

Value
Partnerships

Edition #11

White paper

A new frontier in affordable and accessible cancer care

Partnerships for the life of your cancer center

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"It is my pleasure to announce our new frontier in cancer care. With benefits centered around our core principles of increasing quality and efficiency and reducing cost, we assist customers as partners in planning and developing high-quality cancer care services. Additionally, we develop and execute long-term strategies for oncology centers of excellence with innovative medical technology, digitally enabled integrated services, and clinical care support to provide a comprehensive solution for providers and patients globally."

Amy Hay, Vice President, Strategic Initiatives at Varian Advanced Oncology Solutions, a Siemens Healthineers Company

We pioneer breakthroughs in healthcare

Leading the way in an evolving field

Cancer care has evolved in recent years thanks to new pharmaceutical and technological innovations that expand precision medicine in cancer care.^{1,2} Interventional radiology continues to develop, offering more minimally invasive procedures to improve patient care.³ For example, low-dose computed tomography has demonstrated success in screening for lung cancer, proton therapy offers targeted doses of radiation directly to tumors in patients with breast or prostate cancer, and genomic monitoring of patient biomarkers allows providers to assess and adjust the effectiveness of radiation therapy.^{4,5,6}

However, providers and cancer centers still face a diverse range of challenges related to the rising cost of the high-tech care modalities, international staff shortages, and

limited funding for healthcare services.^{7,8} Although telehealth has helped to ease these burdens and altered patient expectations for their experience, many have had to postpone care during the COVID-19 pandemic.^{9,10,11,12} To address these challenges, healthcare organizations are seeking technology-enabled solutions and ways to streamline clinical and non-clinical workflows.

As patients demand the latest techniques and treatments at cancer centers, personalized care is key. The ability to understand genetic and genomic information has already led to improved patient outcomes.^{13,14} Similarly, individualized practices, such as immunotherapy and proteomics, assess patients on a cellular level for intelligent cancer care.¹⁵

Combining expertise in cancer care

Moving forward, cancer centers must be equipped with the right resources to plan, implement, and optimize the delivery of affordable healthcare. Industry partnerships offer oncologists an opportunity to develop, maintain, and expand their practice capabilities to become centers of excellence. Siemens Healthineers now offers a greatly expanded range of high-quality oncology technology and services that can help health systems adapt to new healthcare trends and compete in the market. These services include long-term strategies for center of excellence development, market growth, facility and program planning, technology management, digital expansion, and operations improvement.

We, Siemens Healthineers, are proud of our enduring engagements that leverage state-of-the-art diagnostics, precision treatment, and industry-leading expertise to increase access to advanced care. The recent union with Varian and ECG Management Consultants allows us to deliver these end-to-end solutions and tailor them to your organization's needs.

ECG Management Consultants has provided guidance for the planning and development of oncology centers of excellence over the past 50 years. As a world leader in radiation oncology, Varian, with its Advanced Oncology Solutions (AOS) offering, has extensive experience with implementing technological solutions and providing strategic and operational consulting. Siemens Healthineers brings a wealth of diagnostic technology, innovation capabilities, operational consulting, and project management to bear for our partners as part of this new venture. Together, we have united to transform healthcare and lives with unique oncology solutions.

The partnership examples described in the following pages provide an indication of the possibilities available to our customers.

Solutions in action

Comprehensive services and expertise to benefit your cancer center

With enduring performance-oriented partnerships, we can help your cancer center deliver breakthroughs in screening, diagnosis, and treatment while improving outcomes. Our unique combination of technology, oncology experience, and global reach helps your center achieve its immediate and long-term goals. We guide you through every step of your cancer center's journey, so you can guide your patients through theirs.

These partnerships help cancer centers plan for innovative strategies by evaluating opportunities specific to local markets. We also help cancer centers perform with access to the most advanced diagnostic and treatment technology, planning resources, staffing solutions, and expert implementation. Additionally, we provide cancer centers an opportunity to advance in the field with optimized resources and actionable insights to improve workflows, staff performance, and care pathways.

