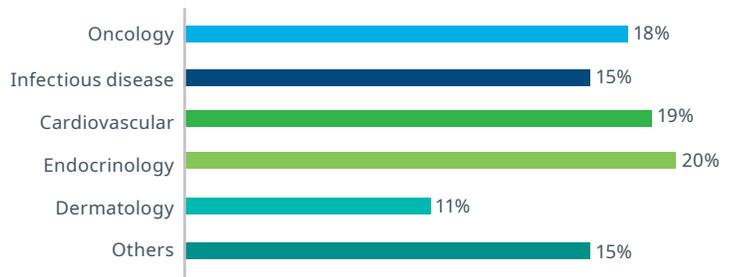
In the last 5 years, IQVIA R&DS was involved in ~16% of the global clinical trials in Southeast Asia across all therapeutic areas

Chart 5: Clinical trial performance benchmarking IQVIA Southeast Asia vs. total Southeast Asia clinical trials (2020-2024)



*Includes phase I-IV studies across Core clinical, Biosimilars, ECG/Cardiac safety, GFR clinical, Lab and outcome

Chart 6: % of studies conducted by IQVIA in Southeast Asia (2020-2024)



*Others include Rheumatology, Respiratory, Gastrointestinal, Ophthalmology, Women's health/Sexual health, Psychiatry, Allergy/Immunology, Acute care, Hepatology, Nephrology and other trials are related to safety and efficacy, bio availability, pharmacokinetic studies etc.

CRA's clinical monitoring experience (average years)

2.4



275 Studies



700 Sites



31,191



Patients randomized

of the global clinical trials in the region had IQVIA involvement

~16%



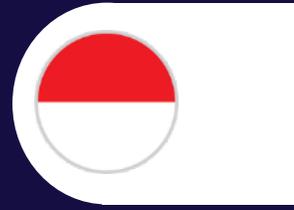
IQVIA R&DS overall experience (2020-2024)

 COUNTRY	 NUMBER OF EMPLOYEES (N= 779)	 NO. OF STUDIES (N=444)	 NO. OF SITES INITIATED (N=1,144)	 NO. OF PATIENTS RANDOMIZED (N=43,280)
Indonesia	11	5	38	4,011
Malaysia	136	91	300	3,074
Philippines	92	57	230	24,758
Singapore	392	111	141	1,508
Thailand	102	113	310	5,670
Vietnam	32	26	53	1,059
Pakistan	14	41	72	3,200



Indonesia

Indonesia offers one of Southeast Asia's largest patient pools. Established in 2006, IQVIA has secured full-service CRO license, ensuring streamlined regulatory processes and reliable trial execution, supported by experienced clinical research team and strong site networks.



COUNTRY OVERVIEW



Highest population in Southeast Asia



Large population of treatment naïve patients and lower number of competing studies



Large Pharma market size (USD 4.2 billion), over 98% of the population has access to Universal Health Care (UHC)



Relatively low in cost (as compared to other countries)



Quick turnaround time for budget negotiation

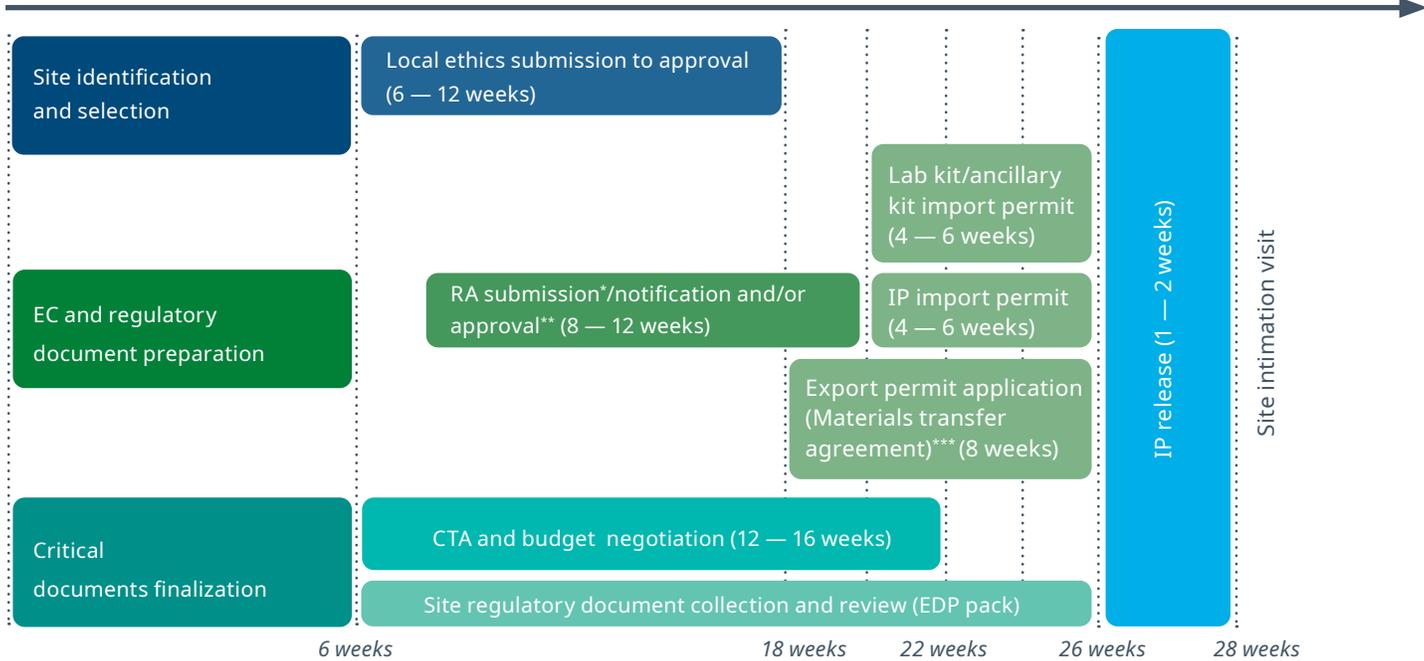


Limited treatment options under UHC coverage, thus trial will benefit patients

Indonesia clinical trial start-up (drugs, vaccine, biologics)

Start-up process flow:

Patient recruitment begins...



SHORTEST: 250 DAYS

*MEDIAN: 362 DAYS

Start-up timelines latest of SSV/final protocol to site activation

*RA submission is made to multiple health authority bodies, depending on type of application: BPOM (for clinical trial application and importation of drug and vaccine) and/or Ministry of Health (for Medical Device Clinical Trial Application, Importation of Medical Device, Ancillary Kits, Lab Kits).

