CORPORATE FINANCE

OCTOBER INSIGHTS PAPER: DIAGNOSTIC IMAGING

Scanning the revolution – Insights into the rapidly evolving diagnostic imaging industry

Market Overview

Growing need for diagnostic imaging services in the UK amidst an aging population and rise in chronic diseases.

Consolidation opportunities ever-present in a maturing-market attracting interest from strategic operators and financial investors alike.

Significant backlog in diagnostics cases post-pandemic driving greater demand for flexible, short-term service providers.

Rapid developments in innovation, leveraging new technologies such as AI and machine learning driving efficiencies in diagnostic testing.

Introduction to Diagnostic Imaging

Discovering what is wrong with a person is vital to treating them – diagnostic activity forms part of 85% of all NHS clinical pathways.[1]

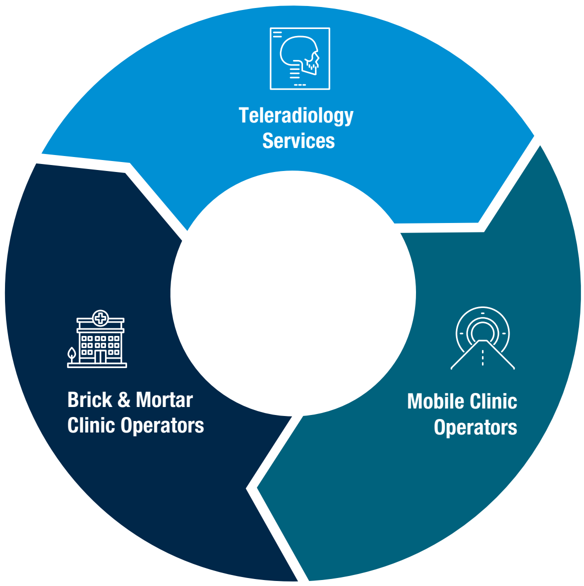
Prompt diagnosis can save lives, saves time and money, and avoids worsening patient outcomes. Diagnostics also have an important role to play in preventative health by improving early detection of illness.

A common first step of this process is a diagnostic scan, undertaken in clinics, either located in hospital, or increasingly part of corporate brick-and-mortar or mobile clinic chains. In public hospital settings, imaging equipment is often maintained, operated and managed by one of the same corporate providers, incentivised to fully utilise the equipment beyond the hospital's own needs.

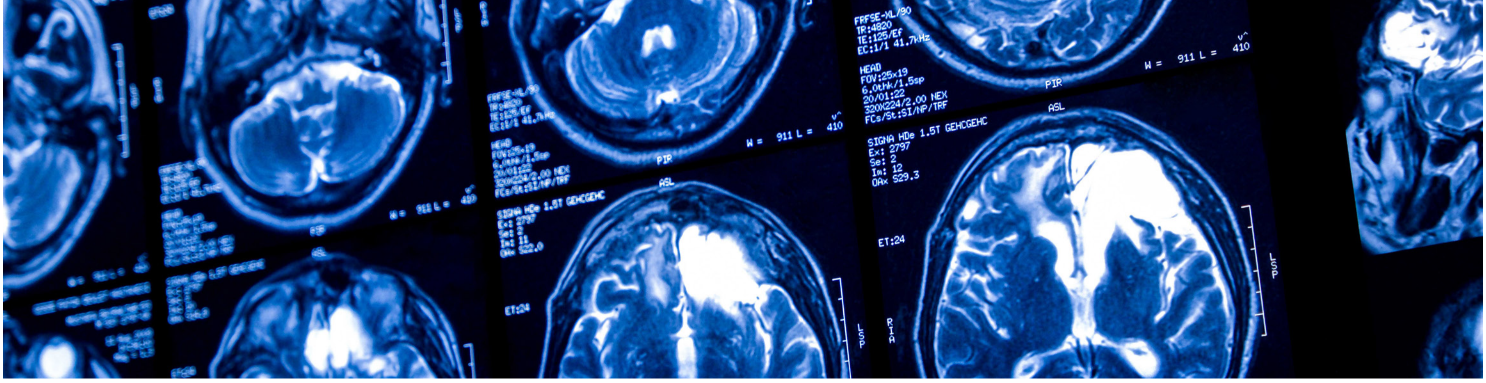
The extensive opportunity therein has allowed corporates across Europe to enter the sector and start consolidating clinics. To improve efficiency, these clinics often contract third-party teleradiology services to interpret images, quickly, accurately and around the clock – providing further private sector opportunities.