In the USA, we partnered CHRISTUS Health in Texas to enhance quality and operational efficiency. Another ongoing collaboration has expanded the radiology and biomed offerings at Queen's Hospital in the United Kingdom to include radiotherapy and oncology. Additionally, our partnership with Ayala Healthcare Holdings, Inc. (AC Health) in the Philippines will support the development, implementation, and eventual operations of the Healthway Cancer Care Center, which broke ground in July 2021 and is expected to open in 2023.

Co-creation with an expert partner

With strategic planning, services, and offerings across the continuum of cancer care, we offer organizations access to a unique portfolio of solutions and services. Our key benefits include:



Creating a road map to keep your center competitive through differentiation and excellence



Accessing global strength, oncology expertise, and trusted guidance to help you develop best practices



Expanding your center's range of services to meet market and patient demand



Delivering high-quality care in the diagnosis and treatment of patients with cancer



Using a single point of contact for tailored solutions, turnkey programs, and scalable services



Expanding your capacity with clinical services such as remote medical physics, treatment planning and quality assurance



Optimizing procedures, workflows, and tumor-site programmatic performance



Enhancing clinical outcomes and patient experience through the development of personalized care pathways



Improving staff recruitment, retention, and satisfaction



Increasing fiscal predictability and performance with flexible financing solutions



Integrating laboratory, imaging, and treatment technology driven by digital breakthroughs



