The information and statistics set out in this section and other sections of this document were extracted from the report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the **[REDACTED]**. *The information from official government sources has not been independently verified by us, the Sole Sponsor, the* **[REDACTED]**, *the* **[REDACTED]**, *the* **[REDACTED]**, *the* **[REDACTED]**, *any of their respective directors and advisers, or any other persons or parties involved in the* **[REDACTED]**, *and no representation is given as to its accuracy.*

Sources of the Industry Information

We engaged Frost & Sullivan, an independent market research consultant, to conduct an analysis of, and to prepare a report on, the PRC medical imaging industry, the PRC medical imaging service market, the PRC third-party medical imaging center market, the PRC medical imaging equipment solutions market, and the PRC medical cloud imaging service market for use in this document, which was commissioned by us for a fee of RMB745,000. Frost & Sullivan prepared its report based on data released by government institutions and non-government organizations and its primary research.

Forecasts and assumptions included in the Frost & Sullivan Report are inherently uncertain because of events or combinations of events that cannot be reasonably foreseen, including, without limitation, the actions of government, individuals, third parties and competitors. Specific factors that could cause actual results to differ materially include, among other things, risks inherent in the PRC medical imaging industry, the PRC medical imaging service market, the PRC third-party medical imaging center market, the PRC medical imaging equipment solutions market, and the PRC medical cloud imaging service market, financing risks, labor risks, supply risks, regulatory risks and environmental concerns.

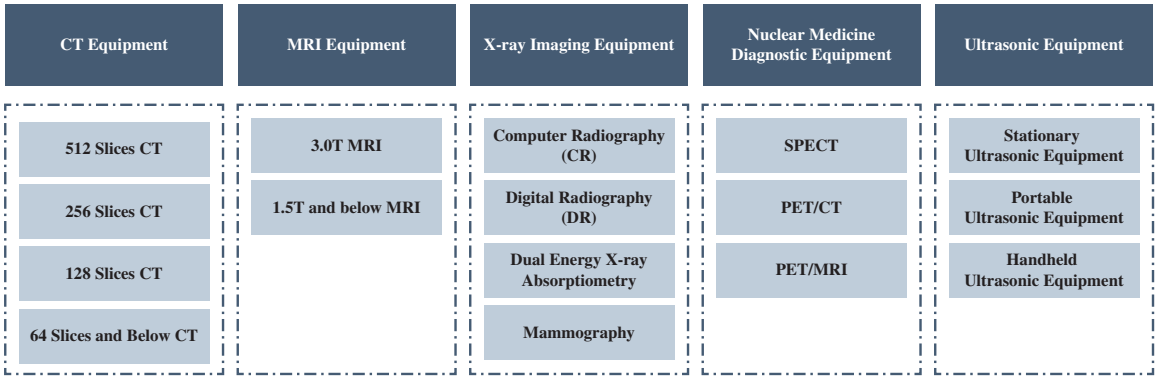
Except as otherwise noted, all of the data and forecasts contained in this section are derived from the Frost & Sullivan Report. Our Directors confirm that after taking reasonable care, there is no material adverse change in the overall market information since the date of the Frost & Sullivan Report that would materially qualify, contradict or have an impact on such information.

Overview of the PRC Medical Imaging Industry

Overview

Medical imaging technology refers to technology used to recreate images of the structure and density of tissues and organs of the human body through interaction between certain media, such as X-ray, electromagnetic field, ultrasonic wave, and the human body for diagnosticians to make judgments based on the information provided by such images and evaluate the health condition of the human body. Commonly used modern medical imaging technologies include computed tomography (CT), magnetic resonance imaging (MRI), X-ray imaging, ultrasound, and nuclear medicine, among other things. Medical imaging technology plays a central role in supporting clinical diagnosis and treatment by doctors due to its non-invasiveness, relative safety and ability to show visual images.

Medical images are collected through medical imaging equipment. The following table sets forth the common types and models of medical imaging equipment:



Source: the Frost & Sullivan Report

Each type of medical imaging equipment differs in terms of working principles, image characteristics, and clinical applications, and has varied advantages and disadvantages. The following table sets forth some major features of each commonly used type of medical imaging equipment:

low → High	X-ray Imaging	Ultrasound	Nuclear Medicine Diagnostic Equipment	CT	MRI
Working Principle	• X-rays use radiation to penetrate and project human body onto an x-ray film to create image	• Ultrasound beams pass through less-dense tissue and bounce off denser tissues to create image	• Radioactive material injected through IV and accumulates in tumor tissue to produce image	• CT combines x-rays and a computer to create 360-degree pictures of bones and internal organs	• MRI uses magnets to spin the hydrogen atoms and radio waves, the information generated is then transformed into image with computer
Image Characteristic	• Non-tomography	• Tomography; real-time image	• Tomography; biological metabolic activity depiction	• Tomography; grayscale image	• Tomography; multi-angle and multi-parameter image
Common Clinical Application	• Commonly used for disease screening covering various organs and bones	• Performs best on soft tissues, such as abdomen, heart, and breast	• Used for cancer diagnosis and metabolic dynamic examination	• Whole body examination including inner organ, brain, and bones	• Widely used on imaging soft tissue, such as central nervous system, breast, and joints
Cost					
Weakness	• High radiation; medium-quality image; non-3D information	• Motion artifacts are common	• Expensive; high radiation	• Low spatial resolution; high radiation	• Long scanning time; motion artifacts; uncomfortable environment
Start Time	• 1923	• 1939	• 1949	• 1972	• 1978

Source: the Frost & Sullivan Report

The price of major types of medical imaging service are regulated by provincial healthcare security administration. The price of medical imaging service at comparable levels does not have significant difference among different regions. The table below sets forth to the price range of different types of medical imaging services:

Medical Imaging Service	Price Range (RMB)
PET/CT	Partial Scan: 2,600-4,000
	Whole Body Scan: 4,000-10,000
CT<64 Slice (Single Source)	Partial Scan: 45-240
CT≥64 Slice (Single Source)	Partial Scan: 200-350
MRI <0.5T	Partial Scan: 150-450
MRI 0.5-1.5T	Partial Scan: 200-600
MRI >1.5T	Partial Scan: 450-800

Notes:

(1) The service fee for one single type of imaging equipment may have a large price range depending on different purpose, cardiovascular scan and functional scan can be much more expensive than other scan.

(2) The statistics were collected from governmental healthcare service catalogues of different provinces, the price for one single medical imaging service may vary from province to province.