In this market paper we explore the drivers behind the growth in the sector, M&A trends underpinning consolidation activity and the expected impact that emerging technologies such as Artificial Intelligence (AI) will have on established operators.

For the purposes of this report, we have examined the sector across the following three sub-verticals:

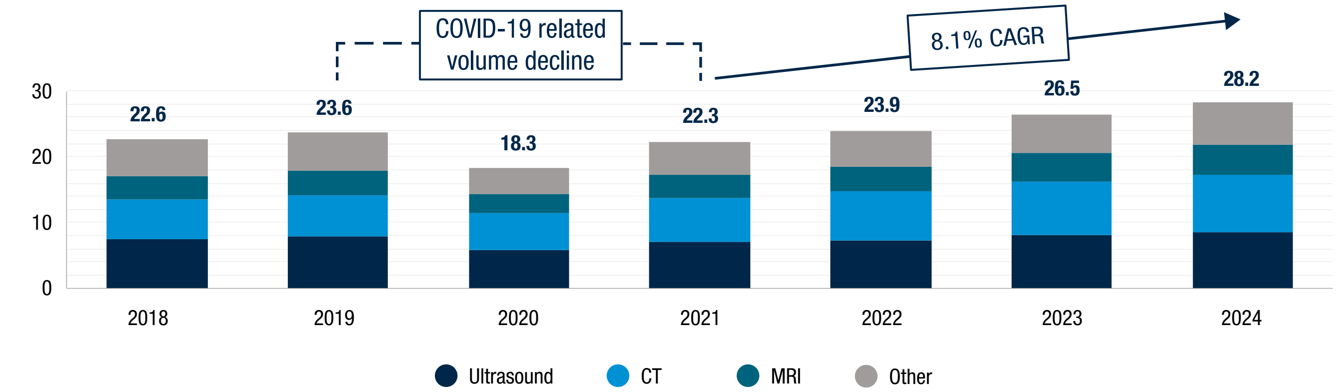


Source: [1]"Community Diagnostic Centres – Guidance for planning, design and implementation" – NHS England



Market Trends – NHS challenges continue to propel private sector growth and opportunity in the Diagnostic Imaging Sector

Fig. 1 - NHS-Paid Diagnostic tests, Performed by Year, FY2018-FY2024[1] in millions



The Diagnostic Imaging sector has exhibited impressive sustained growth coming out of the COVID-19 pandemic. Major trends impacting the sector include:

1. Diagnostic test waiting times remain a huge problem for the NHS

- According to NHS England's monthly diagnostic data, c.1.6 million people were waiting for diagnostic tests at the end of August 2024, a number that has soared over the past decade.[2]
- As of August 2024, 23.9% of the total patients waiting at month end had waited six weeks or more, a number significantly above the NHS' <1% target that's been missed since 2017.[2]
- The number of monthly diagnostic tests carried out by the NHS as of August 2024 has now comfortably surpassed pre-pandemic levels, on track to grow at a c.8.1% CAGR by the close of 2024. Despite these advances demand has grown even quicker, with further government investment and private sector funding currently needed to support the sector.
- The NHS is increasingly outsourcing healthcare services to private operators in a bid to reduce the number of patients waiting for planned operations.