Engaging in collaborative research for continued advancement of care



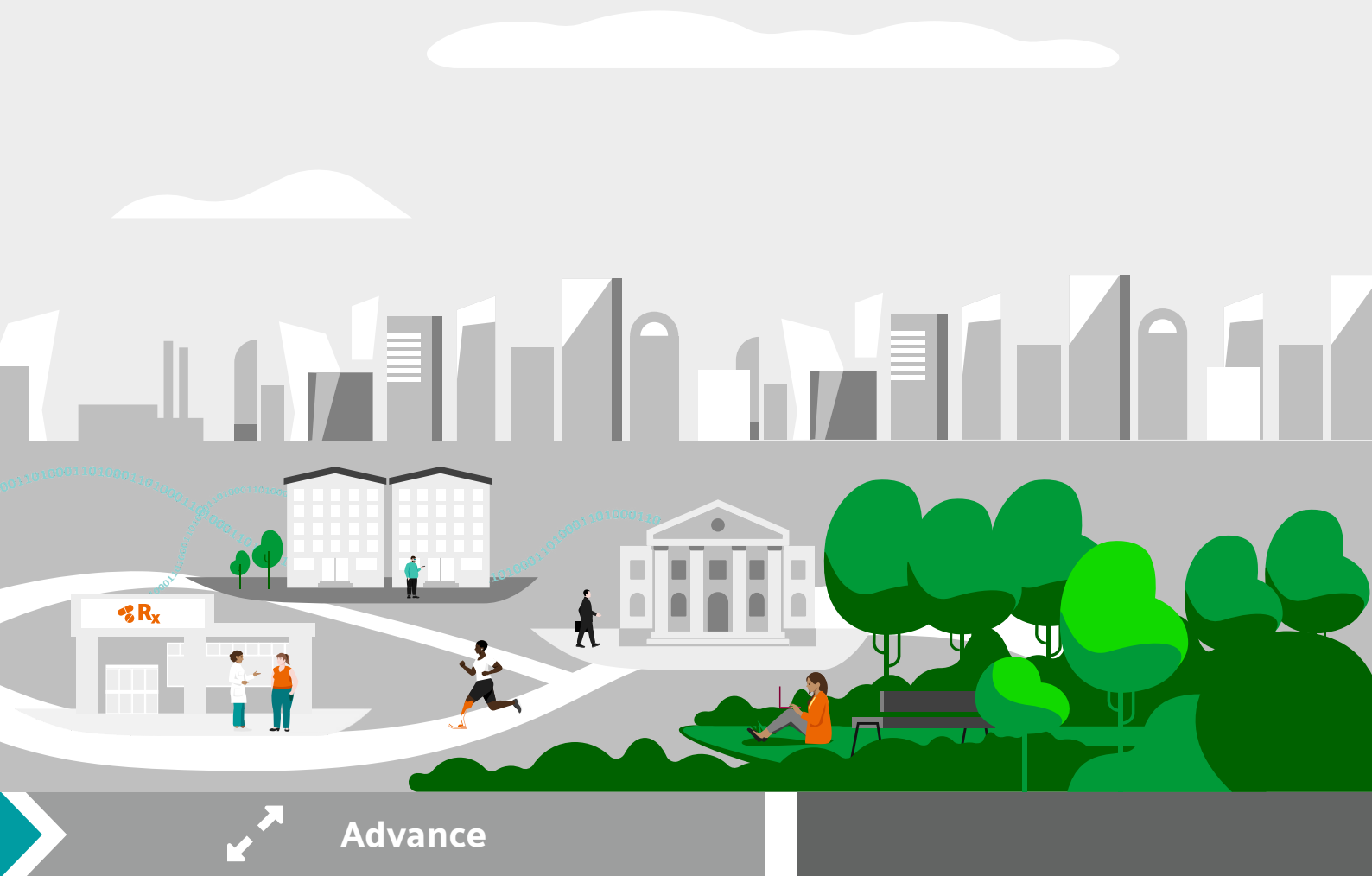
Plan

- Strategic and operational planning
- Center of Excellence development
- Market assessment and reimbursement
- Best practice identification
- Hospital design, organization, and layout



Perform

- Oncology operational expertise and management
- Clinical concept and program implementation
- Clinical services | remote and on-site
- Patient pathways and clinical decision support
- Diagnostic and radiation technology leadership



- Advance innovation
- Quality assurance and improvement
- Workflow efficiency and optimization
- Education and training
- Financial models

Our customers rely on our strategic, clinical, and operational expertise to adapt to diverse markets, patient populations, and regulatory landscapes. We also facilitate improvements in day-to-day operations to optimize efficiency and workflows, identify opportunities for professional education, balance staffing with demand, and minimize gaps in care based on current or anticipated oncology needs. We are ready to support your practice as an expert partner – and because we operate within this partnership model, **your success is our success.**

Success Stories

CHRISTUS Health, USA

Large-scale optimization of a cancer care network



Christus Health – Shreveport-Bossier Health System

Institution(s): CHRISTUS Health

- St. Vincent Regional Cancer Center
- St. Frances Cabrini Hospital
- Spohn Health System
- Shreveport-Bossier Health System
- Ochsner St. Patrick Hospital
- St. Michael Hospital
- Savoy Medical Center

Public/private: Private

Duration: 2021-2028 (7 years)

Summary

CHRISTUS Health is a not-for-profit health system with locations in four states in the USA. Six comprehensive cancer centers treat more than 2,000 patients annually. Our partnership has helped the health system develop a higher-quality, more efficient network. **This 7-year Advanced Oncology Solution partnership from Varian, a Siemens Healthineers Company,** has accelerated the adoption of tech-enabled radiation-oncology services. These include an integrated oncology network platform for secure collaboration between oncologists across the health system, paperless forms to optimize the electronic health record, cloud-based remote and on-site treatment planning, and coding and compliance review services.

This end-to-end oncology engagement has offered CHRISTUS Health ongoing support and maintenance on system technology at seven radiation oncology centers across Texas, Louisiana, and New Mexico. It also fostered the development of hybrid remote and onsite treatment planning and quality assurance program, while working directly with local providers to ensure excellence in patient care. Similarly, the deployment of cloud-based services has increased efficiencies and reduced costs across the entire network.



St. Frances Cabrini Hospital



St. Michael Hospital



St. Vincent Regional Cancer Center

“This partnership offers our patients access to more advanced technology and the clinical benefits from centralized management of our oncology network.”