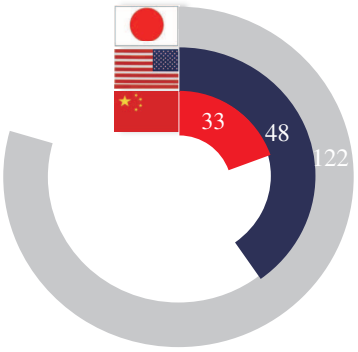
The price of major types of medical imaging service remain stable during the past years, apart from the price for PET-CT scanning in several provinces where PET-CT scanning was included to the provincial reimbursement list.

The Pain Points of the PRC Medical Imaging Industry

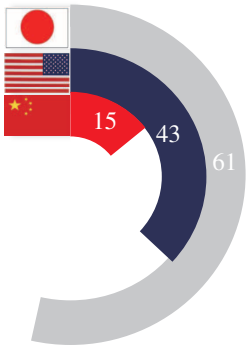
The PRC medical imaging industry has demonstrated the following pain points:

- *Lack of Medical Imaging Resources:*
  - Lack of medical imaging equipment. The following charts set forth the average CT, MRI and PET/CT units installed per million population in Japan, the United States and the PRC in 2023, respectively:

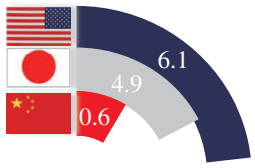
Per Million Population CT Installation



Per Million Population MRI Installation



Per Million Population PET/CT Installation



Source: OECD Statistics, Mid-to-Long Term National Planning of Medical Isotope (2021-2035), the Frost & Sullivan Report

Compared to developed countries, the number of the PRC's CT, MRI and PET/CT units installed is deficient. The average CT units installed per million population in Japan and the United States are 3.7 times and 1.5 times that of the PRC, respectively; the average MRI units installed per million population in Japan and the United States are 4.1 times and 2.9 times that of the PRC, respectively; and the average PET/CT units installed per million population in Japan and the United States are 8.2 times and 10.2 times that of the PRC, respectively.

As restricted by local fiscal expenditure requirements, it is difficult for medical institutions of different levels to install advanced medical imaging equipment within a short time frame that matches the local clinical needs.

- Lack of medical imaging professionals and undervalued training and education system. According to Frost & Sullivan, in 2021, there were only 170 medical imaging professionals per million population in the PRC, insufficient to meet the examination and diagnosis needs of patients. Moreover, the training and education of radiologists and radiographic technologists is undervalued in the PRC, and the overall training period for radiologists is relatively short, usually only taking five years. However, the overall training period for radiologists in countries with sound healthcare systems, such as the United States, the United Kingdom and France, typically ranges from 11 to 12 years. Radiologists in the PRC generally start their medical practice at medical institutions earlier than those in countries with a sound medical system after graduation, and hardly have access to postgraduate education opportunities in medical imaging, resulting in their weaker professional abilities overall.

- *Weak Imaging Service Capabilities of the Primary Healthcare System (which refers to hospitals and primary healthcare institutions of the county-level or below):*

  - Uneven distribution of medical imaging equipment. In the PRC, advanced medical imaging equipment is concentrated at top-level medical institutions. In general, the distribution of medical imaging equipment at medical institutions of the primary healthcare system is insufficient. Most medical institutions of the primary healthcare system fail to install, or only install a limited number of, advanced medical imaging equipment due to considerations relating to costs and revenue, making it difficult for them to satisfy the examination and diagnostic needs of patients.

  - Poor medical imaging diagnostic capabilities and lack of proficient radiologists and radiographic technologists. The overall number of proficient radiologists and radiographic technologists is lacking in the PRC, most of whom are concentrated at top-level medical institutions. The medical imaging capabilities of most radiologists and radiographic technologists in the primary healthcare system are limited. These radiologists mainly hold an associate degree or a bachelor's degree, whereas the radiographic technologists mainly hold a diploma of secondary education or an associate degree. Due to issues including incomplete knowledge system, insufficient experience, and lack of learning and self-elevating opportunities, it is difficult for them to satisfy the clinical diagnostic needs. In addition, the varying skill levels of such radiologists and radiographic technologists can lead to inconsistent image quality, so that medical institutions cannot mutually recognize and accept each other's imaging results. This can result in re-examination by patients if they turn to other hospitals, thereby causing a waste of medical resources.

  - Low utilization efficiency of medical imaging equipment. Although favorable policies are promoting the introduction of advanced imaging equipment in the primary healthcare system, advanced medical equipment is used at a low efficiency rate in some medical institutions of the primary healthcare system, restrained also by the skills, expertise and experience of the relevant radiologists and radiographic technologists in respect of medical imaging equipment, as well as the relevant clinicians' ability to select the accurate imaging examination procedures. In particular, the value of certain high-end advanced imaging equipment with complex functions has not been fully exploited. For example, some medical institutions of the primary healthcare system in the PRC are equipped with advanced CT capable of scanning the heart, but its actual utilization frequency for heart scanning is still relatively low.

- *Limited service capacity of large public hospitals.* Due to the poor imaging service capabilities and limited diagnostic and treatment capabilities, the primary healthcare system is unable to meet the needs of patients. Most patients have to visit large public hospitals for diagnosis and treatment, resulting in long-standing overcrowding at radiology departments in large public hospitals. The waiting time for making imaging examinations is quite long, making it difficult to implement effective patient sorting.

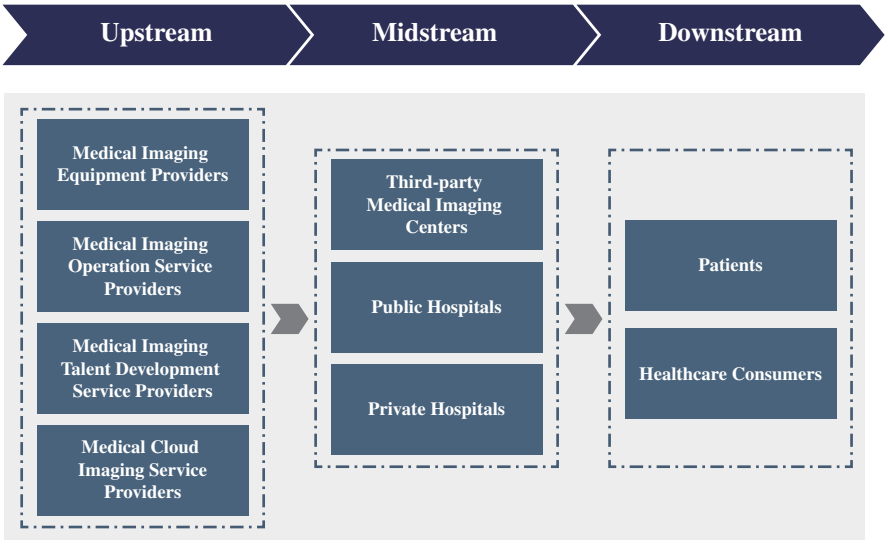
- *Lack of interaction between radiologists and clinicians.* Radiology is usually regarded as an auxiliary department of hospitals in the PRC, and the influence of radiologists is limited, which results in internal communication problems between clinicians and radiologists. Clinicians are also unable to master all imaging examination procedures that evolve rapidly in a timely manner. Meanwhile, radiologists may not be able to produce comprehensive imaging reports for treatment, bringing limited value to clinical decision-making and prescription. As a result, the value of medical imaging in examination and diagnosis in the healthcare system has not been fully realized.

