STERLING RESEARCH

Indian Diagnostic Industry Research

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Industry Research Report

Diagnostics Industry in India

Executive Summary

- **Market Size:** India's healthcare market is large and growing. It was roughly US$372 billion in FY2023 and is projected to reach about US$638 by FY2025. The diagnostics segment (pathology and radiology labs) was valued at about INR 1.54 trillion (US$≈19 B) in FY2024. Forecasts suggest it will roughly double to ~INR 2.98T (US$≈37 B) by FY2030 (CAGR ≈11.7%). Independent analyses project a ~14% CAGR for diagnostics over FY2023–28, reflecting accelerated growth in healthcare spending.

- **Growth Drivers:** The industry is underpinned by rising healthcare spend, driven by an ageing population, growing income levels, technological advancement, increasing chronic disease, rising awareness of preventive testing, wider availability of advanced diagnostic tests, increased penetration of health insurance and initiatives taken by the central government to strengthen healthcare infrastructure. Preventive health awareness and expanding health insurance (public and private) are boosting testing volumes. Public initiatives – notably Ayushman Bharat (health coverage and health & wellness centres), the National Digital Health Mission, and Production Linked Incentives (PLI) for medical devices – are strengthening infrastructure and access. Digitization (electronic health records, teleconsultations, mobile apps) is improving reach and efficiency across urban and rural areas.

- **Competitive Landscape:** The diagnostics market remains highly fragmented. Organised chains account for only ~15% of revenue; hospital-based labs 37%; and independent small labs 48%. Major national players include Dr. Lal PathLabs (largest pathology chain), Metropolis Healthcare (2nd-largest), SRL Diagnostics, Thyrocare (TCS-owned), Apollo Diagnostics, and Neuberg Diagnostics, among others. Private equity and strategic investors are active (e.g. Morgan Stanley PE-backed Sterling Accuris, TPG, KKR in hospitals, etc.), supporting rollouts and M&A. Recent deals include Metropolis' acquisitions of Core Diagnostics and Dr. Ahuja's Pathology, Thyrocare's purchase of Think Health (at-home testing), and consolidation of regional labs by PE-backed chains.

- **Key Trends:** Telemedicine and digital health have surged post-pandemic. India's telemedicine market is estimated at US$4.0 B (INR ~330 B) in 2023 and is expected to hit US$15.1 B by 2030 (CAGR ≈20.7%), integrating remote diagnostics and consultations. Artificial Intelligence (AI) is growing rapidly in diagnostics; one forecast predicts the AI-driven diagnostics segment will more than triple (≈23% CAGR) from ~$12.9 M in 2024 to ~$44.9 M by 2030 (note: niche subset of market). Healthtech innovation is booming: Bain & Co. estimates India's healthcare innovation market at ~$30 B (FY23), with healthtech sub-sector roughly ~$7 B (FY23) – more than double FY20 levels. Startups in digital pathology, teleradiology, AI-powered imaging/analysis (e.g. 5C Network, SigTuple), at-home testing (e.g. Redcliffe Labs, Healthians), and health data platforms are proliferating.

- **Challenges:** Key risks include regulatory and quality issues. India has only ~5,500 qualified MD pathologists against ~300,000 labs, creating a workforce shortage and reliance on diploma-level technicians in many unaccredited labs. Data privacy and cybersecurity are concerns, given sensitive patient data and nascent protection laws. Pricing pressures arise from insurance scheme rate caps and competition (e.g. e-pharmacy chains offering low-cost test packages). Fragmentation and price sensitivity (especially in metros) may squeeze margins.

- **Outlook:** The diagnostics sector is poised for robust growth. Under-penetration (India's tests-per-capita lag emerging peers) implies a large unmet market. Forecasts see the market roughly doubling by 2030. Expanding primary care coverage, health tourism (India is a global medical tourism hub driving demand), and technology adoption will open new opportunities. Startups and investors have high conviction in segments like digital labs, AI tools, portable/home diagnostics, and telehealth. Regions beyond the metros (Tier-2/3 cities and rural areas) represent major expansion potential. Strategic emphasis on quality (NABL/NABH accreditation), partnerships with insurers, and tech-enabled convenience (online booking, home collection) are likely to differentiate winners. In summary, India's healthcare and diagnostics industry is entering a phase of high growth and consolidation, underpinned by favourable demographics and policy support.