David Benner, PharmD, MS, MHA, FACHE, Chief Ancillary Officer, CHRISTUS Health

Key challenges:

- Limited standardization and clinical communication
- Under-utilization of clinical and financial resources
- Competitive market for radiation oncology medical physicists and dosimetrists
- Equipment upgrades and replacements needed

Key services:

- Fostered the adoption of new technologies
- Optimized clinical workflows and operations with remote and onsite medical physics and dosimetry
- Installed and commissioned six new linear accelerators, including the TrueBeam and Edge radiotherapy systems
- Implemented a cloud-based oncology network with Eclipse treatment planning software

Key results:

- Decreased costs and overhead
- Increased quality and efficiency
- Standardized clinical operations across the network
- Achieved operational and financial stability

Queen's Hospital, UK

Decreasing operational complexity with one technology partner



Queen's Hospital

Health Trust: Barking, Havering, and Redbridge University Hospitals NHS Trust

Public/private: Public

Duration: 2006-2039 (33 years)

Summary

Queen's Hospital first entered into a **Value Partnership with Siemens Healthineers** in 2006, including medical technology and onsite support for radiology and biomedical equipment, as well as telephony services. In 2017, the hospital entered into a major agreement to expand this partnership by including oncology services and radiotherapy devices. Although the hospital has experienced financial challenges, one of the benefits of this ongoing engagement has been the ability to spread out costs over time. Queen's Hospital now has a financial model that forecasts capital and maintenance costs to enable informed long-term planning and ensure the best value for the money.

The current end-to-end oncology engagement provides medical technology, including two Halcyon LINACs, a TrueBeam Edge, and immobilization and dosimetry equipment. Siemens Healthineers also provides proactive maintenance and repair services for this technology. The planned transition to cloud-based services will simplify the process for required updates and upgrades, while scalable information technology (IT) solutions will allow the system to increase or decrease the number of user licenses. Moving forward, Queen's Hospital will continue focusing on improving clinical workflows and cancer pathways with continuous access to the latest technology and innovations.

“Our partnership with Siemens Healthineers allowed us to spread out the costs over time, and the on-site support for equipment has been a major benefit.”

Ghirmay Kidane, Deputy Head and Operation Lead of Radiotherapy Physics

Key challenges:

- Obtaining funding approval
- Limited financial resources
- Complicated technology infrastructure requiring labor-intensive management

Key services:

- Supply of imaging and radiation oncology technology with full equipment lifecycle maintenance
- Installation and onsite support for two Halcyon Linacs and a TrueBeam Edge system
- Provided strategic operational and financial planning
- Planned delivery of a cloud-based solution to digitalize the radiotherapy department and remove the complexity of a physical IT environment

Key results:

- Improved cancer care pathways and workflows
- Reduced complexity due to a holistic solution provided by one partner
- Better operational management and performance
- Cloud solution will simplify the management of updates and upgrades

AC Health, Philippines

Developing the country's first cancer center of excellence



Healthway Cancer Care Center

Institution(s): Healthway Cancer Care Center

Public/private: Private

Duration: 2020-2028

(3 years pre-operations and 5 years operations)

Summary

AC Health recently entered a **8-year Advanced Oncology Solution partnership with Varian, a Siemens Healthineers Company**, to build the first stand-alone comprehensive cancer care center in the Philippines. As part of this partnership, we have become immersed into the daily workflows at AC Health from diagnosis to treatment. Additionally, we are providing long-term clinical and operational guidance to achieve the common goal of providing quality and affordable comprehensive cancer care in the Philippines.¹⁶

AC Health currently has a network of primary and specialty care clinics and recently acquired four community-based hospitals. Our multidisciplinary partnership will leverage the extensive AC Health footprint and its provider networks to create an integrated cancer program with

services across the entire continuum from screening, prevention, and care delivery all the way to survivorship. The Healthway Cancer Care Center broke ground in July 2021 and is anticipated to open for patient care in 2023.