- *Information barriers as a result of inadequate information technology capabilities of medical imaging.* In general, the information infrastructure of medical institutions in the PRC is relatively backward and their information technology capabilities are insufficient, especially in respect of imaging data storage, transmission, cloud processing, electronic film, remote diagnosis and data analysis. Medical images are usually stored in the local systems of medical institutions that are not able to be carried and transferred, which has formed isolated information islands and barriers, and information asymmetry among doctors and patients. Patients have to seek examination and diagnostic services repeatedly if visiting multiple hospitals, thereby increasing their personal medical costs and leading to a waste of medical imaging resources. It is necessary to gradually establish a standard information system that can accomplish the sharing and exchange of medical data among different medical institutions.

- *Lack of effective quality control over medical imaging.* Most radiology departments of medical institutions in the PRC have not implemented effective quality control over medical imaging, resulting in quality issues of medical imaging services. Most radiologists and radiographic technologists pay little attention to quality control, and most medical institutions have not designated special personnel to conduct quality control at their radiology departments, resulting in a lack of effective supervision and management of medical imaging services.

Composition of the Value Chain

In general, the ultimate end customers of the PRC medical imaging industry value chain are patients and healthcare consumers. The following diagram illustrates the typical participants in the upstream, midstream and downstream of the PRC medical imaging industry value chain:



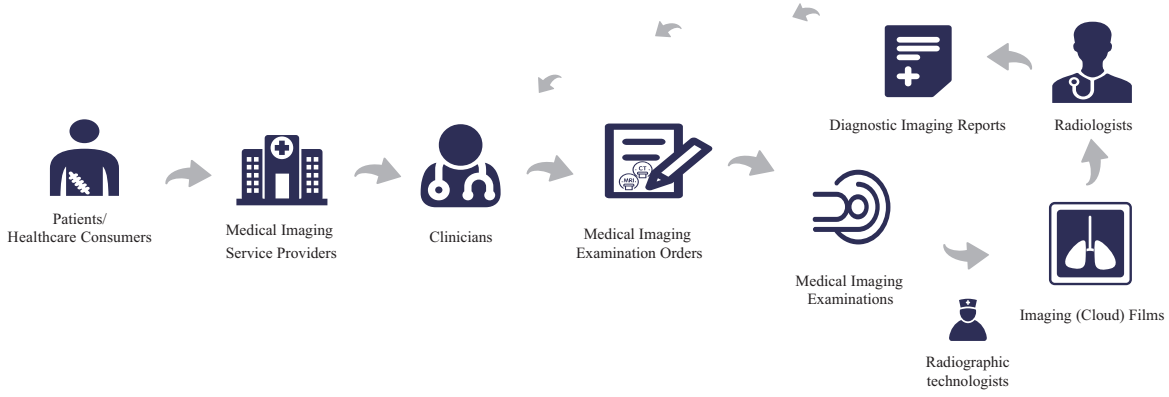
Source: the Frost & Sullivan Report

The PRC medical imaging industry value chain can be divided into three parts: (i) the upstream involves, among others, medical imaging equipment providers, medical imaging operation service providers, medical imaging talent development service providers, and medical cloud imaging service providers; (ii) the midstream involves medical institutions encompassing public and private hospitals, and third-party medical imaging centers; and (iii) the downstream involves patients and healthcare consumers who receive medical imaging services. In particular, the upstream players provide medical institutions at the midstream, especially public hospitals, with medical imaging operation services, medical imaging equipment solutions, and medical cloud imaging services in response to their needs.

The PRC Medical Imaging Service Market

Overview

Medical imaging center refers to a medical institution that provides patients and healthcare consumers with imaging examination and diagnostic services. Radiographic technologists use medical imaging equipment to obtain physical human information, which is analyzed by specialized radiologists, and the results of such analysis are then provided to clinicians to conduct a diagnosis. Such services are a commonly used and important method and tool for clinicians to diagnose and guide treatment in their medical practice and to determine in health check-ups whether the body is healthy. The following diagram illustrates the general procedures of medical imaging services as provided by a medical imaging center:



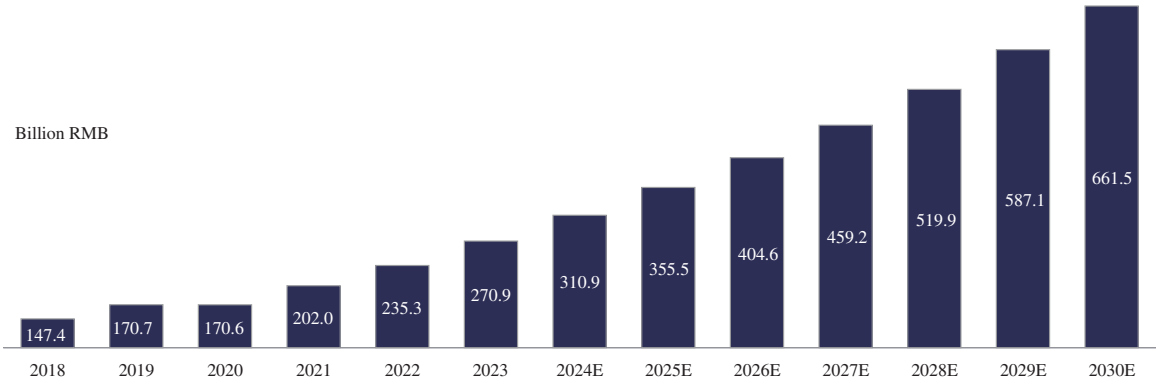
Source: the Frost & Sullivan Report

Market Size

According to Frost & Sullivan, the size of the PRC medical imaging service market by revenue grew from RMB147.4 billion in 2018 to RMB270.9 billion in 2023, at a CAGR of 12.9%, and is expected to reach RMB661.5 billion in 2030. The following chart sets forth the historical and forecast size of the PRC medical imaging service market by revenue from 2018 to 2030:

China Medical Imaging Service Market, 2018-2030E

Period	CAGR
2018-2023	12.9%
2023-2026E	14.3%
2026E-2030E	13.1%



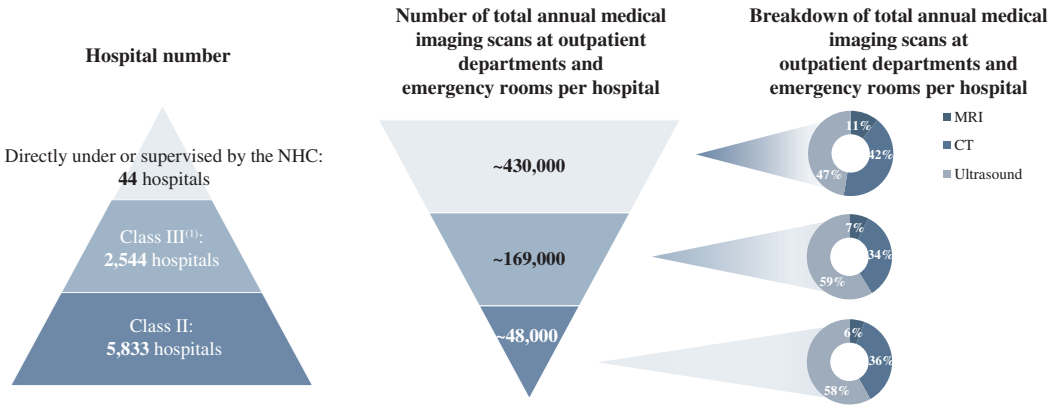
Source: the Frost & Sullivan Report

Note:

The size of the PRC medical imaging service market by revenue includes medical imaging service-related revenue contributed by hospitals, third-party medical imaging centers, and private health check-up centers.

The main participants in the PRC medical imaging service market are the radiology departments of hospitals, and third-party medical imaging centers, among others. The radiology departments of hospitals take the dominant position in terms of the coverage of patient traffic, mainly because patient traffic is concentrated at public medical institutions, and PRC basic medical insurance mainly covers diagnosis and treatment at public medical institutions.

The imaging service capabilities of the PRC primary healthcare system are insufficient, and the demand is largely unsatisfied. The following diagram illustrates the number of Class II and Class III hospitals and Class III Grade A hospitals directly under or supervised by the NHC of the PRC, as well as the number of total annual medical imaging scans via CT, MRI and ultrasound at outpatient departments and emergency rooms per hospital in 2020:



Source: *the Frost & Sullivan Report, the NHC and National Healthcare Service, Quality, and Safety Report (國家醫療服務與質量安全報告)*

Note:

(1) Excluding hospitals directly under or supervised by the NHC

According to Frost & Sullivan, Class III Grade A hospitals directly under or supervised by the NHC and Class III hospitals have contributed a disproportionately high level of medical imaging services within the healthcare system. In 2020, the number of total annual medical imaging scans (via CT, MRI and ultrasound) at outpatient departments and emergency rooms in Class III Grade A hospitals directly under or supervised by the NHC and Class III hospitals was around 430,000 per hospital and around 169,000 per hospital, respectively, which are significantly higher than that of Class II hospitals (around 48,000 per hospital). In comparison, in 2022, out of approximately 36.9 thousand hospitals in China's healthcare system, only about 3.5 thousands were Class III hospitals. In addition, the average salary of healthcare professionals in radiology department of public hospitals in first-tier cities is usually higher than that of healthcare professionals in radiology department of public hospitals in other cities, according to Frost & Sullivan.

Based on the foregoing, the resources of the PRC medical imaging service market are unevenly distributed, and governmental policies, such as Guiding Opinions on Promoting the construction of Hierarchical Diagnosis and Treatment System (《關於推進分級診療制度建設的指導意見》), can help the PRC medical imaging service market toward a more balanced distribution of resources. Medical imaging centers provide a remedy for the over-capacity issue that leads to extended waiting periods for diagnostic procedures in higher-ranking hospitals. Furthermore, these centers enhance the overall medical imaging proficiency by offering services to lower-ranking hospitals, thereby fostering the execution of a Hierarchical Diagnosis and Treatment System.

The PRC Third-party Medical Imaging Center Market

Overview

According to the Basic Standards for Medical Imaging Diagnostic Centers (Trial) (《醫學影像診斷中心基本標準(試行)》), third-party medical imaging center refers to an independently established medical institution that uses X-ray, CT, MRI, ultrasound and other modern imaging technologies to examine the human body and issue imaging diagnostic reports; and third-party medical imaging center excludes the radiology department of hospitals and other medical institutions.

Third-party medical imaging centers are generally operated based on the following two business models:

Source: *The Frost & Sullivan Report*

Under the first model, a third-party medical imaging center provides medical imaging services directly to patients and healthcare consumers. These services may include physical examinations, expert consultations, and other specialized imaging procedures. These centers are typically operated independently from hospitals and are not part of the hospital system. Patients pay directly for the services they receive at these centers. In general, third-party medical imaging centers provide a convenient and accessible option for patients who need high-quality imaging services outside of a hospital.

Under the second model, a third-party medical imaging center provides medical imaging operation services to hospitals and other medical institutions. This model is encouraged by the national government and covers the entire process from establishment to daily operation of medical imaging centers. Under this model, medical institutions, such as hospitals, purchase relevant services according to service agreements with third-party medical imaging centers (as medical imaging operation service providers), and such centers are typically located on the premises of the medical institutions. The operation services provided by third-party medical imaging centers can realize the sharing of equipment, medical professionals and data, which enables hospitals to improve efficiency and reduce costs.

Since public hospitals in the PRC have a dominant position in terms of patient traffic, third-party medical imaging centers under the second model often cooperate with public hospitals in a region to improve the medical imaging services offered by those hospitals while obtaining customers. Additionally, given the relatively poor capabilities of medical imaging services in China's primary healthcare system, there is significant market potential for third-party medical imaging centers to provide services to county-level or below hospitals and primary healthcare institutions.

Generally, the second model of medical imaging centers provides a collaborative approach to delivering high-quality medical imaging services to patients, with a focus on improving the efficiency and effectiveness of healthcare services.