**Clinical trial approval is issued within 20 working days after dossier is deemed complete, payment is received, and all queries are answered. EC approval is prerequisite for clinical trial approval.

***Fully executed CTA is prerequisite for approval.

BPOM (Badan Pengawasan Obat dan Makanan) = NADRC (National Agency of Drug and Food Control)

*Median: Includes trials from all phases and does not consider clock stop for delays with RA/EC approvals, amendments during start-up and uncontrollable delays from sponsor/investigator.

Hospitals across Indonesia

HOSPITAL CATEGORY	National referral hospitals	University hospitals	Cancer center	Psychiatry hospitals	Stroke centers	Respiratory hospital	Cardiovascular hospital	Regional, army, and private hospitals with clinical research experience	Other hospitals
NO. OF HOSPITALS	13	19	8	48	10	11	7	120	2607

Indonesia clinical regulatory reform

INA CRC

- One stop solution for clinical trial conduct in Indonesia
- To facilitate management of clinical trials

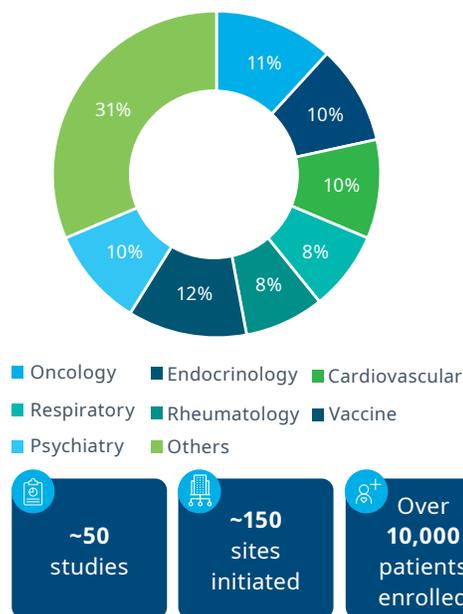
Formation of Clinical Research Unit (CRU)

- Clinical trial management at key hospitals
- To conduct clinical trial in adherence to ICH GCP

Reshaping of clinical trial ecosystem

- Online application for EC, regulatory approval, permits (MTA) — enable easy progress monitoring
- Continuous regulatory restructure to improve country competitiveness

Chart 7: Clinical trial landscape



Key therapeutic area

Oncology

High prevalent cases include: Breast, Lung, Cervix, Colorectal, and Liver Cancer

Infectious diseases and vaccine

Most prevalent cases include: Tuberculosis, HIV, Dengue, and Malaria

High burden diseases include: Pneumonia and Influenza

Cardiovascular metabolic

Top indication includes: Stroke, Coronary artery diseases, Heart failure, Hypertension, and Diabetes Mellitus

Biosimilars

Limited access to advanced therapy create high demands for affordable alternatives.

Key indications include: Oncology, Hematology, Autoimmune diseases, and Respiratory diseases

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Malaysia

Malaysia's ethnically diverse population and advanced healthcare infrastructure make it possible to generate multi-ethnic clinical data under consistent trial conditions, strengthening scientific validity and enhancing global applicability.



COUNTRY OVERVIEW



Ethnogenetic diversity
To enhance trial cohort variety, improving data generalizability



Large patient access
Public system does not routinely cover high-cost innovative therapies. Clinical trials as a route to advanced care



Regulatory accredited sites
available for First-In-Human studies



Regulatory efficiency
Malaysia's regulatory bodies ensure predictable timelines and transparent processes >600 ethics submission achieved



Leading CRO in Malaysia, honored with the 8th CRO of the Year Award in 2025 with >20 years of clinical trial experience

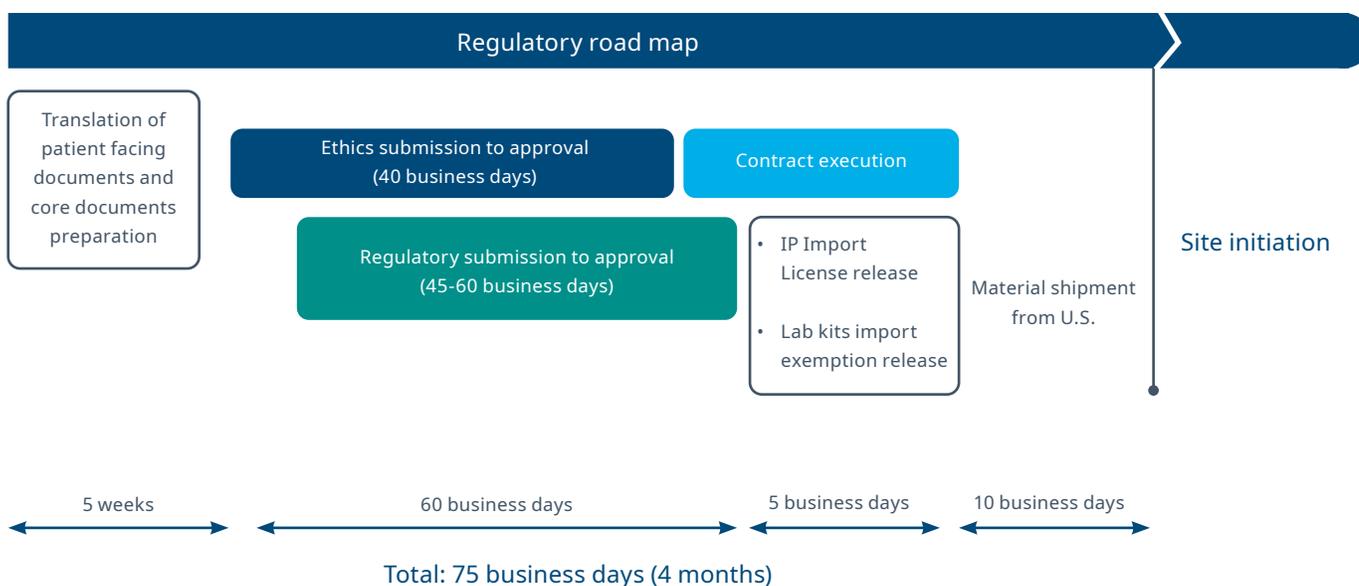


Rated top 30 country in IQVIA country prioritization report



Government support
through initiatives and community engagement to enhance patient enrollment and retention

Malaysia clinical trial start-up



Sites accredited for First-In-Human (FIH) studies



Hospitals and Healthcare Centers (HCs) across Malaysia*

HOSPITAL CATEGORY	Government hospitals with clinical research centers	University hospitals	Government hospitals	Private hospitals with clinical research centers	Private and government universities	Private hospitals	Government health clinics (also known as klinik kesihatan)	Army, navy and air force hospitals
NO. OF HOSPITALS	37	6	146	22	71	209	1057	5

*Private clinics are not included due to unavailability of ICH-GCP set-up.