Industry Overview

India's healthcare sector is broad, comprising hospitals/clinics, diagnostics, pharmaceuticals, medical devices, and insurance. Hospitals dominate, while diagnostics, pharma, devices, and insurance contribute smaller shares compared to hospitals. Within healthcare, diagnostics (pathology and radiology services) forms a critical sub-market. Pathology labs perform blood and other tests (biochemistry, hematology, microbiology, molecular), and radiology centers provide imaging (X-ray, ultrasound, CT, MRI). According to one analysis, diagnostics accounts for just ~8% of total healthcare spend but influences 90% of clinical decisions and cost across healthcare, underscoring its importance.

India has a mixed public-private healthcare system. Public facilities (under central/state governments) provide a portion of care, but ~70% of services are delivered by the private sector (clinics, hospital chains, and labs). Key government players include AIIMS, CGHS centers, and a network of Primary Health Centers (PHCs) and District Hospitals. Major private hospital chains (Apollo, Fortis, Max, Narayana Health, etc.) also run their own diagnostics wings.

In diagnostics specifically, the market is split between standalone labs (independent labs or chains), hospital-based labs, and pathology chains. Hospital labs (e.g. within Apollo or Fortis) capture about 37% of revenue, and standalone (often family-owned) labs about 48%. Well-known national lab chains include Dr. Lal PathLabs (India's largest pathology network), Metropolis Healthcare (ranked second), SRL Diagnostics, Thyrocare (TCS-owned), Apollo Diagnostics, Neuberg Diagnostics, Healthians, and others. On the radiology side, large imaging centers are often affiliated with hospitals, though specialized radiology services (e.g. teleradiology firms, cancer imaging centers) also exist.

Diagnostic segments: Industry reports segment diagnostics into two main parts – pathology (lab tests) and radiology (imaging). Pathology (blood and bio-specimen analysis) dominates revenue due to volume of routine tests. Radiology (X-rays, ultrasound, CT, MRI) is smaller but technologically intensive. Both segments are being transformed by technology: for example, domestic manufacturing of imaging equipment is being encouraged, and digital imaging/AI tools are improving radiology throughput.

Major players (by revenue and scale) in diagnostics include:

- *Dr. Lal PathLabs:* A leading national chain (20+ Regional Reference Labs, 1500+ labs/service centers).
- *Metropolis Healthcare:* Second-largest pathology chain(subsidiary of Mumbai-based Metropolis Investments).
- *SRL Diagnostics:* Formerly Associated Pathologists, now under Fortis Healthcare.
- *Thyrocare Technologies:* Major preventive health and lab chain (acquired by TCS).
- *Apollo Diagnostics:* Lab arm of Apollo Hospitals group.
- *Neuberg, Redcliffe, Healthians, Pathkind, etc.:* Newer chains/digital players.

(These chains complement thousands of smaller regional and hospital labs.)

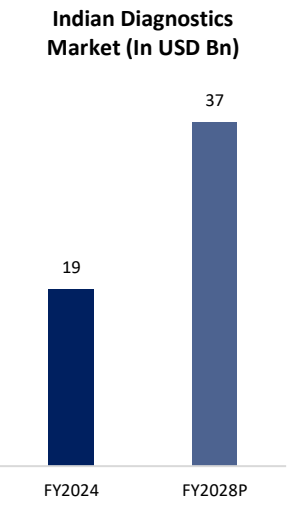
Country infrastructure: Healthcare access varies by geography. Metro and tier-1 cities have dense coverage; rural and small-town India remains under-served. The government's network of health centers and new Ayushman Bharat Health & Wellness Centres are expanding primary care into semi-urban areas. Insurance schemes (e.g. PM-JAY) now mandate use of empanelled labs, broadening reach. Overall, the sector is poised for consolidation and modernization as public and private stakeholders invest to meet growing demand.