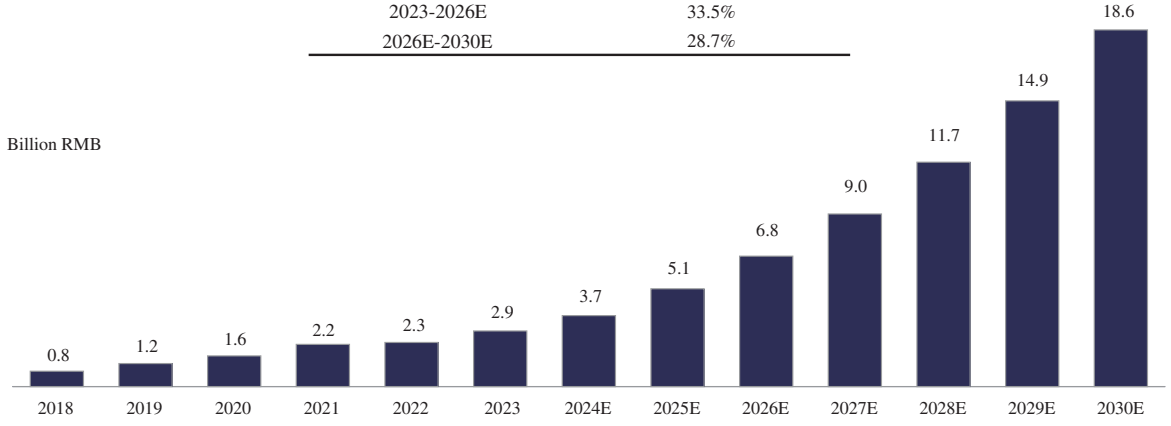
Market Size

The PRC third-party medical imaging center market emerged late and has a relatively short development period. This market is still at an early stage with a relatively small market size, indicating relatively large growth potential. According to Frost & Sullivan, the third-party medical imaging center market in the United States has a history of over 30 years with over 6,000 third-party medical imaging centers having been established. Compared to the United States, according to the latest information on the NHC official website as of the Latest Practicable Date, there were only 163 third-party medical imaging center licenses in effect in the PRC. These licenses belonged to approximately 80 companies. Even taking into consideration the instances of one license with multiple addresses, the number of third-party medical imaging centers in the PRC is far less than that in the United States.

According to Frost & Sullivan, the size of the PRC third-party medical imaging center market by revenue grew from RMB0.8 billion in 2018 to RMB2.9 billion in 2023, at a CAGR of 29.0%, and is expected to reach RMB18.6 billion in 2030, representing a CAGR of 30.7% from 2023 to 2030. The following chart sets forth the historical and forecast size of the PRC third-party medical imaging center market by revenue from 2018 to 2030:

China Third-party Medical Imaging Center Market, 2018-2030E

Period	CAGR
2018-2023	29.0%
2023-2026E	33.5%
2026E-2030E	28.7%



Source: Expert interview, the Frost & Sullivan Report

Competitive Landscape

According to Frost & Sullivan, in terms of fees paid by patients (comprising (i) fees paid by patients to third-party medical imaging centers, and (ii) imaging examination and diagnosis and related fees paid by patients to medical institutions served by medical imaging service providers through operational management and other service agreements) in 2023, we ranked first among all PRC third-party medical imaging center operators, and in terms of revenue generated from imaging center services in 2023, we ranked second among all PRC third-party medical imaging center operators. As illustrated in the following table, along with other ranking information of major players in this market:

			As of the Latest Practicable Date		
Company	Revenue in 2023	Fees paid by patients in 2023	Number of licenses	Number of county-level divisions covered	Number of imaging centers in operation
	(RMB in billion)				
Our Company[(1)]	0.6	1.5 to 1.6	32	61	101
Universal Medical Imaging (上海全景醫學影像科技股份有限公司)[(2)]	0.7 to 0.8	0.7 to 0.8	11	10	11
Gosun Medical Imagine (廣東高尚醫學影像科技集團有限公司)[(3)]	0.3 to 0.4	0.3 to 0.4	8	8	8
Imagingrace (上海聯影智慧醫療投資管理有限公司)[(4)]	0.2 to 0.3	0.2 to 0.3	11	10	11
Ping An Healthcare (平安好醫投資管理有限公司)[(5)] . .	0.2 to 0.3	0.2 to 0.3	11	11	11

Source: the NHC, the Frost & Sullivan Report

(1) For more information about the imaging centers of our Company, see "Business — Imaging Center Services."

(2) Universal Medical Imaging (上海全景醫學影像科技股份有限公司) was founded in Shanghai in 2011, which is a chain brand of professional medical institutions specializing in the diagnosis of difficult diseases. The cities covered by its medical imaging centers include Beijing, Tianjin, Shanghai, Nanjing, Xuzhou, Hangzhou, Guangzhou, Chongqing, and Chengdu. This company's total revenue in 2023 ranged from RMB0.7 billion to RMB0.8 billion.

(3) Gosun Medical Imagine (廣東高尚醫學影像科技集團有限公司) was founded in Guangdong province in 2016, which is a chain brand of for-profit medical imaging diagnosis centers. The cities covered by its medical imaging centers include Hefei, Xiamen, Wuhan, Guangzhou, Chengdu, Kunming, Shanghai and Xi'an. This company's total revenue in 2023 ranged from RMB0.3 billion to RMB0.4 billion.

(4) Imagingrace (上海聯影智慧醫療投資管理有限公司) was founded in 2016 in Shanghai, which is a chain brand of medical imaging diagnosis centers and an associate company of a listed company engaged in the manufacture and sales of medical imaging equipment. The cities covered by its medical imaging centers include Hengshui, Changchun, Xi'an, Chengdu, Hefei, Beijing, Wuhan, Zhongshan, Jingzhou, and Yinchuan. This company's total revenue in 2023 ranged from RMB0.2 billion to RMB0.3 billion.

(5) Ping An Healthcare (平安好醫投資管理有限公司) was founded in 2015, and its parent company is listed on both the Hong Kong Stock Exchange and the Shanghai Stock Exchange. The cities covered by its medical imaging centers include Shenyang, Xiamen, Nanchang, Qingdao, Wuhan, Xiangyang, Guangzhou, Xi'an, Chongqing, and Shanghai. Its total revenue in 2023, which included revenue generated from its imaging center operations business, medical clinic business and health check-up business, ranged from RMB0.3 billion to RMB0.4 billion. The revenue of Ping An Healthcare disclosed in the table only includes revenue generated from its imaging center operation business.

Except for our Company, other foregoing participants in the PRC third-party medical imaging center market mainly provide medical imaging services directly to patients or healthcare consumers. Our Company has also assisted medical institutions in providing medical imaging services to their patients, or to help them operate and manage their imaging centers, in order to improve their medical imaging service capabilities.

Due to stringent requirements over equipment, personnel, capital and technology as well as the strict registration process, according to the latest information on the NHC official website as of the Latest Practicable Date, there were only 163 third-party medical imaging center licenses in effect in the PRC. According to Frost & Sullivan, we ranked first in terms of number of third-party medical imaging center licenses held among all PRC third-party medical imaging center operators as of the same date. As of Latest Practicable Date, we ranked first in terms of number of county-level divisions covered by a medical imaging center network among all PRC third-party medical imaging center operators, according to the same source.