Malaysia's hybrid decentralized solution

Decentralized solution leveraging Malaysia's health clinic network and Mobile Healthcare Professionals (MHPs).

- Access**
 Brings trials closer to patients. Malaysia's dense healthcare network, supportive regulations
- Simplified experience**
 Patients attend trial visits at nearby clinics with remote PI oversight via telemedicine, and direct-to-patient delivery
- Retention**
 Reduces patient burden, improves compliance, ensuring better trial continuity

Key therapeutic area

THERAPEUTIC AREA	#EXPERIENCE SITES
Oncology	60
Autoimmune diseases	23
Cardiovascular	57
Neurology	15
Infectious disease	22

New clinical trial initiations by year

Chart 8: Number of sponsored clinical research approved (2020-2024)

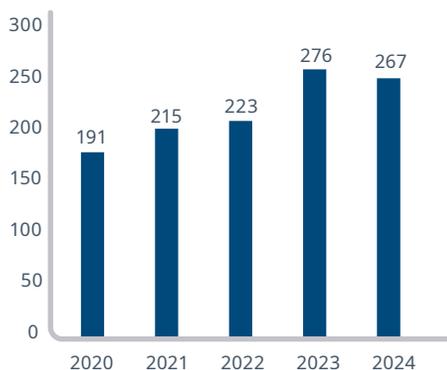
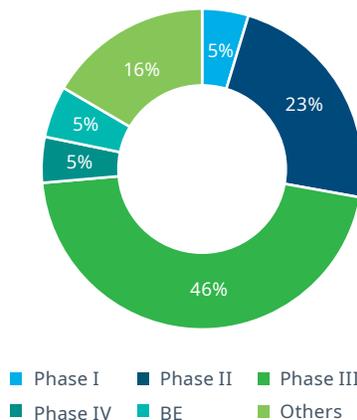


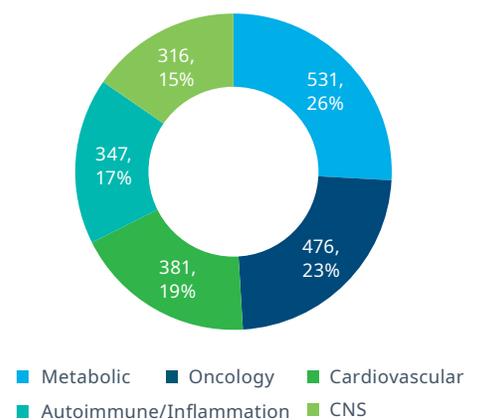
Chart 9: Breakdown of interventional studies in 2024



Source: Adapted from: Annual Report Clinical Research Malaysia 2024

Top 5 indications

Chart 10: Number of studies for the top 5 indications in 2024



Source: Citeline

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Philippines

As the second most populous country in Southeast Asia, patient interest in clinical trial participation remains high due to limited standard-of-care reimbursement and high demand for access to innovative treatments. English-based healthcare system and staffs in the country facilitate global study alignment as well.



COUNTRY OVERVIEW



The second most populated country in Southeast Asia (>115 million)



Strong patient interest and high retention due to limited standard-of-care reimbursement, with high demand for new treatments



Over **100 sites and >400 investigators** in different specialties in the past 5 years



Largest CRO in the Philippines with vast experience in Oncology, Cardiovascular, Rheumatology, Respiratory and Infectious diseases



Lower trial costs compared to western and other APAC countries



With vast experience in using **digital solutions** across different therapeutic areas



Government and private tertiary hospitals with own clinical research units



National practice guidelines aligned with international standards



Hosted **4 PFDA, 1 CFDI, 1 EMA and 5 USFDA inspections** without any critical findings



English-speaking staff and **medical records** in English

Philippines clinical trial start-up process



SHORTEST (2024 TO PRESENT): **211 DAYS**

^MEDIAN (2024 TO PRESENT): **262 DAYS**

Startup timelines from SSV approval to site activation

^Median: Does not include timelines for studies under the regulatory reliance policy

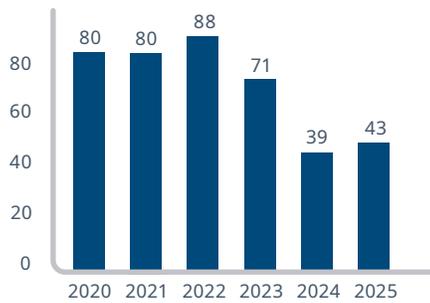
Hospitals and other health facilities across Philippines

HOSPITAL CATEGORY	Level 3 private hospitals (teaching/training)	Level 3 government hospitals (teaching/training)	Specialty hospitals (government)	Level 2 (private)	Level 2 (government)	Level 1 (government/private)	Other health facilities (includes: dialysis centers, psych centers)
NO. OF HOSPITALS	82	40	11	323	66	~719	>8,700

This includes hospitals like Perpetual Succour Hospital and West Visayas State University Medical Center.