2. Staff and equipment shortages are hindering efforts to reduce wait times

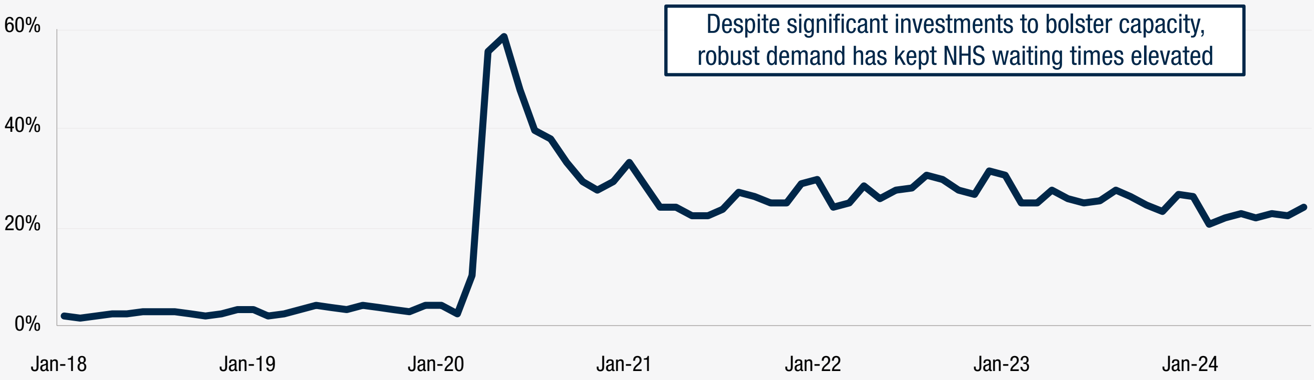
- Staff shortages across the NHS are impacting diagnostic services, as the number of people in the workforce has not kept pace with rising demand.
- A report by the Royal College of Radiologists found that the UK has a 31% shortfall in clinical radiologists, which will rise to 41% in five years without action.[3] This shortfall has an impact on staff morale (49% of clinical radiologists report feeling burnt out4), retention and patient safety.
- Access to equipment presents similar challenges – in 2020, the Kings Fund found that the UK ranked 25th out of 28 OECD countries for the number of CT, MRI and PET scanners per million population.[4]

3. Remediatory actions have been taken, but change will take time and sustained investment

- In 2021, the government announced £2.3 billion of funding to create 100 Community Diagnostic Centres (CDCs) across England – intended to tackle the waiting list and bring care closer to communities via additional NHS and private sector operated sites.[5]
- As of April 2024, there were 160 CDCs open, delivering over 7 million tests annually (though this has further increased pressure on the workforce).
- The 2024 spring budget further included an NHS productivity plan backed by £3.4 billion to invest in NHS technological and digital transformation, including upgrading diagnosti equipment.
- Despite significant investment to date, challenges persist and further sustained investment, especially in workforce and equipment, will be needed to continue meeting rising demand.

Source: [1]A&M estimate: reflects the annualisation of actual NHS activity reported until Aug-24, [2]"NHS Diagnostic Waiting Times and Activity Data – August 2024" – NHS England, [3]"State of the wait" – The Royal College of Radiologists, [4]"What are diagnostics, and how are diagnostics services performing" – The King's Fund, [5]"Diagnostic checks rolled out to 160 sites under CDC program" – GOV.UK,

Fig. 2 – Percentage of NHS Diagnostic Patients Waiting 6+ Weeks at Month End
Monthly, Jan-18 – Aug-24



Market Trends – The flexibility of mobile diagnostics and teleradiology solutions has appealed massively to Integrated Care Systems (ICSs), tasked with doing more with less

Major trends impacting the sector continued:

4. Mobile infrastructure is playing an increasingly critical role in combating the overwhelming demand

- Backlog challenges have shone a light on the need for collaborative networks and the ability to pool resources over wider areas, enabling services to be efficiently rendered when and where they are needed the most.
- Mobile infrastructure is helping address these needs by bringing services closer to patients. The flexibility offered by mobile healthcare units is enabling ICSs to share central diagnostic resources, leveraging facilities that can be easily moved around within the network and quickly installed at various locations.
- In addition to improving the patient experience, these less capital-intensive solutions offer greater ongoing flexibility, with the ability to evolve as needs change, and to be adapted in emergency situations.

5. Ongoing staffing challenges continue to catalyse the growth of teleradiology services

- Teleradiology services have helped to mitigate the staffing challenges plaguing the sector, enabling remote imaging specialists to review high-resolution images quickly, accurately and around the clock.
- The NHS England's introduction of a teleradiology framework arrangement for 2019-2022 and subsequent roll forward of said framework for 2023-2027 has created opportunity for both established and startup sector players alike.
- Total NHS spend on outsourcing to teleradiology companies over this period has grown from £192.3 million in 2019-20 to £368.9 million in 2022-23[1].
- The flexibility of teleradiology services have compounded the benefits of mobile diagnostic imaging infrastructure, allowing ICSs to easily transmit scans taken from remote and rural sites for immediate analysis and diagnosis.