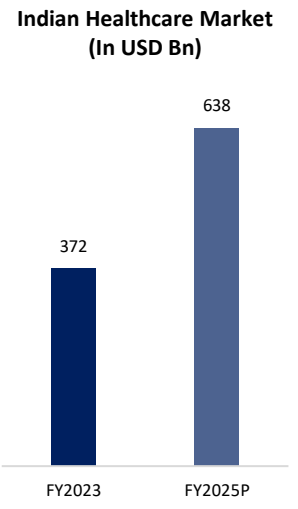
Source: Medprone

Market Size & Growth Drivers

Market Size:

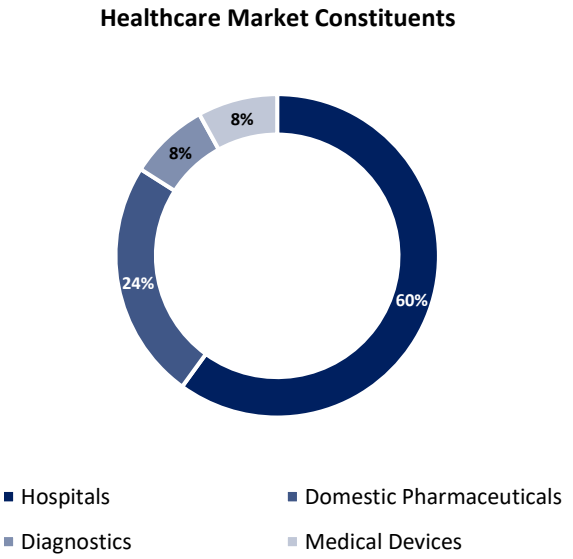
- **Diagnostics Market:** The Indian diagnostic laboratories market was valued at INR 1.54 trillion (US$≈19 B) in FY2024. Research estimates indicate it will nearly double to INR 2.98T (US$≈37 B) by FY2030, at ~11.7% CAGR (FY25–30). Industry reports earlier pegged market size at around US$13–19B in 2023 (variations reflect different coverage of pathology vs radiology).
- **Healthcare Market:** More broadly, India's total healthcare market stood at US$372 B in FY2023 and is forecast to expand at ~12p.a., reaching roughly US$638 B by 2025. Telemedicine (which includes remote diagnostics) was about US$4.04 B in 2023 and is projected to reach ~US$15.1 B by 2030 (≈21% CAGR). These figures underscore the rapid expansion of India's health sector.





Growth Drivers:

- **Demographics and Disease Burden:** India's large, ageing population is seeing a surge in chronic conditions (cardiovascular disease, diabetes, cancers), driving demand for regular diagnostic testing. Life expectancy and disposable incomes are rising, leading people to invest more in health.
- **Increased Healthcare Spending:** Public and private spending on health is rising. The government has budgeted for higher health expenditure (target ~2.5–3% of GDP), while households spend an estimated ₹15+ lakh crore annually on health. Insurance penetration is improving (PM-JAY now covers ~500 million people), so more diagnostics are reimbursed.
- **Preventive Care Awareness:** There is growing awareness of preventive health check-ups. Many diagnostic chains now market health packages (annual check-ups, full-body profiles) to corporate and retail customers. CRISIL notes that high-margin preventive health packages may account for ~25% of diagnostics revenue going forward.

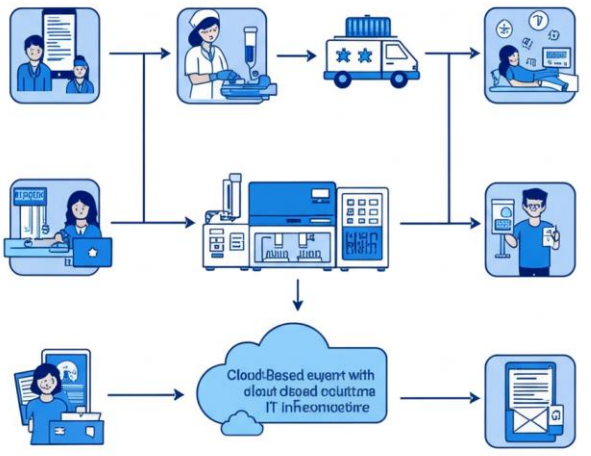


Note: The above graph represents a comparison of 4 of the constituents of the entire healthcare market.