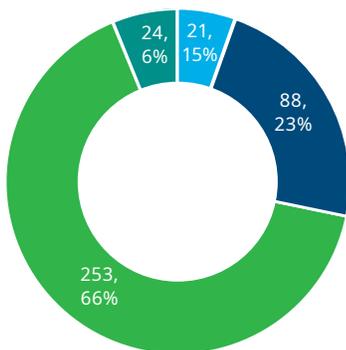
Clinical trial landscape

Chart 11: Number of new clinical trials initiated per year



Source: Citeline Trialtrove

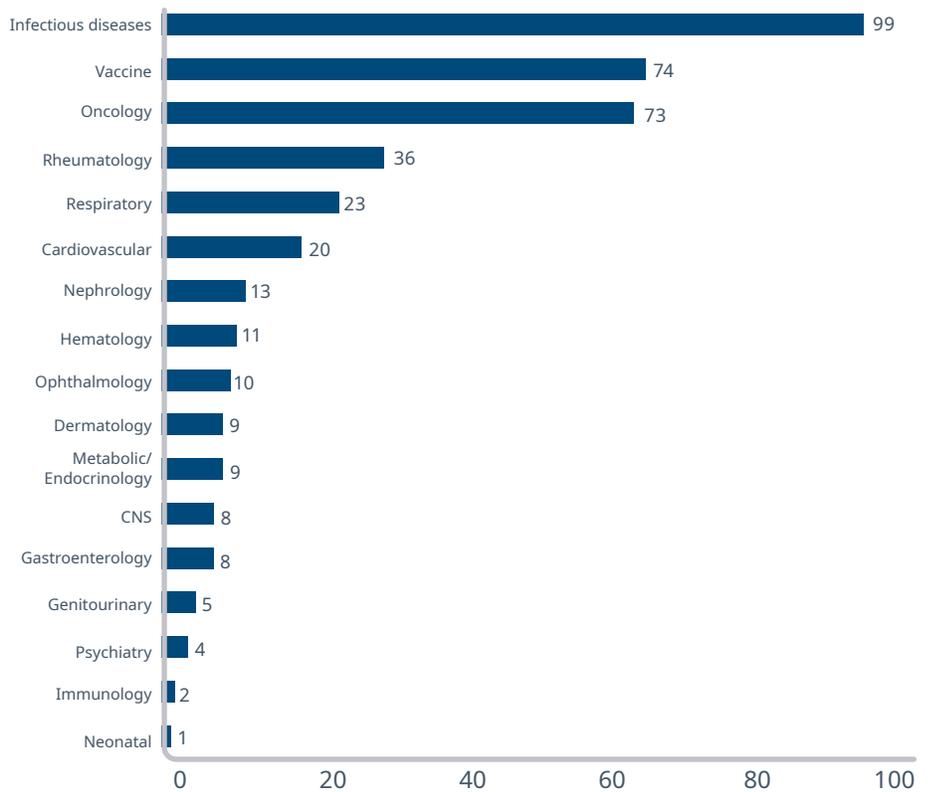
Chart 12: Number of clinical trials started per year (2020-2025)



■ Phase I ■ Phase II ■ Phase III ■ Phase IV

Source: Citeline Trialtrove

Chart 12: Number of clinical trials started per year (2020-2025)



Source: Citeline Sitetrove

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Vietnam

Vietnam provides access to a large treatment-naïve population and rapidly expanding research sites. IQVIA leads the way as Vietnam's first global CRO with a wholly-owned foreign enterprise licensed by MOH. With over 20 years of proven expertise, IQVIA delivers seamless clinical trial management from start-up to close out, setting the standard for quality and reliability in Vietnam.



COUNTRY OVERVIEW



Over 102M population, with a large treatment-naïve cohort across multiple TA



Strong foundations for **patient recruitment**, high compliance and low dropout



Robust investigator and site ecosystem, with **>60 MOH GCP-accredited hospitals and over 200 seasoned investigators**



Specialized centers, disciplined emergency workflows, and national-level clinical **infrastructure**



Start-up environment is advancing steadily as MOH reforms improve clarity and predictability

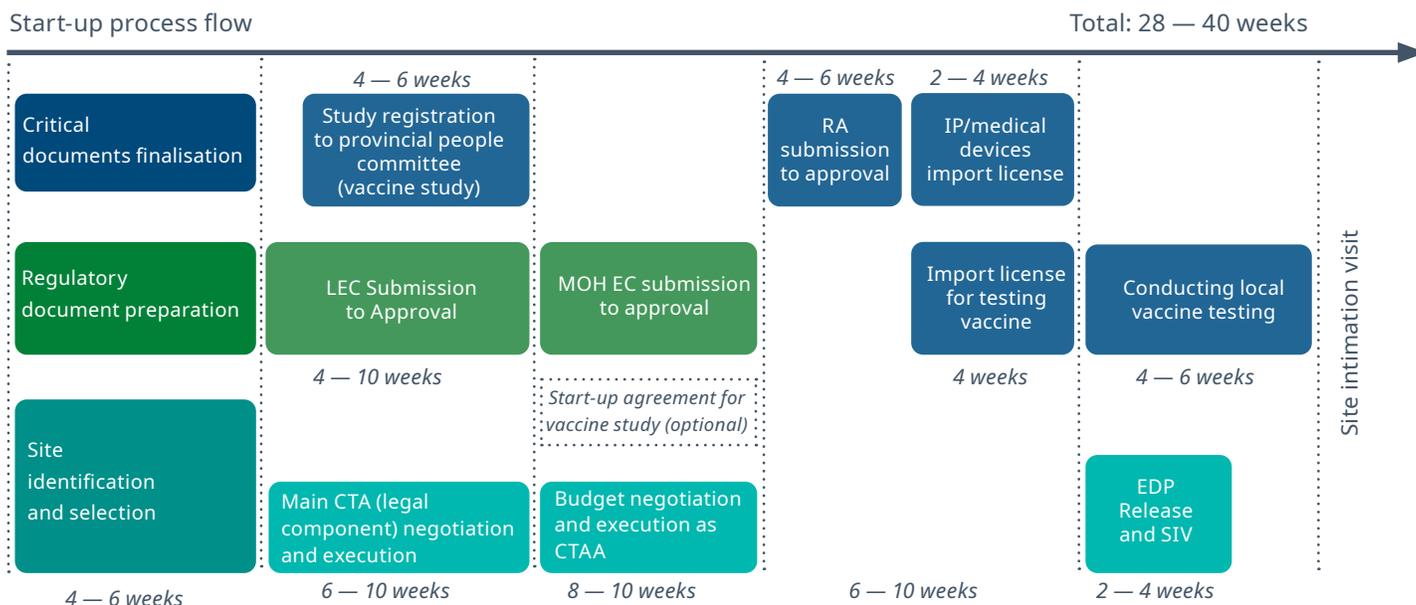


IQVIA as Vietnam's first global CRO with a wholly-owned foreign enterprise approved by MOH



Vietnam brings speed and clinical precision needed for high burden therapeutic areas. **Oncology-Hematology Cardiovascular disease and CNS (Stroke)** are rising focus with significant successful stories

Vietnam clinical trial start-up



SHORTEST: 216 DAYS

^MEDIAN: 241 DAYS

Start-up timelines latest of SSV/final protocol to site activation

^Median: Includes trials from all phases and does not consider clock stop for delays with RA/EC approvals, amendments during start-up and uncontrollable delays from sponsor/investigator.