Entry Barriers

New entrants to the PRC third-party medical imaging center market are confronted with a number of barriers, including those relating to:

- *Market resource and license barrier.* Medical imaging centers rely heavily on various types of medical infrastructure and require certain capital investment in equipment. In addition, a medical imaging center must obtain a Practicing License in accordance with the Medical Institution Management Regulations before it starts business, which is the most basic qualification requirement for a medical imaging center. To configure large medical equipment and engage in imaging examination and diagnosis, medical imaging centers should also obtain operating qualifications such as Radiological Diagnosis and Treatment Licenses and Large Medical Equipment Configuration Licenses. In addition, there is a customer resource barrier in the third-party medical imaging center market.

Public hospitals generally tend to enter into long-term cooperation agreements with market participants with which they have long cooperated in the past. It is difficult for new market entrants to acquire public hospitals as customers.

- *Professional knowledge.* Medical diagnostic imaging services involve multi-disciplinary expertise and know-how, which requires long-term medical education and training of radiologists. Medical institutions of the primary healthcare system may also rely on imaging centers for their professional capabilities that are unavailable in-house. New market entrants may find it difficult to recruit professionals equipped with solid theoretical knowledge and rich practical experience.

- *Expert team.* An expert team is the key to combine theoretical medical imaging knowledge and diagnostic practice, and dissemination of clinical experience. A dedicated team of radiologists and radiographic technologists with solid theoretical knowledge and rich practical experience can greatly improve the efficiency and accuracy of imaging diagnostic results.

- *Operational capability.* A medical imaging center's operational capabilities are crucial to its long-term development. Existing market players have gained industry experience and knowledge, which put them in a better position to further explore the market and improve its operation and service capabilities.

Growth Drivers and Future Trends

According to Frost & Sullivan, the growth of the PRC third-party medical imaging center market has been, and is expected to continually be, driven by: (i) the PRC third-party medical imaging center market's great growth potential in light of the large population and low medical imaging equipment per million population in the PRC as well as the fact that there were only 163 third-party medical imaging center licenses in effect in the PRC according to the latest information on the NHC official website as of the Latest Practicable Date; (ii) increasing demand for diagnostic imaging mainly as a result of an aging population and the continual improvement of residents' health awareness in the PRC; (iii) the large room for improvement in medical imaging capabilities of the primary healthcare system given the overall scarcity and imbalance of medical imaging resources in the PRC, especially the inability of medical imaging equipment in the primary healthcare system to meet the needs of patients; (iv) unmet needs of high-end customers for quality medical imaging services, as large public hospitals are overloaded by patients, which has led to long waiting times for medical imaging examinations; (v) demand from medical institutions that lack advanced medical imaging equipment and radiologists to improve service

capabilities; (vi) continual support from the PRC government that encourages the development of third-party medical imaging centers; and (vii) diversified needs of patients that drive the penetration of quality medical imaging services to third-tier cities or below.

Meanwhile, this market has demonstrated the following trends:

- ***Growing market.*** Compared with the markets in the United States, Japan and other developed countries, the PRC third-party medical imaging center market has a short history with a low penetration rate, which therefore indicates a huge upside for growth. As residents' health awareness has improved in the PRC, the PRC third-party medical imaging center market is expected to continually and rapidly grow in the future. In particular, the government has issued a number of policies to continuously encourage the development of the third-party imaging center market, which is expected to achieve further growth.

- ***Diversified needs and services.*** As the PRC third-party medical imaging center market is an emerging market, a variety of participants are focusing on diversified needs and services accordingly. Many of the market participants are currently exploring several business models and tend to make progress in one or two particular sub-sectors.

- ***Specialist education.*** The innovation of medical imaging equipment and medical imaging technology will inevitably require a large number of talents who are familiar with various types of equipment and their operation. Meanwhile, talent development of radiologists is transitioning from an imaging equipment-oriented approach to a clinical specialty-oriented approach.

- ***Application of remote diagnostic imaging.*** Medical imaging centers are increasingly utilizing remote diagnostic imaging, which is expected to improve the imaging diagnostic capabilities of the primary healthcare system in remote areas and alleviate the uneven distribution of medical resources.

The PRC Medical Imaging Equipment Solutions Market

Overview

PRC medical imaging equipment solutions refer to solutions that are centered around equipment, for purposes of increasing the utilization efficiency of medical imaging equipment. Medical imaging equipment solutions mainly comprise:

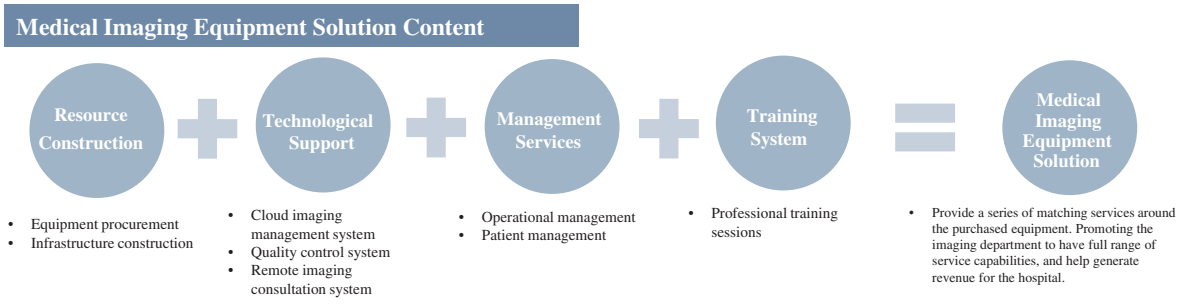
(i) resource construction, such as equipment selection and deployment, optimizing the instrument configuration based on frequency and duration of use, and scientific interior design of medical imaging centers to make the examination process more efficient and patient- and radiologist-friendly;

(ii) technological support, such as development of cloud imaging management systems that provide standardized and homogeneous data for imaging centers of different levels, remote consultation systems, and quality control systems;

(iii) management services, such as operational management to improve efficiency and profitability, and management of patients before and after diagnosis for patient/customer retention and enhancing awareness of preventive screening; and

(iv) training systems, such as professional training sessions to improve radiologists' skills and expertise, and providing communication opportunities among radiologists.