- **Technological Advancements:** Adoption of digital technologies (LIS, mobile apps for bookings, tele-radiology, AI-powered analysis) is improving efficiency and access. For example, national labs are expanding home-sample collection and online reporting, reducing turnaround time. The move towards digital health records (Ayushman Bharat Digital Mission) will further integrate diagnostics data.
- **Government Initiatives:** The central government has launched programs to bolster healthcare infrastructure. Ayushman Bharat (National Health Protection Scheme + Health & Wellness Centres) has significantly expanded demand for diagnostics in rural/low-income segments. Production-Linked Incentive (PLI) schemes for medical devices encourage local manufacturing of equipment and reagents, potentially lowering costs. Regulatory support (e.g. easing of foreign investment limits in health, incentives for startups) also helps attract capital.
- **Private Investment & Consolidation:** As organized players expand their networks, they unlock economies of scale. Many chains are rapidly opening new labs and collection centers in Tier-2/3 cities. For instance, Dr. Lal PathLabs announced plans to open 15–20 new labs in FY2025 targeting smaller cities. CRISIL observes that established labs are moving into previously untapped Tier-2/3/4 markets to drive volume and utilization. Robust funding for digital health (~$7B in FY23) is also spurring innovation in diagnostics services.

Value Chain

- **Test Ordering and Booking:** Patients initiate tests through physicians or directly via lab tie-ups. Increasingly, online channels (apps, portals) and teleconsultation services allow direct booking of diagnostic packages.
- **Sample Collection:** This is often done at lab collection centers, hospitals, clinics, or at home. National chains now have extensive networks of collection centers or offer home-visit phlebotomists (for blood/urine samples). For example, Dr. Lal PathLabs is expanding regional reference labs (RRLs) in Mumbai and Bangalore and is building networks of collection centers and satellite labs to feed these hubs. Home-collected samples are then transported back to the lab.
- **Transport & Logistics:** Collected samples are transported (often by cold-chain couriers) to central labs. Turnaround time (TAT) is a key service metric; organized chains optimize routes and logistics for speed.



Source: This is an AI Generated Image

- **Laboratory Testing:** Central and regional labs perform the analyses. Pathology labs use automated analyzers for biochemistry, hematology, immunology, microbiology, and molecular tests (PCR, etc). Histopathology requires manual slide preparation and microscopy. Radiology centers perform imaging tests (X-ray, ultrasound, CT, MRI). Many chains have one or more Central Reference Labs with high-end equipment for specialized tests, and multiple smaller labs for routine work.
- **Data Analysis & Reporting:** Results are interpreted by qualified pathologists or radiologists. Reports are generated via Laboratory Information Systems (LIS) and delivered to the physician/patient. Digital platforms enable online report access via patient portals. Some labs offer AI-assisted tools (e.g. preliminary image analysis) to enhance accuracy and efficiency.
- **Technology & Support:** Equipment vendors (GE Healthcare, Siemens, Abbott, etc.) supply machines and reagents. Software providers offer LIS, tele-radiology networks, and reporting tools. Quality assurance (NABL/NABH accreditation) and regulatory compliance (ICMR guidelines, Radiation Safety (AERB) for imaging) are critical quality controls across the chain.
- **Customer Interface:** Ancillary services such as customer call centers, field sales, and pharma/insurance tie-ups also support the value chain. Increasingly, wellness brands bundle diagnostics into preventive health packages, and e-pharmacies cross-sell lab tests online.