Potential investigation site across Vietnam for hospital- and community-based trials

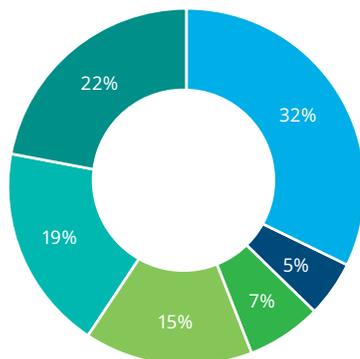
Hospital-based potential investigation sites						Community-based potential investigation sites					
HOSPITAL CATEGORY	MOH hospitals	Medical school/ university hospitals	Military hospital	Sector hospital	Private hospitals	INVESTIGATION CATEGORY	National health institutes	Provincial hospital (200-500 beds)	Provincial CDCs	District hospitals (100 to 200 beds)	Commune health centers
NO. OF HOSPITALS	46	13	30	35	102	NO. OF SITES	9	447	34	628	11,162

Vaccine Trials in Vietnam (2015 — 2025)**

Vietnam experience in vaccine trials (2014 — 2024)**

Chart 13: Number of vaccine trials

- 50+ studies
- 40+ global studies
- 400++ Patients per site per month



■ Other ■ HPV ■ Hepatitis B
■ Rotavirus ■ Influenza ■ Covid-19

*Vietnam statistic book 2024
** Citeline

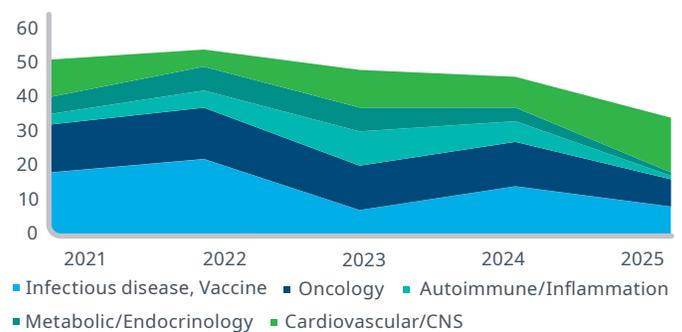
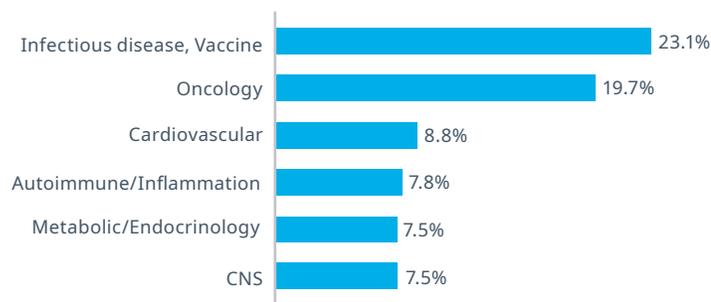
Vaccine trial site map

- Central**
Leading site: National health institutes
- Province**
Center for disease control and prevention (63)
- District**
District health centers in the network (646) and/or hospitals
- Commune**
Referral network: Subjects referred to district centers (11162)

Bring studies to participants nationwide through the lead site — satellite site model

Clinical trial landscape

Chart 14: Top therapeutic areas (2021 — 2025)



Beyond its well-known footprint in vaccines, the country now shows momentum in Oncology, Cardiovascular and Stroke

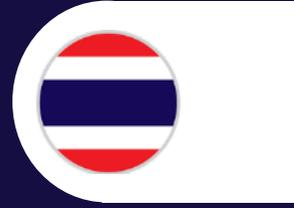
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Thailand

Thailand's healthcare landscape is undergoing a significant transformation. With a continual growth of pharmaceutical market, large patient pool, recent regulatory reform, as well as a proven track record in research, the country is emerging as a key destination for clinical trial expansion.



COUNTRY OVERVIEW



Competitive cost in clinical trial across all therapeutic areas and clinical trial phases as compared to other regions, despite the high quality of medical infrastructure



Regulatory reform in 2024, transforming the clinical trial landscape with promising regulatory approval timeline of 8 — 12 weeks



Expansion of clinical trial (CT) sites under ASEAN initiatives with target for additional 24 MOPH sites with established CRC to be more engaged in CT



Experienced investigators and clinical trial sites with university hospitals as main sites for clinical trial and > 61 hospitals with JCI certification



Thailand healthcare market growth stands out in SEA with high quality care focusing on innovations and advance medical facilities. The market growth is driven by aging population, increasing demand of wellness, precision medicine, and medical tourism

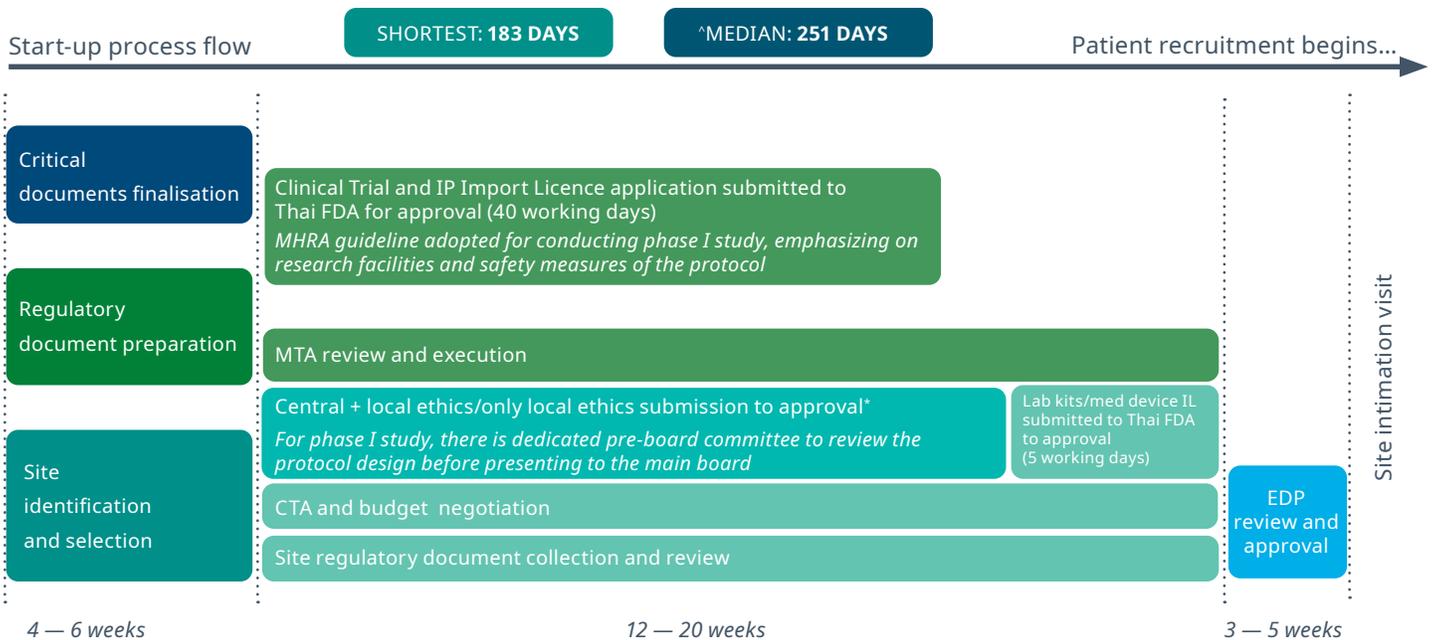


High quality standards with IQVIA experience in hosting 4 EMA, 1 FDA, and 2 Thai FDA inspections without any critical findings during 2020 — 2025