Source: [1]"Radiology: Telemedicine" – TheyWorkForYou.com

Market Activity – Selected company highlights

Several newer market participants are helping to drive the pace of exciting change we are observing within the sector. Below we've highlighted a handful of players we've observed making notable waves within the industry, globally:

Selected company highlights – 1. Axon Diagnostics

UK-based Axon Diagnostics is driving advancement within the UK and global teleradiology and pathology markets – via its suite of services to support the NHS and they deliver cost-effective and efficient radiology and pathology reporting.

Axon provides a centralised diagnostic reporting hub for secure image sharing, allowing radiologists or pathologists to connect remotely (from anywhere), using its 100% lossless virtual desktop environment to securely access its centralised PACS based reporting platform. Complementary services such as reporting management, independent audit and teleradiology services can be seamlessly integrated as a packaged offering to support care providers in the delivery of timely and efficient services.

Axon recently won ***'Most Trusted Diagnostics Imaging Service Provider 2024'*** at the SME Greater London Enterprise Awards[2]. This follows a series of accolades including ***'Most Innovative Diagnostic Imaging Solutions Provider'*** at the 2023 Healthcare and Pharmaceutical Awards[3].

Selected company highlights – 2. DeepHealth

deephealth *part of* RadNet

US-based DeepHealth, founded in 2015, is a developer of an AI-based platform that assists radiologists in identifying diseases such as cancer more accurately and quickly – aiming to enhance clinical workflows and patient outcomes.

The company's core platform, DeepHealth OS, is a cloud-native system designed to streamline clinical and operational workflows in medical imaging. The platform leverages AI to support diagnostic decision-making, primarily in areas such as breast, lung, prostate, and brain health.

Most recently, DeepHealth ***acquired UK-based Kheiron Medical Technologies***[1]. Kheiron uses AI technology to transform cancer diagnostics, recently partnering with the NHS to conduct trials of their flagship AI platform, Mia, which demonstrated the ***potential to detect 12% more breast cancers*** while offering ***potential workload savings of up to 30%***[2].

Source: [1]https://femtechinsider.com/deephealth-acquires-kheiron/
[2]https://www.kheironmed.com/12-more-breast-cancers-detected-with-potential-workload-savings-of-30-in-the-uks-first-prospective-evaluation-of-breast-screening-ai/

Selected company highlights – 3. Hexarad

HEXARAD

backed by

MTIP Foresight

Hexarad, a pioneering UK-based teleradiology company, was founded in 2016 by a group of NHS consultant radiologists who saw the need for more efficient and scalable teleradiology solutions.

The company is also enhancing its AI capabilities through its collaboration with Newton's Tree, which allows hospitals to select and integrate AI tools seamlessly into their radiology processes. These developments are empowering radiologists and improving patient outcomes by addressing the increasing demand for radiology services.

Of note, Hexarad ***recently completed a €13m funding round led by Swiss-based growth equity firm MTIP***[1]. The investment, according to co-founder and chief executive Farzana Rahman, will be used to continue its international growth.

Selected company highlights – 4. Everlight Radiology

EverlightRadiology

backed by

Livingbridge

Everlight Radiology was founded in 2006 by Dr. Robert Clarke and Dr. James Osborne, two consultant radiologists, who identified a gap in radiology reporting services, particularly out-of-hours coverage.

They continue to lead in teleradiology services with exciting innovations such as their "Follow the Sun" model, which ensures 24/7 radiology reporting by leveraging their global network of over 800 consultant radiologists across the UK, Ireland, Australia, and New Zealand. This approach ***enables urgent reporting in as little as 15 minutes***[2], significantly improving diagnostic turnaround times.

Recently, the company was ***awarded Diagnostics Provider of the Year at the 2024 HealthInvestor awards***, where judges praised the exceptional stroke reporting service, in addition to its innovative model and high-quality service.

Selected company highlights – 5. behold.ai

behold.ai

UK-based behold.ai was founded in 2017 by ex-Medica Group founder Simon Rasalingham with the aim of building disruptive AI-powered radiology diagnostic tools to help address structural challenges in healthcare diagnostics globally.

Their flagship product, red dot®, is an AI-powered platform that assists radiologists in detecting conditions such as lung cancer and stroke from medical images like CT scans and X-rays. The platform is designed to speed up diagnosis by rapidly ruling out normal scans and prioritising urgent cases, significantly reducing backlogs in hospitals. In one example, ***the platform processed almost 3,800 images in 11 hours*** at Somerset NHS Foundation Trust[3].