The details of medical imaging equipment solutions are set forth below:



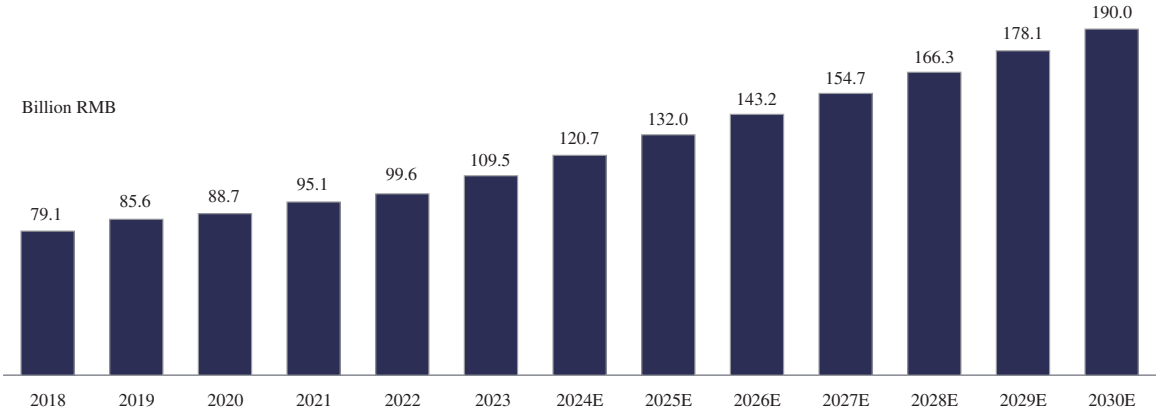
Source: the Frost & Sullivan Report

Market Size

According to Frost & Sullivan, the size of the PRC medical imaging equipment solutions market based on the types of equipment required for medical imaging centers as specified in the Basic Standards for Medical Imaging Diagnostic Centers (Trial) (《醫學影像診斷中心基本標準(試行)》) along with relevant medical imaging equipment management services grew from RMB79.1 billion in 2018 to RMB109.5 billion in 2023, at a CAGR of 6.7%, and is expected to reach RMB190.0 billion in 2030, representing a CAGR of 8.2% from 2023 to 2030. The following chart sets forth the historical and forecast size of the PRC medical imaging equipment solutions market by revenue from 2018 to 2030:

China Medical Imaging Solutions Market, 2018-2030E

Period	CAGR
2018-2023	6.7%
2023-2026E	9.4%
2026E-2030E	7.3%



Source: Expert interview, the Frost & Sullivan Report

Medical imaging equipment solutions not only cover resource construction, such as equipment sales, and maintenance, targeted at medical institutions that lack medical imaging equipment, but also include other types of services, such as technical support, training systems, cost control, performance management, and operational efficiency improvement. Medical imaging equipment solutions are able to help medical institutions improve their overall business and service capabilities.

Entry Barriers

New entrants to the PRC medical imaging equipment solutions market are confronted with a number of barriers, including those relating to:

- ***Operational experience.*** It is difficult for new market entrants without successful operational experience to gain the trust of medical institution customers.

- ***Technical expertise.*** The provision of medical imaging equipment solutions requires strong technical expertise in medical imaging. New market entrants usually possess limited technical expertise and know-how in this respect due to lack of practice.

- ***Coverage of medical institutions.*** Providers of medical imaging equipment solutions need to expand their coverage of medical institutions to grow business.

Growth Drivers and Future Trends

According to Frost & Sullivan, the PRC medical imaging equipment solutions market is driven by the following:

- ***Unequal distribution of medical resources and strong demand for procurement and efficient use of medical imaging equipment in the primary healthcare system.*** The uneven distribution of medical resources and their mismatch with diagnosis demands has resulted in patients' needs being poorly served. The primary healthcare system lacks medical imaging equipment, and is unable to meet the needs of patients. Medical imaging equipment solutions are able to help the primary healthcare system resolve such difficulty regarding equipment deployment, while offering services that help them improve capabilities to use medical imaging equipment, thereby comprehensively enhancing the service quality of the primary healthcare system.

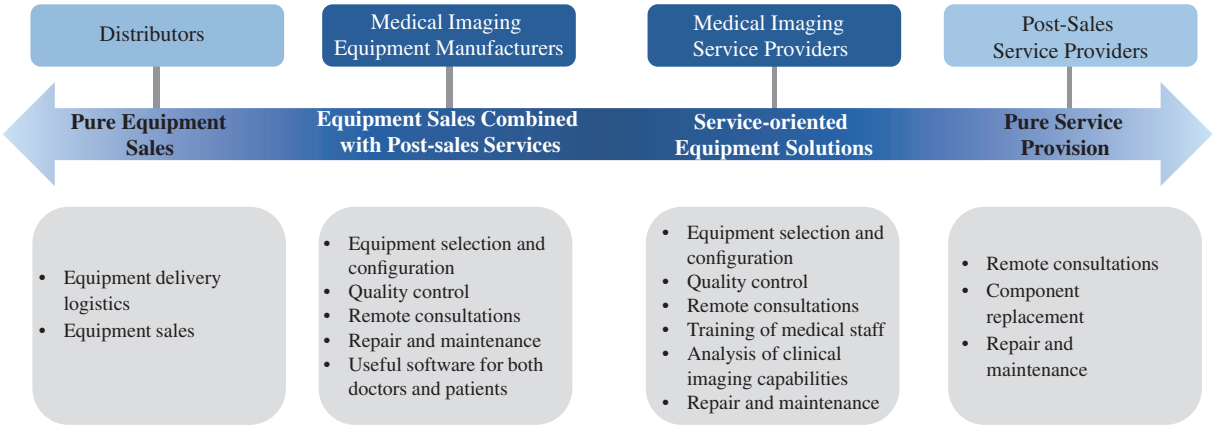
- ***Growing demand for the upgrade of medical imaging equipment.*** To improve the service quality and capabilities, medical institutions have a demand for upgrading medical imaging equipment. Medical imaging equipment solutions can be service-oriented, helping medical institutions upgrade medical imaging equipment, and maximize the use of the upgraded imaging equipment.

- ***Growing demand for comprehensive services centered around medical imaging equipment in the primary healthcare system.*** Government policies are driving the introduction of more advanced imaging equipment, technologies and professionals to the primary healthcare system. Comprehensive services centered around medical imaging equipment can provide all-inclusive training for radiologists and radiographic technologists on advanced imaging equipment, on the one hand, and can also supply successful operational management experience to improve the operations of radiology departments at medical institutions of the primary healthcare system, on the other hand.

In the meantime, the PRC medical imaging equipment solutions market has shown a trend away from pure imaging equipment procurement to procurement of imaging equipment-related services along with the imaging equipment.

Competitive Landscape

The PRC medical imaging equipment solutions market is highly fragmented. This market mainly includes several major types of players, such as medical imaging equipment distributors, medical imaging equipment manufacturers, medical imaging center service providers and equipment after-sales service providers. As hospitals are emphasizing more on services, medical imaging center service providers develop more customers through cooperation with upstream manufacturers. The following table sets forth some details of the major types of participants in the PRC medical imaging equipment solutions market:



Source: the Frost & Sullivan Report

The PRC Medical Cloud Imaging Service Market

Overview

PRC medical cloud imaging services are based on a cloud-based system for storing, sharing or processing medical images among medical institutions. Medical cloud imaging services facilitated various applications, including digital medical cloud imaging storage system, imaging data platform, regional imaging diagnostic platform, and imaging archiving and communication system.