Biggest CRO in Thailand with >25 years of trial experience

Thailand clinical trial start-up

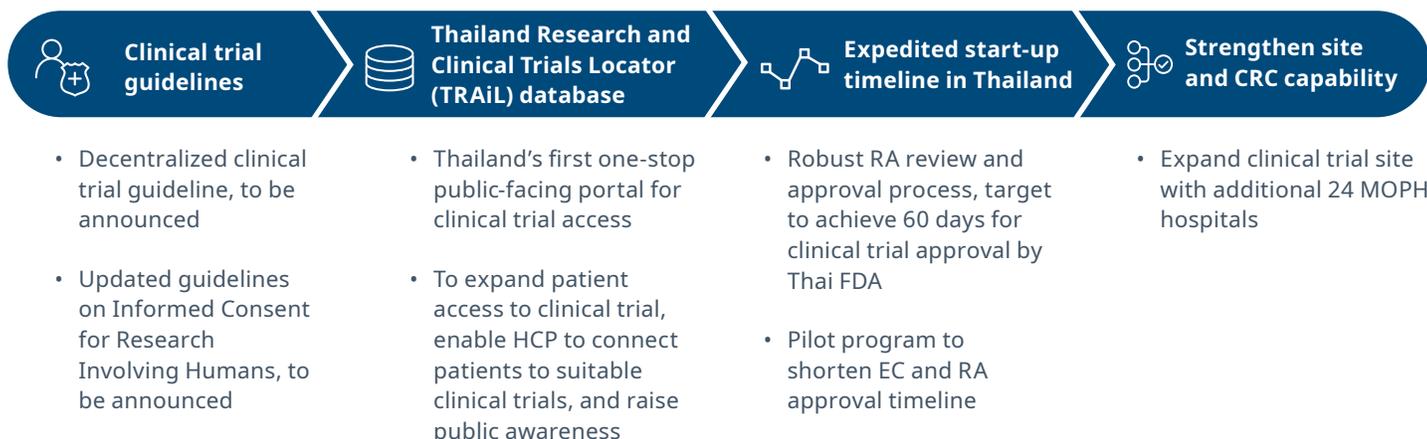


*Median: Includes trials from all phases and does not consider clock stop for delays with RA/EC approvals, Amendments during start-up and uncontrollable delays from sponsor/investigator.

*EC submission at each site could be either CEC and LEC or LEC only, depending on 1) Whether or not the LEC is in the list of certified EC by Thai FDA
2) site policy

Regulatory landscape

Thai FDA CEC industry



Hospitals and healthcare centers across Thailand

HOSPITAL CATEGORY	Medical school hospitals with clinical research centers	Medical school hospitals	MOPH tertiary care hospitals (>500 beds)	MOPH secondary care hospitals (120-500 beds)	Private hospitals	MOPH Primary care hospitals (10-120 beds)	Army, Navy and Air Force hospitals	Bangkok metropolises hospitals
NO.OF HOSPITALS	9	21	35	88	332	775	63	11
ETHICS COMMITTEE PROCESS	Protocol submission to either Central Research Ethics Committee (CREC) following by Local Ethics Committee (LEC) or LEC only, depending on site policy Approval timeline = 3-5 months		Protocol submission to either Central Research Ethics Committee (CREC) following by Local Ethics Committee (LEC) or LEC only, depending on site policy Approval timeline = 3-5 months					Bangkok Government EC and Site EC approval required Approval Timeline = 4-6 months

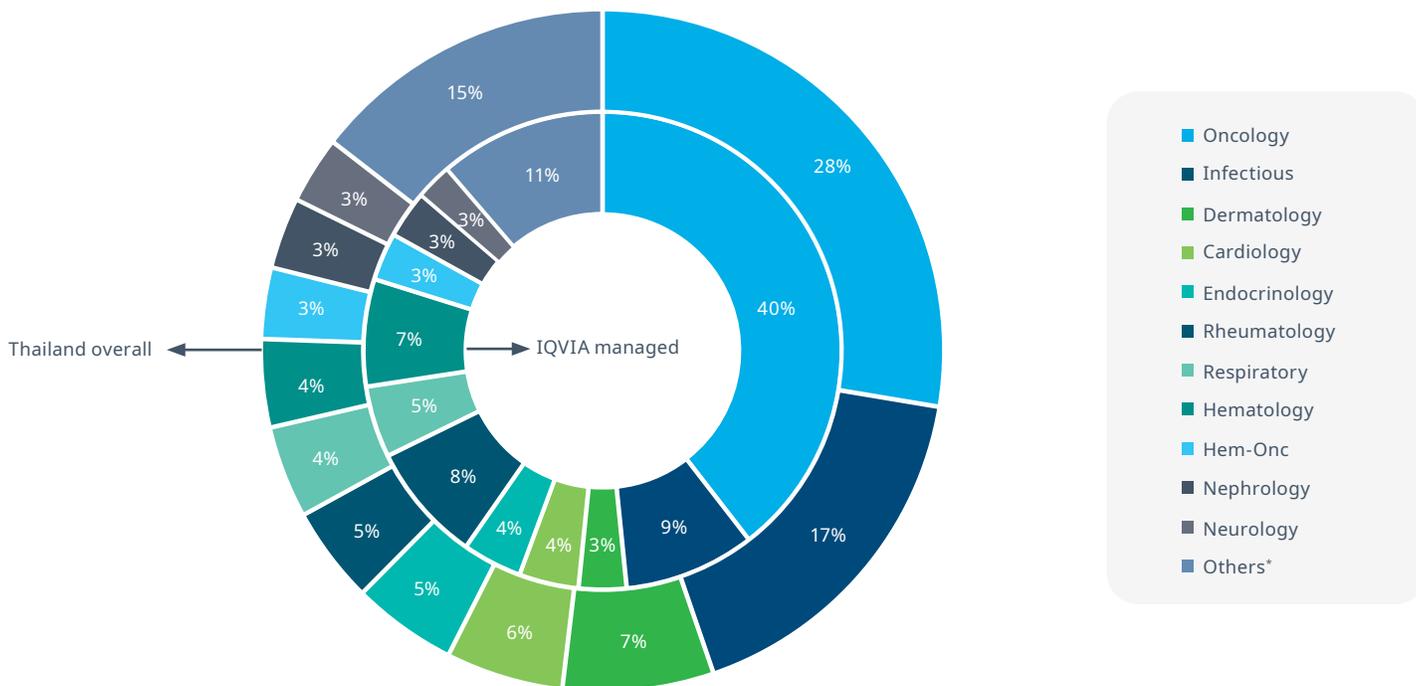
Early Phase Oncology Network (EPON) sites