In June this year, behold.ai ***won the Prix Galien International Award for the Best Digital Health Solution***, demonstrating the impact the platform could have in supporting healthcare systems and saving lives.

Source: [1]https://www.finsmes.com/2024/08/hexarad-raises-e13m-in-growth-funding.html
[2]https://www.everlightradiology.com/en-gb/teleradiology-services
[3]https://www.behold.ai/case-studies/somerset-nhs-foundation-trust-case-study/

M&A Activity – Key themes continue to underpin robust interest in the sector

We see several market themes underpinning robust M&A interest in diagnostic imaging sector operators across the full range of sub-verticals, throughout Europe and beyond.

M&A Theme 1: Private capital backed platforms continue to consolidate clinics across Europe

Significant private capital has flowed into diagnostic imaging clinic operators in recent years, attracted by the highly fragmented nature of the sector, ripe for consolidation. The high costs of sustaining equipment investment and recruiting and retaining talent in an undersupplied market has increasingly enticed independent players to join larger platforms to reap the benefits of scale vis-à-vis ability to invest in leading technology and professionalise recruitment.

Select European Private Capital Backed Platforms[1]

affidea / GBL	ergéa / DWS	evidia / EQT	Alliance Medical / icon infrastructure
7 clinic operators acquired across ***5 countries*** since Jan-23	***3 clinic operators*** acquired across ***2 countries*** since Jan-23	***4 clinic operators*** acquired across ***Germany*** since Jan-23	***1 clinic operator*** acquired in ***Italy*** since Jan-23

Source: [1]MergerMarket – reflects only publicly disclosed deals

M&A Activity – Key themes continue to underpin robust interest in the sector (cont'd)

M&A Theme 2: Diagnostic lab operators have been drawn to the sector's attractive fundamentals[1]

In addition to the large PE-backed platforms, large lab diagnostic players have also been attracted to the race for market consolidation. For instance, Unilabs, a leading diagnostics lab services provider backed by A.P. Moller, first entered the space in 2007 when it merged with Capio, a major imaging player. Horizontal integration has proved an attractive strategy for a range of players present in Europe, with Synlab (GER), Cerba Healthcare (FRA), Bianalisi (ITA), and Sonic Healthcare (AUS) all adopting similar diversification strategies.

Date	Target	Aquiror[2]	Deal rationale
Dec-23	ADUS RADIOLOGIE	Unilabs; A.P. MØLLER	The acquisition of ADUS Radiologie strengthens Unilabs' position as a leader in diagnostic imaging in German-speaking Switzerland where, combined with its acquisition of RIMED in 2022, it now provides services from 20+ locations.
Dec-23	Madonna della Bruna Poliambulatorio	BIANALISI; Charme Capital Partners	The acquisition of the Madonna della Bruna Radiology Center in Matera expanded Bianalisi's diversified diagnostic and healthcare services offering into the Basilicata region of Italy – where it has ambitions to continue growing via targeted acquisition.
Dec-23	SALUS	SYNLAB; CINVEN	The acquisition of SALUS strengthens Synlab's diagnostic imaging offering in Italy, with SALUS Medical Director, Filberto Dal Molin commenting *"We are thrilled to become part of a large international network such as the Synlab Group.* ***Thanks to this acquisition, we will be able to guarantee citizens even more complete and punctual services****, thus improving our offer"*[3]

M&A Theme 3: Large corporates are looking to own the entire patient pathway by combining imaging clinics with teleradiology[1]

Corporates with chain clinics are seeing opportunity to improve their return on capital by integrating teleradiology capabilities that allow them to manage the entire patient pathway. This operating model helps sustain higher margins than in the clinic model alone and provides the opportunity to offer combined package pricing with greater flexibility to client/patient needs.