Our partnership is focused on developing and implementing a center of excellence road map with local providers to expand access and provide high quality care. We have also leveraged our operational knowledge and providers from the American Oncology Institute (AOI) in India for clinical and operational planning. The center will have a full range of capabilities, with the latest diagnostic, imaging and radiation oncology technology, treatment planning services.

“We are delighted to have a partner in helping us bring affordable, high quality cancer care services to more Filipinos. By combining local knowledge and care with operational and clinical expertise, we have a unique opportunity to redefine cancer care in the Philippines.”

Paolo F. Borromeo, AC Health President and CEO

Key challenges:

- No comprehensive cancer care in the country
- Lack of access to healthcare services
- Limited sub-specialization in clinical providers

Key services:


- Cancer center of excellence development, implementation, and operations
- Remote and on-site clinical care support with medical physics, treatment planning, and decision support
- Establish and implement best practices for oncology
- Foster recruitment of oncology care providers
- Organization of primary care checkpoints throughout the community for screening and survivorship

Key results:

- Introduce the first cancer specialty hospital in the Philippines
- Increase access to care powered by state-of-the-art technology
- Standardize daily operational and clinical workflows
- Increase staff and improved training


Read more from our series on Value Partnerships and how to create more value for healthcare providers:

Technology management – Healthcare enterprises continually strive to simultaneously optimize their operations, expand their capabilities, and advance innovation. Therefore, one of the most critical focus areas is the holistic management of their medical technology.

 siemens-healthineers.com/whitepaper-technology-management




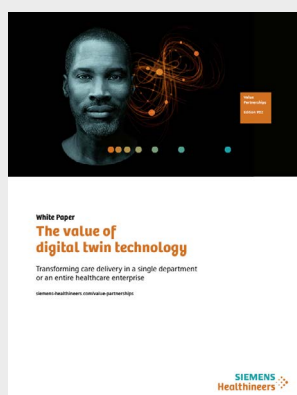
Value Partnerships – These game-changers help healthcare providers meet their challenges by digitalizing and transforming care delivery while expanding precision medicine and improving patient experience.

 siemens-healthineers.com/whitepaper-value-partnerships




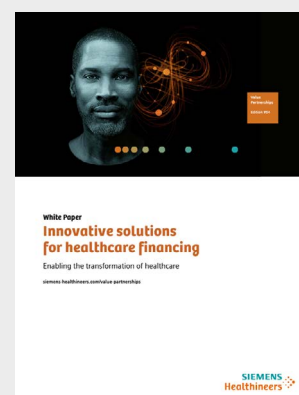
Digital twin technology – Virtualized presentations of facilities and processes – have emerged as powerful tools for healthcare providers. They can reduce the time and expense of piloting different solutions and approaches in the physical world.

 siemens-healthineers.com/whitepaper-digital-twin




Financing models – Innovative financing models become a vital part to meet unique challenges for healthcare providers. The combination of expertise, financial solidity, and passion for creating value in healthcare separates Siemens Healthineers from other potential financial partners.

 siemens-healthineers.com/whitepaper-financing-models




Consulting services and digital transformation – How choosing the right consulting partner can help healthcare providers thrive in challenging times, unlock value and drive future-proof transformation.

 siemens-healthineers.com/whitepaper-consulting-digital-transformation




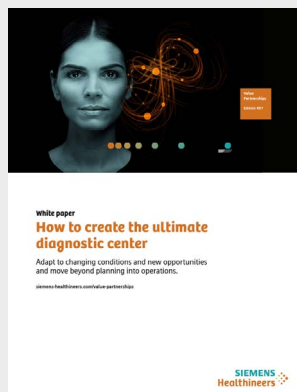
How to create the healing environment of the future – Thoughtful, human-centric facility design can make a positive impact on patient and staff experience. Interdisciplinary team work, biophilic design, and new technologies are shaping the healing environment of the future.