Competitive Landscape

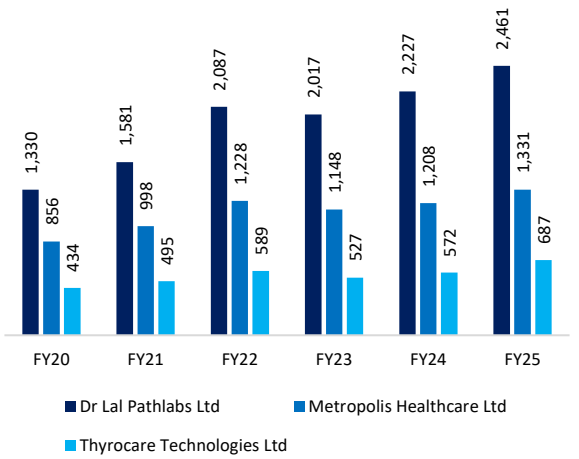
The Indian diagnostics sector is highly competitive and fragmented. Key organized players compete with numerous unorganized independent labs and hospital-based labs. Recent consolidation and investment trends include:

- **Market Structure:** Organized chain laboratories contribute ~15% of industry revenue, with the rest split between hospital labs (37%) and standalone labs (48%) The market share of the top few players is growing but remains modest relative to the overall pie.
- **Leading Players:**
  - Dr. Lal PathLabs – India's largest pathology chain, with pan-India presence and multiple reference labs.
  - Metropolis Healthcare – Second-largest pathology network, recently active in M&A and expansion.
  - SRL Diagnostics – Major network now owned by Fortis Healthcare.
  - Thyrocare – Large national chain specializing in preventive and home-based diagnostics (acquired by TCS).
  - Apollo Diagnostics – Backed by Apollo Hospitals, operates a wide network.
  - Others: Neuberg, Redcliffe Labs, Healthians, Pathkind, Thyron, etc., are growing regional/digital challengers.

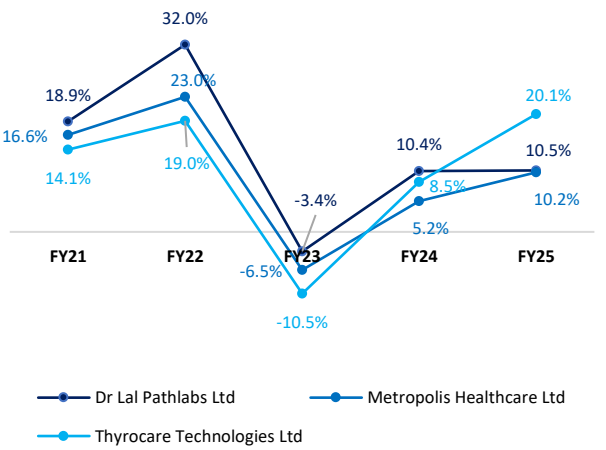
Competitive Landscape

- **Market Shares:** Industry reports note the organized sector has low penetration. For example, organized chains account for just 15% of revenues, highlighting opportunity for scale. Hospital labs and family-owned labs form the rest.
- **Recent M&A and Private Equity:** Private capital is active in diagnostics. Notable deals include: Metropolis' recent acquisitions of Core Diagnostics (oncology lab) and Dr. Ahuja's Pathology & Imaging Centre (DAPIC) to deepen North India presence; Thyrocare's purchase of Think Health Diagnostics (a Chennai-based at-home services provider) in Feb 2024; and Morgan Stanley's PE arm financing Sterling Accuris, which has made multiple deals (e.g. acquiring Gujarat & Maha Gujarat Path Labs in Apr 2025).
    - **PE/VC Interest:** Beyond these, funds like KKR, TPG, and global healthtech investors are investing in healthcare and diagnostics chains. Morgan Stanley PE invested ~$34M in Sterling Accuris in 2021, and Sterling has since acquired several regional labs.
    - **Consolidation Trends:** Organized players are pursuing acquisitions to enter new regions. For example, Metropolis acquired two Uttar Pradesh labs (in Agra and Lucknow) in 2025, while Sterling Accuris has consolidated Gujarat/Rajasthan labs. However, many smaller labs saw strong COVID-driven growth, so large acquisitions have been limited by owners' reluctance to sell at lower valuations.
- **Profitability:** Established chains typically report healthy margins (20–30% EBITDA) due to operating leverage. CRISIL notes that newer revenue streams (preventive health packages) are higher-margin and should help sustain operating margins even with promotional spending.
- **Competition:** Price competition is intense at the lower end. Unorganized local labs and hospital labs often undercut national chains on routine tests. Organized chains compete on scale, quality (accreditation), and digital convenience (online bookings, quick reporting).