Clinical trial landscape

Chart 16: Therapeutic area breakdown of clinical trials in Thailand (2020-2024)

Thailand overall VS. IQVIA managed



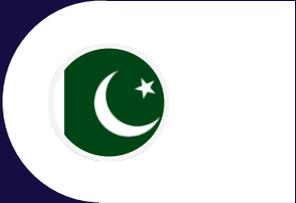
- Oncology and infectious were the top therapeutic areas
- IQVIA RDS was involved in approximately 15% of the global clinical trials in Thailand

*Others include neurology, medical genetics – Rare, Allergy/Immunology, Ophthalmology, Acute care, Reproductive health and other trials are related to safety and efficacy, bioavailability, pharmacokinetic and comparison studies etc.

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Pakistan

Pakistan is rapidly emerging as significant hub for clinical trials, leveraging its large treatment-naïve populations across urban and rural settings for efficient recruitment and relevant data generation. The enhanced regulatory support (DRAP) and low operational costs further enhance trial feasibility.



COUNTRY OVERVIEW



5th most populous country with 256 million people and 63% literacy rate as per NFPA/trading economics



High disease burden and large treatment naïve population



GDP Growth Rate 3.5%, GDP/capita USD \$1,700 as per trading economics report



Relaxed duties and taxes on import of test articles and supplies



JCI/ISO/DRAP/CAP approved well established healthcare centers



Up to 70% more economical than US (USD 1 = PKR 279)



16 years of average local experience that understands the local culture and nuances



GCP compliant sites and **English-speaking** professionals

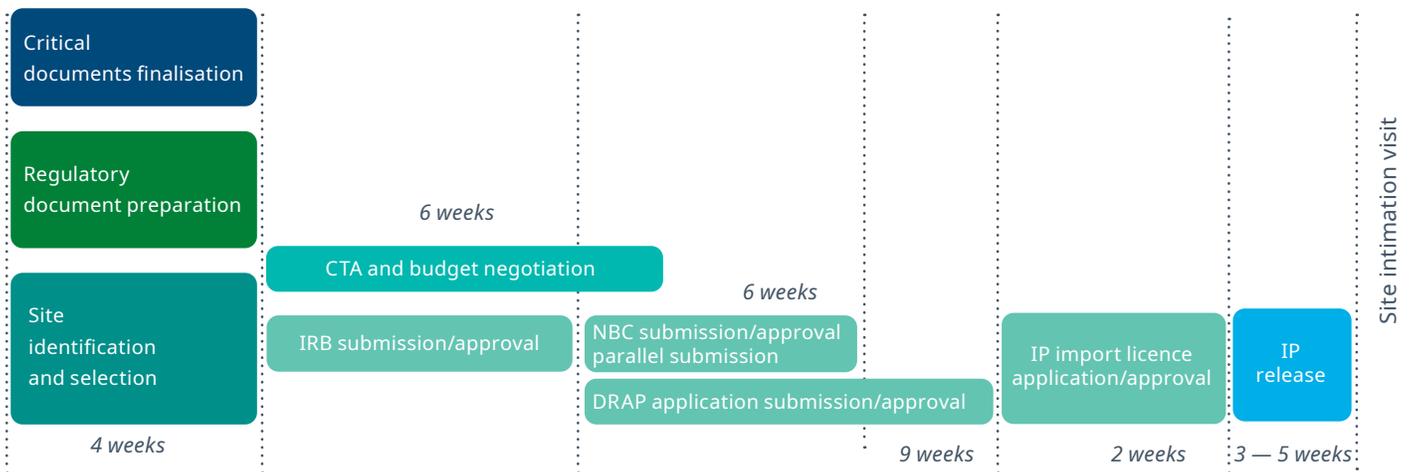


FSO and FSP services, along with regulatory and clinical monitoring

Pakistan business initiation — Jan 2019

Start-up process flow: 4.5 months — 5 months only

Patient recruitment begins...



SHORTEST: 90 DAYS

^MEDIAN: 120 DAYS

Start-up timelines latest of SSV/final protocol to site activation

^Median: Includes trials from all Phases and does not consider clock stop for delays with RA/EC approvals, Amendments during start-up and uncontrollable delays from sponsor/investigator.

**EC submission at each site could be either CEC & LEC or LEC only, depending on 1) Whether or not the LEC is in the list of certified EC by Thai FDA 2) site policy

Pakistan site map: Hospitals and healthcare centers approved by DRAP in 3 years across Pakistan

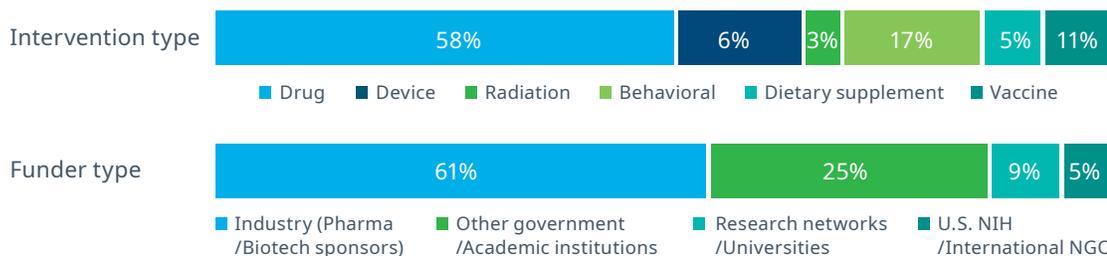
HOSPITAL CATEGORY	Medical school hospitals with clinical research centers	University hospitals	Women's and children's hospital	Cancer centre	Principal referral hospitals	Psychiatry hospitals	Phase I units	Private hospitals	Army, Navy and Air force hospitals	Other Hospitals (Large)	Other hospitals (small and/or remote)
NO.OF HOSPITALS	10	5	3	5	5	1	4	10	3	4	3