 siemens-healthineers.com/whitepaper-healing-environment




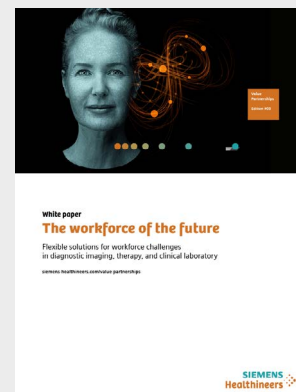
How to create the ultimate diagnostic center – Medical technology partners offer expert operational and strategic consulting to help laboratories optimize their current operations, expand their capabilities, and advance the pace of innovation in their institutions. A range of operations solutions, from managed equipment services through full operational and staffing responsibility, are now available.

 siemens-healthineers.com/whitepaper-the-ultimate-diagnostic-center




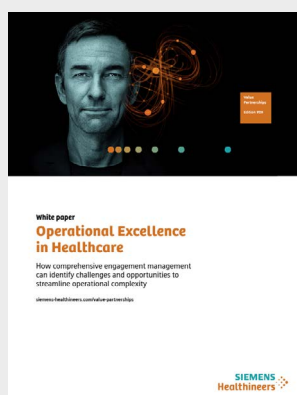
The workforce of the future – Many factors are responsible for today's personnel shortages in healthcare. The magnitude of these issues is increasing and may require even more flexible staffing solutions in the future.

 siemens-healthineers.com/whitepaper-workforce-of-the-future




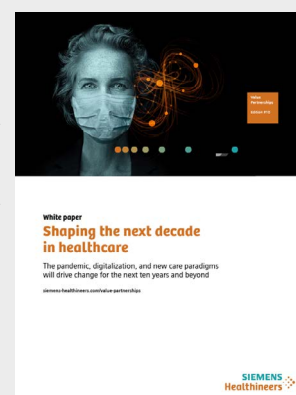
Operational Excellence in Healthcare – A combination of clinical insight, medical technology innovation, strategic vision, implementation expertise, and process optimization capability helps healthcare providers develop and realize their key strategic goals and avoid unnecessary risks.

 siemens-healthineers.com/whitepaper-operational-excellence-in-healthcare



Shaping the next decade in healthcare – COVID-19 revealed critical weaknesses in many health systems, but it also accelerated adoption of important new technologies. A panel of experts from Siemens Healthineers discussed the lasting impacts these pandemic-driven adaptations were likely to have.

 siemens-healthineers.com/whitepaper-shaping-the-next-decade



Would you like to drive cancer care to the next level?

Contact us to see how we pioneer breakthroughs in healthcare.



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About Value Partnerships

Oncology Value Partnerships combine holistic medical technology management, operations management, and consulting. Our technology management services include asset and capacity analysis, technology optimization, multi-vendor technology management, and change management capabilities. With sustainable consulting and transformation services and future-proof design planning, we are well positioned to co-create an oncology solution with and for you.

Oncology Value Partnerships can help you optimize operations today, expand with new capabilities tomorrow, and advance innovation in oncology.

Disclaimer

The products/features and/or service offerings mentioned here are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offerings cannot be guaranteed. Please contact your local Siemens Healthineers organization for more details.

The results described herein by customers of Siemens Healthineers were achieved in the customers' unique setting. Since there is no "typical" hospital, and many variables exist (e.g., hospital size, case mix, level of IT adoption), there can be no guarantee that other customers will achieve the same results.

The scientific overlay on the title is not that of the individual pictured and is not from a device of Siemens Healthineers. It was modified for better visualization.

References

- ¹ <https://www.apptitudehealth.com/oncology-news/global-oncology-trends/>
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- ⁷ <https://www.fightcancer.org/sites/default/files/Costs of Cancer - Final Web.pdf>
- ⁸ <https://www.projecthope.org/addressing-the-global-shortage-of-health-care-workers/04/2018/>
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- ¹³ <https://medlineplus.gov/genetics/understanding/precisionmedicine/definition/>
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- ¹⁶ <https://www.achealth.com.ph/news/ac-health-ctsi-varian-partner-to-develop-and-operate-the-countrys-first-cancer-specialty-hospital-in-taguig-city>

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