Revenue Comparison (in Cr)



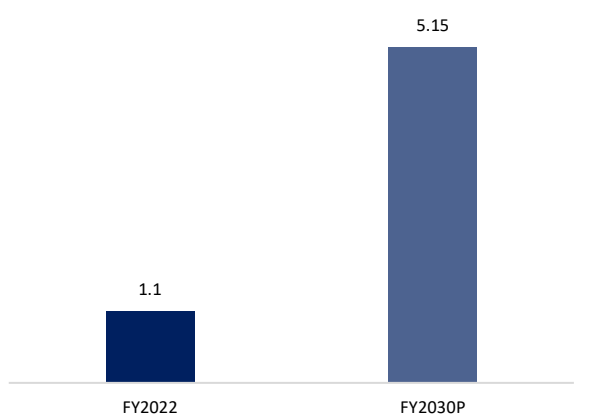
Revenue Growth Comparison



Key Trends

- **Telemedicine & Digital Diagnostics:** The pandemic catalyzed remote healthcare. Teleconsultations (e-Sanjeevani) and mobile health apps have become mainstream, with roughly 3.5% of global telehealth market share in 2023. This drives use of digital diagnostics (e.g. patients using home-monitoring devices, online test bookings). A major trend is teleradiology (scans done locally but interpreted by specialists remotely) and telepathology (digital slide sharing). The telemedicine services market in India is projected to grow ~5x by 2030.

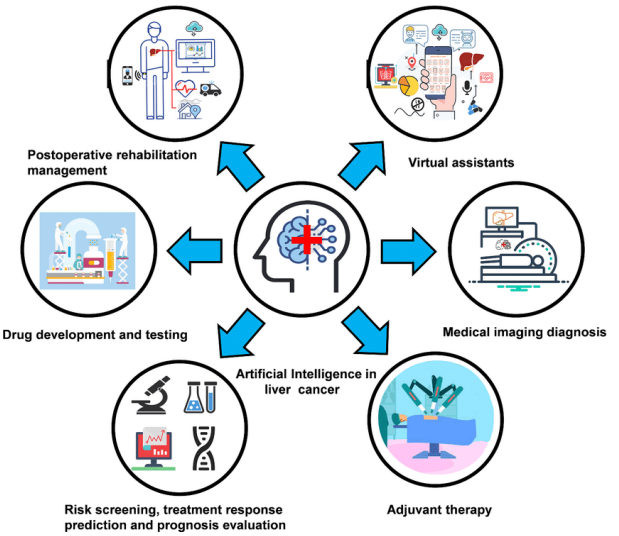
India Telemedicine Market (in USD Bn)



Key Trends

- **AI and Machine Learning:** AI-powered diagnostic tools are emerging rapidly. Radiology and pathology are early focus areas: companies offer AI algorithms to detect abnormalities in X-rays, CT scans, mammograms, and histopathology images. One report projects India's AI-driven diagnostics market to grow at ~23% CAGR (from a small base) through 2030. Adoption is accelerated by a shortage of specialists – for example, as India has only ~18 pathologists per million people (versus 65/million in the US). AI can augment human experts and help address that gap. Government initiatives like the Ayushman Bharat Digital Mission provide infrastructure (e.g. digital health IDs) to integrate AI tools. However, cost and data privacy remain challenges

- **Digital Reporting and Records:** Electronic report delivery is now the norm for large labs. Many chains integrate with hospital EHRs and insurance portals. The government's unified health records framework (Health ID) will further push standardization. Mobile apps for booking/tests, digital payments, and paperless records are increasingly common, improving patient convenience and operational efficiency.