Aquiror	Target	Date	Rationale
evidia	4ways tele-diagnostics, your way	Dec-23	Evidia's acquisition of 4Ways has significantly extended Evidia's teleradiology capabilities, while also providing an attractive entry into the large UK radiology market. Jan Hörnström, Head of International at Evidia, commented at the time of the deal: *"4ways has an impressive track record in servicing the UK market with high quality teleradiology services and we are excited to welcome them to our Group. Together we will bring further value to patients and healthcare professionals across the European market while* ***accelerating Evidia's digitally focused capabilities.****"*[4]
affidea	IMI	Dec-23	Affidea's acquisition of IMI in Portugal was key to adding significant teleradiology capabilities, enhancing its service offerings in Portugal and beyond. Former Group CEO, Giuseppe Recchi, commented at the time of the deal: *"IMI's acquisition in Portugal is an important milestone in Affidea's story of growth, proving our commitment to strengthen our leadership position in advanced diagnostic imaging and our interest in building a digital platform with additional services like teleradiology. Leveraging our core competencies, we will continue to invest in the healthcare industry, expand geographically and* ***create value through digital and data-driven adjacencies.****"*[5]

Source: [1]MergerMarket – reflects only publicly disclosed deals
[2]Logo of primary capital backer also included
[3]https://app.mergerlinks.com/transactions/2022-08-08-salus-srl-belluno-medica-srl/dealmakers
[4]https://4waysdiagnostics.co.uk/evidia-group-acquires-4ways/
[5]https://healthmanagement.org/c/healthmanagement/issuearticle/affidea-grows-in-portugal-and-expands-into-teleradiology

M&A Activity – Key themes continue to underpin robust interest in the sector (cont'd)

M&A Theme 4: Imaging services operators and sector software providers are making investments to accelerate digital capabilities – particularly around machine learning and AI[1]

As medical imaging technology continues to evolve at an accelerating pace, the combination of AI and medical imaging holds promise for improved precision and accuracy in medicine. We are already starting to see applications of AI used in the workflow, image acquisition and image reconstruction space – however challenges around regulatory approvals, system implementations, data security and human reluctance have tempered the pace of change. Nonetheless forward-thinking operators are steadily investing in AI-based capability as a means of enhancing diagnostic accuracy, streamlining workflows, and ultimately improving patient outcomes. Select transactions illustrating this theme have included:

RadNet aidence

In Jan-22, RadNet, a large U.S.-based provider of diagnostic imaging services, acquired Aidence, a Netherlands based company specialising in AI solutions for lung cancer detection. The acquisition is aligned with RadNet's ***strategy to enhance its AI-driven cancer screening capabilities,*** complimenting its existing AI capabilities in breast cancer detection via its prior acquisition of DeepHealth in Mar-20.

SIRONA Nines

In Feb-22, Sirona Medical, a U.S.-based company developing an "operating system" for digital radiology, acquired Nines Radiology, a U.S. based company that had developed FDA-cleared analysis and triage algorithms. Sirona notably did not acquire Nines' teleradiology business, focusing instead on the AI tools and talent to support its broader vision of transforming radiology IT infrastructure.

Value Indications – Select precedent transactions[1]

Date	Target	Aquiror	Deal metrics	M&A Theme
Sep-24	lumus imaging	Affinity Equity Partners	EV: A$965m EV/EBITDA: 17x	Private-Equity platform acquisition
Jun-24	Capitol Health Limited	integral diagnostics	EV: A$413m EV/EBITDA: 10x	Corporate merger
Feb-24	Alliance Medical	icon infrastructure	EV: £910m EV/EBITDA: 11.5x	Private-Equity platform acquisition
Apr-23	medica:	IK Partners	EV: £269m EV/EBITDA: 16.6x	Private-Equity platform acquisition (teleradiology)
Jan-23	PRP Diagnostic Imaging	IFM Investors UniSuper	EV: A$800m EV/EBITDA: 13x	Private-Equity consolidation
Jul-22	affidea	GBL Groupe Bruxelles Lambert	EV: c.$1.6bn EV/EBITDA: c.15x	Private-Equity platform acquisition

Source: [1]MergerMarket – reflects only publicly disclosed deals

Sector Outlook

The private sector will continue to play a major role addressing the supply/demand gap in the UK

With high waiting times holding unabatingly, government investment in CDCs will continue to represent a large opportunity for corporate clinic and teleradiology service providers alike.

Continued consolidation across European markets and merging of leading national platforms

Given the significant tailwinds propelling the private sector, we foresee continued consolidation across Europe, with corporates such as Affidea and Ergea reaping the cost synergies of internationalisation. Leading national platforms such as Simago in France and Bianalisi in Italy may also begin looking for merger opportunities internationally as their home markets fully consolidate.