Site capabilities and expertise

- Quality, experienced sites and affiliations**
 - Experience of early phase trials with multinational sponsors
 - Inspected by WHO and other regulatory bodies
 - Well established dedicated clinical trial units approved by DRAP
- KOLs — Internationally recognized with expertise and experience in**
 - Foreign trained and experienced consultants
 - National and international research experience
 - Member of international forums and societies
- Multi-disciplinary research teams**
 - Led by experienced senior staff members
 - Experienced team trained on international protocols
 - Capacity to manage 2000 healthy volunteer for vaccine study
- Phase II capabilities: Early phase trials setup**
 - Specialized experience and expertise in complex and first in human clinical trials
 - Dedicated investigators with early drug development experience
 - Trained in PK sampling/early phase sampling management
- Ethics**
 - Monthly ethics review
 - Fast track approvals with NBC (National Bioethics Committee (NBC)
 - As approved CTU, RA Approvals by DRAP (Drug regulatory Authority of Pakistan) Expert CSC (Clinical Study Committee) on 9 weeks

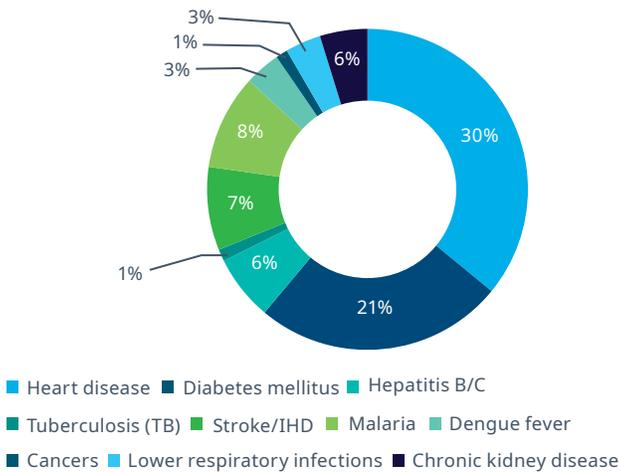
Clinical trial landscape

Last 10 years Split from 330 studies



Only 1% major finding as per 3rd party audit

Chart 17: Top 5 therapeutic areas by global rank 2025



- Over the last 10 years, oncology, hepatitis, and cardiovascular diseases have attracted international sponsors
- Due to the availability of treatment-naïve patients, Pakistan has been one of the highest recruitment countries for many indications, especially infectious diseases and CVD
- Historical data shows that Pakistan has consistently achieved targeted enrollment ahead of schedule and often surpassed initial targets

Chart 18: Top 5 cancers overall % of total cases

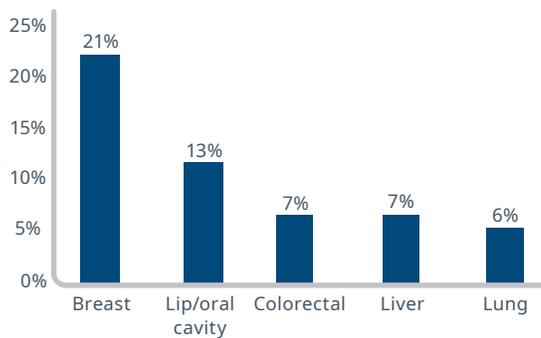
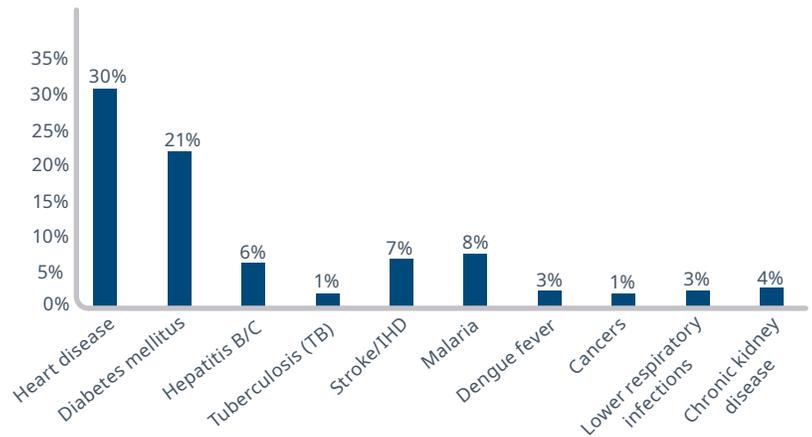


Chart 19: Top 10 diseases by prevalence



Selected disease prevalence and incidence landscape in Pakistan

DISEASE	LATEST PREVALENCE/INCIDENCE IN PAKISTANS
Gaucher disease	~1-2 per 100,000 live births (global est., higher locally due to consanguinity); commonest lysosomal storage disorder (LSD) in cohorts
Hepatitis delta	~10-15% prevalence among HBsAg+ carriers (est. 3-5 million total cases); ~74% in some high-risk groups
Thalassemia	Carrier rate 5-7%; ~10,000 new cases/year; prevalence ~1 in 1,000-2,000 births
MASH/NASH	~10-20% in general population; 40-60% in NAFLD patients (est. 25-30% NAFLD prevalence)
Asthma	10-18% in children (urban Karachi/Islamabad surveys); 6-12% in adults; ~4-6 million cases nationwide

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Conclusion



Southeast Asia and Pakistan are quickly becoming transformative hubs for clinical trials. With diverse, treatment-naïve populations, evolving regulatory frameworks, cost advantages and improving infrastructure, these markets stand out as strategic geographies for innovation.

But the question is not just why these regions matter. It is how IQVIA can leverage these opportunities effectively.

IQVIA is equipped with experience, capabilities and strong networks to deliver end-to-end support for your clinical trial development. With over 700 professionals operating across the region, IQVIA helps support every stage of the clinical trial lifecycle, bringing treatments to market and patients faster.

Local presence

 INDONESIA	 EMPLOYEES
Clinical monitoring	6
Clinical project management	0
Quality management	2
Regulatory	3
Others	6
Total	11

 PAKISTAN	 EMPLOYEES
Clinical monitoring	37
Clinical project management	2
Quality management	2
Regulatory	3
Others	11
Total	27

 MALAYSIA	 EMPLOYEES
Clinical monitoring	37
Clinical project management	6
Quality management	1
Regulatory	1
Others	91
Total	136

 PHILIPPINES	 EMPLOYEES
Clinical monitoring	28
Clinical project management	0
Quality management	1
Regulatory	2
Others	61
Total	92

 THAILAND	 EMPLOYEES
Clinical monitoring	55
Clinical project management	6
Quality management	1
Regulatory	8
Others	32
Total	102

 VIETNAM	 EMPLOYEES
Clinical monitoring	20
Clinical project management	1
Quality management	0
Regulatory	1
Others	10
Total	32



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