Source: ResearchGate

- **Healthtech Startups and Digital Players:** Hundreds of healthcare startups are scaling up, especially in diagnostics. Venture funding in healthtech rebounded strongly in 2024 (>$1B). Startups are innovating in on-demand home labs, AI diagnostics, digital pathology, and e-pharmacy. For example, Redcliffe Labs (omnial channel diagnostic chain) claims 80+ labs and 2,000+ collection centers nationwide and has grown ~30% annually, far above industry average. AI pathology firms (e.g. SigTuple), remote ECG/monitoring (e.g. ThinkLabs), and on-demand lab marketplaces (e.g. Healthians) are all expanding. The broader digital health market in India was ~$7B in FY2023 (doubling since 2020), of which diagnostics-related solutions form a sizable part.

- **Preventive & Wellness Focus:** Bundled health packages (annual checkups, corporate health plans) are rapidly growing. Insurers and employers promote full-body scans, cardiac profiles, and NCD (non-communicable disease) panels. CRISIL notes that preventive packages (which yield higher per-patient revenue) are expected to account for ~25% of diagnostics revenue. This also ties into the fitness/wellness trend, with labs partnering with gyms and wellness ch

- **Home Sample Collection & Point-of-Care:** Major chains now offer home sample collection services in most urban and many semi-urban areas. Point-of-care testing (portable glucose/ketone meters, rapid kits) is rising, especially in remote areas. Coupled with teleconsultation, this creates new business models – e.g. "doctor at home" and mobile pathology vans.

- **Insurance and Pricing:** Ayushman Bharat and other insurance programs now cover a set list of diagnostic tests. Increased insurance penetration is expanding paid testing. However, government schemes often fix reimbursement rates, putting pressure on labs' pricing (especially for less complex tests). At the same time, NPPA (pricing authority) has historically controlled certain high-cost devices and drugs, indirectly affecting input costs for labs.

- **Start-ups: Healthians** – Offers at-home diagnostic test services with quick sample collection, testing, and digital report delivery. **Orange Health** – Provides on-demand lab tests at home with reports in 6 hours, operating through a hyperlocal logistics model.

Source: This is an AI Generated Image

Risks & Challenges

- **Regulatory and Quality Compliance:** Diagnostics involves multiple regulations (ICMR guidelines, AERB radiation licenses, state health licenses, etc.). Maintaining compliance across dozens of labs is complex. Quality assurance is a major challenge: out of ~300,000 labs in India, only a minority (~17,000) are NABL-accredited. In rural areas, many labs operate with minimal oversight; often diploma holders (not MD pathologists) sign off on results. This inconsistency risks diagnostic errors and can undermine patient trust. Ongoing audits and stricter enforcement are needed but raise operating costs.
- **Pricing Pressure:** Organized labs face competition from unorganized players and hospitals, which often price aggressively. Moreover, e-pharmacy and telehealth firms sometimes bundle low-cost routine tests into promotions. CRISIL notes that routine test revenues are stagnating in metro markets due to such competition. Government insurance schemes (PM-JAY, state schemes) set fixed lab rates, which can squeeze lab margins if not regularly updated. Any future price controls (akin to NPPA price caps on certain diagnostics consumables or implants) would add risk.
- **Talent Shortage:** India has a severe shortage of qualified specialists. As noted, only ~5,500 MD pathologists are available for the entire country(approx. 18 per million population, well below OECD norms). Radiologists and specialized techs (medical technologists, sonographers) are also in limited supply. This shortage can constrain growth and quality. It drives up salaries and may force labs to send work to a few big city centers (delaying turnaround).
- **Data Privacy and Cybersecurity:** Healthcare data (test results, imaging scans) are highly sensitive. India's Personal Data Protection Bill is still evolving, leaving a regulatory gap. High-profile cyberattacks globally (1.9 million attacks on healthcare in 2022) underscore the risk. Many labs are now digitized (LIS, cloud storage, mobile apps), so they must invest in IT security, encryption, and compliance. Privacy concerns may also limit sharing of data for AI development unless managed carefully.
- **Infrastructure & Access Inequality:** Despite growth, diagnostics infrastructure is uneven. Tier-2/3 towns and rural areas still have few high-quality labs. Issues like unreliable power supply or internet connectivity can hamper lab automation in remote centers. Also, the cost of testing is still a barrier for lower-income patients, limiting market expansion unless subsidized by insurance or public schemes.
- **COVID-19 Backdrop:** The pandemic initially boosted volumes (especially for PCR tests) and revenue, but also led to short-term overcapacity in some segments. As COVID testing demand normalizes, labs must fill capacity with elective and preventive business. Fluctuations in pandemic waves create uncertainty.