Emerging technologies will help to address the supply/demand gap at a tempered pace

Advances in AI have yielded benefits to both onsite and teleradiologists alike, supporting improvements in triage management (i.e. prioritising the most urgent reports), report read times, and reporting accuracy.

Whilst investment in AI applications supporting the sector has flourished, the reality is that it will take these investments considerable time to have a transformative impact on the market.

Slow, expensive and relatively opaque regulatory approval processes, shortage of clinical validation studies, and concerns with data security and system integration all present near/mid-term challenges – however long-term potential remains undeniable.

How can A&M help you

We are a specialist mid-market M&A team supporting owner-managers, entrepreneurs and private equity clients to achieve their growth and value realisation goals. We work shoulder-to-shoulder with our clients to drive transactions from conception to closing, providing independent advice and a holistic approach.

Led by Al-Munther Sultan, A&M's Healthcare and Life Sciences M&A division is a fully resourced team of 11 dedicated individuals with extensive market and transaction knowledge. Supported by over 10,000 deal practitioners worldwide, we have a proven track record of executing sell-side and buy-side transactions.

Our wider international network of Healthcare and Life Sciences specialists comprises seasoned industry and advisory executives across the globe, able to deliver unparalleled access to the latest global market insights. We hold close relationships with companies across the industry, maintaining regular dialogue, providing access to key decision makers.

If you are interested in exploring value realisation options or would like to find out more about our team and services, please get in touch with our Healthcare and Life Sciences specialists.

About A&M

Alvarez & Marsal is a global consultancy who, for more than four decades, has set the standard for helping organisations tackle complex business issues, boost operating performance and maximise stakeholder value.

We bring operating and management expertise combined with top-tier consulting and specialised industry experience to meet the changing needs of companies and investors.

Why choose A&M

- Integrated full-service solutions
- Senior-led, dedicated specialist team
- Hands-on approach to value creation
- Strong operational heritage
- Free from audit-based conflicts

KEY CONTACTS

Al-Munther Sultan
Managing Director,
Head of HLS M&A

+44 7500 973 878
asultan@alvarezandmarsal.com

Claire Edwards
Director,
HLS M&A

+44 7885 536 958
claire.edwards@alvarezandmarsal.com

Matt Donald
Associate Director,
HLS M&A

+44 7385 238 047
mdonald@alvarezandmarsal.com

Priyesh Talati
Associate,
HLS M&A

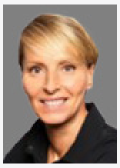
+44 7880 015 746
ptalati@alvarezandmarsal.com

KEY CONTACTS PARIS

Our Paris M&A team, led by Mark Wyatt, brings extensive experience and remains highly active advising operators across the French and broader European medical imaging markets

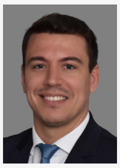
Mark Wyatt
Managing Director

+33 14 45 00 135
mwyatt@alvarezandmarsal.com



Sandra Crochemore
Associate Director

+33 14 45 00 135
scrochemore@alvarezandmarsal.com



Adrien Morel
Associate

+33 78 70 62 986
amorel@alvarezandmarsal.com

Disclaimer

The information contained in this document is of a general nature and has been obtained from publicly available information plus market insights. The information is not intended to address the specific circumstances of an individual or institution. There is no guarantee that the information is accurate at the date received by the recipient or that it will be accurate in the future. All parties should seek appropriate professional advice to analyse their particular situation before acting on any of the information contained herein.

ABOUT ALVAREZ & MARSAL

Companies, investors and government entities around the world turn to Alvarez & Marsal (A&M) for leadership, action and results. Privately held since its founding in 1983, A&M is a leading global professional services firm that provides advisory, business performance improvement and turnaround management services. When conventional approaches are not enough to create transformation and drive change, clients seek our deep expertise and ability to deliver practical solutions to their unique problems. With over 10,000 people providing services across six continents, we deliver tangible results for corporates, boards, private equity firms, law firms and government agencies facing complex challenges. Our senior leaders, and their teams, leverage A&M's restructuring heritage to help companies act decisively, catapult growth and accelerate results. We are experienced operators, world-class consultants, former regulators and industry authorities with a shared commitment to telling clients what's really needed for turning change into a strategic business asset, managing risk and unlocking value at every stage of growth.

To learn more, visit: AlvarezandMarsal.com

Follow A&M on:

453319-43103/November 24
9436_Stg05