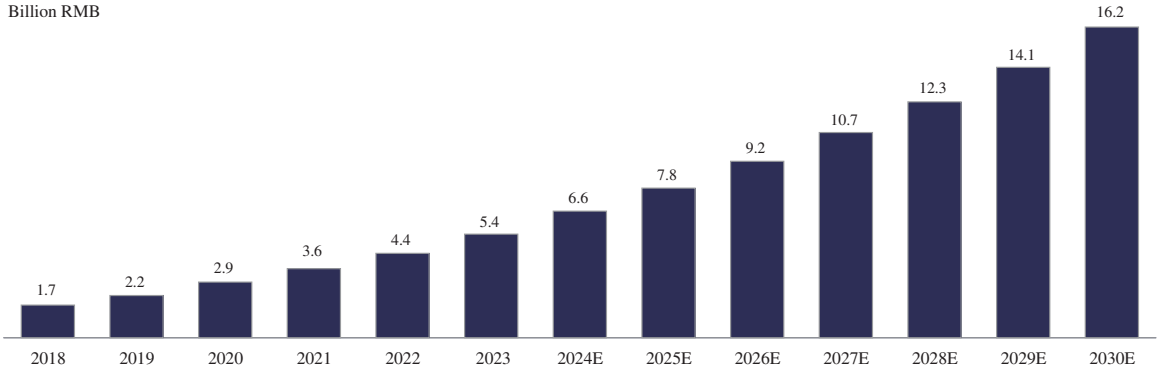
The informatization of medical imaging has been evolving rapidly during recent years, the development of which can be divided into three stages. The first stage of medical imaging informatization is the establishment of medical imaging infrastructure within each hospital. Currently, the medical imaging infrastructure established in Class III hospitals is typically much more comprehensive than that in medical institutions of the primary healthcare system. As the coverage of the medical imaging infrastructure continues to expand, the development of medical imaging informatization will reach its second stage, which is data-based interconnectivity among various medical institutions, allowing sharing of medical imaging information and dissemination of professional medical imaging knowledge among different hospitals. In the future, medical imaging informatization is expected to develop towards consolidation of AI and related technologies, which is expected to assist physicians in daily medical imaging diagnosis.

Market Size

The following chart sets forth the historical and forecast size of the PRC medical cloud imaging service market by revenue from 2018 to 2030:

China Medical Cloud Imaging Market, 2018-2030E

Period	CAGR
2018-2023	25.9%
2023-2026E	19.4%
2026E-2030E	15.3%



Source: Expert interview, the Frost & Sullivan Report

Medical cloud imaging services contribute to the reform of medical industry, enhance the collaboration of medical resources and assist the development of medical consortia/medical groups. Medical imaging big data can be combined with new technologies, such as cloud computing and AI, in application in the long term to fully explore the application value of medical imaging big data and promote intelligent examination and diagnosis of medical imaging. The following are the advantages of medical cloud imaging services from the perspectives of various medical imaging industry participants:

- ***For medical institutions***: Medical cloud imaging services can break down the information silo within hospitals and realize the sharing of imaging data within and among hospitals. They are also able to analyze and improve the overall operation of the radiology departments, strengthen the workload and performance management capabilities of the radiology departments, and help provide remote medical services.

- ***For patients***: Medical cloud imaging services are able to provide reasonable guidance and assistance in diagnosis and treatment, while allowing patients to efficiently obtain and understand imaging data and reports for subsequent diagnosis and treatment.

- ***For radiologists***: Medical cloud imaging services help radiologists improve efficiency and accuracy of diagnosis, reduce repetitive work, reduce misdiagnosis and missed diagnosis, and achieve remote diagnosis and professional communication.

- ***For radiographic technologists***: Medical cloud imaging services help radiographic technologists quickly complete scanning parameter settings, standardize and simplify radiographic technologist scanning operations, and ensure that radiographic technologists conduct high-quality examinations.

Entry Barriers

New entrants to the PRC medical cloud imaging service market are confronted with a number of barriers, including those relating to:

- ***Data accumulation.*** Medical cloud imaging services are based on enormous medical cloud imaging analyses, and it is difficult for new market entrants to accumulate a large amount of data within a short period of time.

- ***Informatization capabilities.*** The development of medical cloud imaging services has given rise to the need for the construction of an informatization infrastructure, which requires substantial resources, including the extensiveness of medical institution networks, as well as data analysis and processing capabilities.

- ***Reputation and customer loyalty.*** Factors such as consistent track record, industry reputation, client retention rate, service quality, regulatory compliance and confidentiality are crucial in the selection of medical cloud imaging service providers for cooperation.

Growth Drivers and Future Trends

According to Frost & Sullivan, factors such as the demand of medical institutions for informatization, increased awareness of health management of residents and changes in consumer behavior are expected to unleash the growth potential of the PRC medical cloud imaging service market. Along with the development and application of cloud computing and big data, as well as the implementation of relevant policies, higher requirements are expected to be put forward for the scientific, standardized, and refined management of hospital operations. Accordingly, this market has demonstrated the following trends:

- ***Digitized and intelligent process of medical imaging services.*** The medical imaging services provided to patients and the internal department management of hospitals are expected to be executed via one platform throughout the whole process, thereby avoiding switching between different platforms by patients and doctors.

- ***Data-driven services.*** The overall analysis of the radiology department's capabilities and the application of medical AI empowerment are based on the analysis and application of medical imaging big data. Technologies such as big data and AI can accelerate the intelligent and efficient dissemination of information. The integration of technology and medical data is expected to broaden the scope of medical imaging services beyond the limitations of time and space.

- ***Empowerment from new technologies.*** Based on the development of AI companies, AI has achieved good results in medical imaging on single disease diagnosis. It is expected that AI will be deeply integrated with PACS, aiming at the diagnosis of multiple diseases. AI will also play an important role in intelligent patient routing, and one-click scanning for radiographic technologists, among other aspects.

Competitive Landscape

According to Frost & Sullivan, the PRC medical cloud imaging service market is fragmented. The reasons are as follows:

- Medical imaging informatization is still in fast development stage in most hospitals in the PRC.

- The primary consideration for most hospitals to choose informatization construction is localized and personalized services based on concerns over timely response for technical assistance. Accordingly, there are many cloud imaging service providers that have entered this market, taking advantage of their geographical proximity to customers.

With the advancement of medical imaging data technology and related services, this market is expected to further grow, and address more complex issues present in the medical imaging service industry. Companies with regional influence and a national layout are expected to be more competitive in this market. While hospital resources are important, once the hardware has been fully and comprehensively deployed, outstanding medical cloud imaging services are expected to further enhance customer stickiness, and therefore to generate lasting revenue streams.