Future Outlook & Opportunities

- **Market Expansion:** Diagnostics is forecast to expand robustly (double by 2030). India remains under-tested compared to peers (tests per capita are much lower than in Brazil or Saudi Arabia), indicating huge untapped demand. As public and private health infrastructure reaches deeper into Tier-2/3 cities and rural areas, the volume of tests per capita is likely to rise significantly.
- **Regional Penetration:** Rural and semi-urban India represent the next frontier. Organized players are already investing heavily outside metros (e.g. Dr. Lal's new labs in UP, Sterling's labs in Gujarat/MP). Government initiatives (wellness centers) will funnel more patients into diagnostic networks. New models (mobile labs, tele-sample collection) can serve remote areas cost-effectively.
- **Technology & Innovation:** Advances in low-cost diagnostic kits and point-of-care devices (for diabetes, anemia, infectious diseases) will open new markets in primary care. AI tools will continue to improve efficiency (e.g. screening large volumes of imaging scans or cytology slides). Integration of genomics and personalized medicine could create niche opportunities (e.g. gene tests, oncology panels).
- **Medical Tourism:** India is a global hub for medical tourism. High-quality, affordable diagnostics (as part of international patient packages) will remain in demand. This drives demand for advanced tests (cancer markers, genetic tests) and top-tier imaging.
- **Investment & Consolidation:** Investors see diagnostics as an attractive, asset-light business with recurring revenue. Consolidation will likely continue, albeit at a measured pace (valuations remain high for quality assets). Expect more M&A: large chains acquiring regional labs, and possibly private capital entering (Firms like KKR or GIC have begun investing in healthcare platforms). Additionally, hospital chains may verticalize further by owning in-house labs (or partnering with labs) to capture margins.

Future Outlook & Opportunities

- **Policy Support:** Health is a key government priority (e.g. National Health Policy 2025 emphasis, increased health budgets). This should translate into continued support for expanding diagnostic access (screening programs, telehealth infrastructure). Relaxation of FDI norms or incentives for preventive health could further stimulate growth.
- **Entrepreneurial Opportunities:** Startups addressing gaps will find rich opportunities: digital pathology platforms; remote monitoring devices; home lab services; analytics for health data; and AI-enabled diagnostic decision-support. Venture capital and strategic investors are keen on such innovations, given the scale of the market.

Conclusion

India's healthcare and diagnostics sector stands at a pivotal juncture. With robust macro trends – rising health awareness, insurance expansion, digitalization and supportive policies – the market is set for sustained double-digit growth. Diagnostics, though currently under-penetrated, is rapidly modernizing through technology adoption, consolidation, and new service models (home testing, telemedicine). Key players and new entrants alike are expanding networks into underserved regions, spurred by strong demand fundamentals. Regulatory and operational challenges remain (workforce shortages, data privacy, pricing pressures), but these also create opportunities for innovation and differentiation (e.g. AI tools to mitigate workforce gaps, telehealth to bridge distance).

Strategically, stakeholders should emphasize quality (NABL accreditation, standardized protocols), technology integration (LIS, AI analytics), and patient-centric convenience (online bookings, home services). Public-private collaboration (leveraging government health schemes and digital ID systems) can further accelerate reach. As India's healthcare spending grows and the economy matures, diagnostics will become an even more integral part of medical care, making this sector a prime field for investment and innovation through the coming decade.

Sources & References

IBEF – Report on Indian Healthcare industry – February 2025
Bain&Company – Healthcare innovation in India report
Businesswire - Indian Diagnostics Laboratories Market report 2025
Economic Times
VCCIRCLE
Financial Express
Grandview Research
India AI Article – How digital pathology helps India enhance disease detection
Crisil
Digital Health news