




Nuclear Medicine Solutions

Bringing your **vision to life**

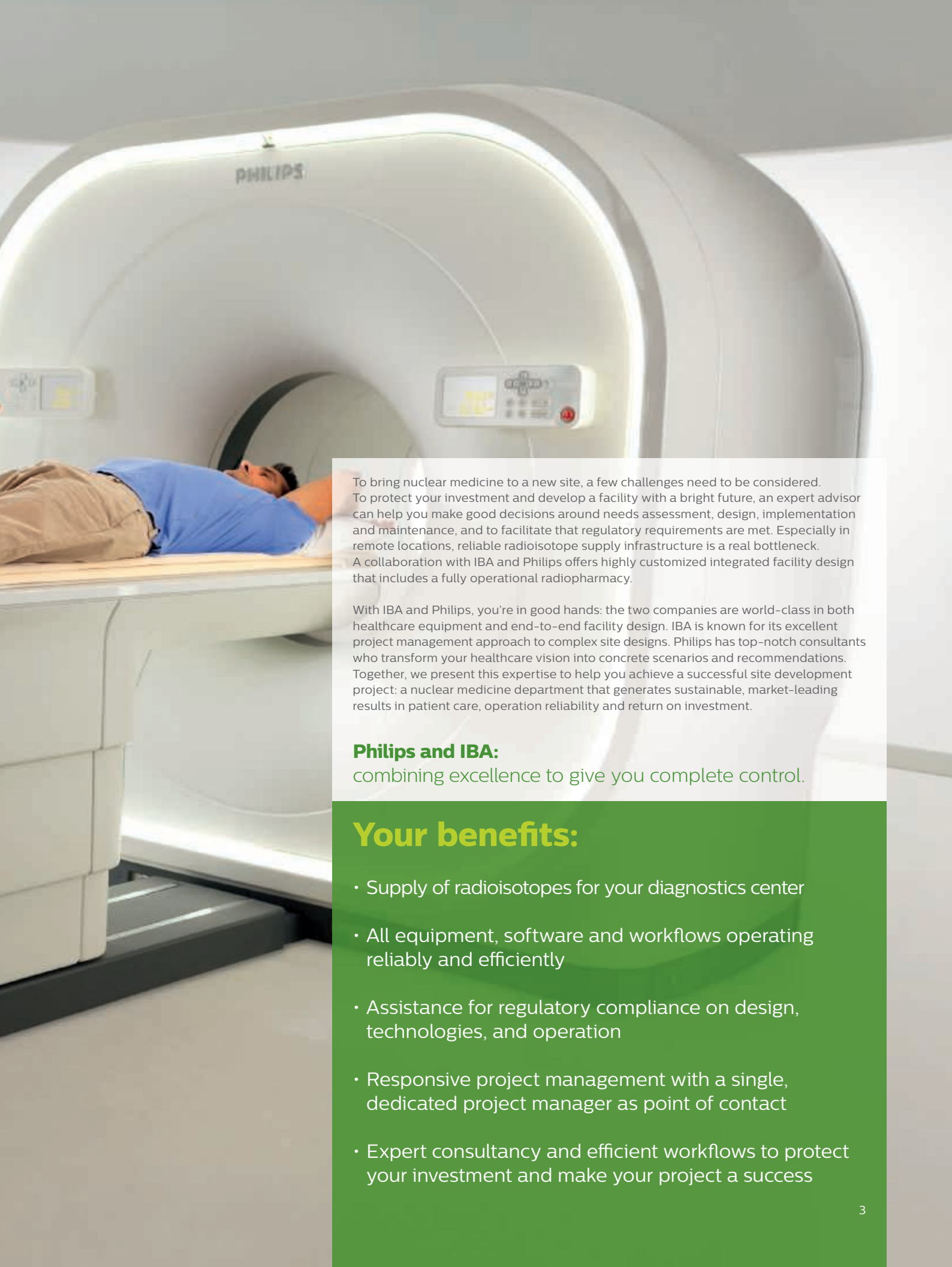
PHILIPS

Iba

A patient is lying on a white medical table in a bright, modern hospital room. The patient is wearing brown pants and grey socks. The room has large windows in the background, and the overall atmosphere is clean and professional.

The field of nuclear medicine offers exciting emerging opportunities to improve patient care and can no longer be overlooked in diagnostics. A well-designed, state-of-the-art nuclear medicine department prepares your community to receive the benefits from breakthroughs and advances in personalized medicine. An excellent investment into your community's future.

Combining excellence
to bring nuclear medicine
to new communities



To bring nuclear medicine to a new site, a few challenges need to be considered. To protect your investment and develop a facility with a bright future, an expert advisor can help you make good decisions around needs assessment, design, implementation and maintenance, and to facilitate that regulatory requirements are met. Especially in remote locations, reliable radioisotope supply infrastructure is a real bottleneck. A collaboration with IBA and Philips offers highly customized integrated facility design that includes a fully operational radiopharmacy.

With IBA and Philips, you're in good hands: the two companies are world-class in both healthcare equipment and end-to-end facility design. IBA is known for its excellent project management approach to complex site designs. Philips has top-notch consultants who transform your healthcare vision into concrete scenarios and recommendations. Together, we present this expertise to help you achieve a successful site development project: a nuclear medicine department that generates sustainable, market-leading results in patient care, operation reliability and return on investment.

Philips and IBA:

combining excellence to give you complete control.

Your benefits:

- Supply of radioisotopes for your diagnostics center
- All equipment, software and workflows operating reliably and efficiently
- Assistance for regulatory compliance on design, technologies, and operation
- Responsive project management with a single, dedicated project manager as point of contact
- Expert consultancy and efficient workflows to protect your investment and make your project a success

Supporting your project



you in all aspects of development

1. Assessment

making the business case for a profitable, state-of-the-art facility

a. Working together to develop your vision for healthcare

b. Providing a thorough analysis of:

- Market situations
- Infrastructure availability and requirements
- Demographics and clinical needs
- On-site observations and stakeholder interviews

2. Design

solid decisions built on concrete recommendations

a. Financial and clinical scenarios to help in the decision-making process

b. Guidance through strategic discussions

c. Help in making concrete decisions based on realistic variables

3. Implementation

realizing the vision for your facility

a. Building

- Construction according to a GMP layout
- Detailed data sheets and associated drawings per room

b. Equipment selection and installation

- Isotope production equipment IBA cyclotron, targets, synthesizers and hotcells
- Imaging equipment Philips PET/CT, SPECT and SPECT/CT
- Workflow systems Philips IntelliSpace Portal and iPatientc.

c. Processes and protocols

- Quality risk management
- Radiation monitoring
- Waste management
- Lab equipment use and maintenance

d. Staff selection and education

- Creating a staff acquisition and training program
- Attracting and hiring the right staff
- Training staff to use the new equipment

e. Achieving regulatory compliance

- Filing for certification for GMP and other standards
- Writing a validation master plan
- Finalizing quality and risk management protocols
- Compiling site master file
- Documenting pharmaceutical quality system including batch records and SOPs

4. Maintenance

protect your investment and increase uptime

a. Modular equipment maintenance service and warranties

- Service contracts for external support
- Training your engineers to deliver in-house support

b. Detailed materials list

- Production and QC of consumables
- Facility operating/cleaning consumables
- Recommended spare parts list

Expertise for today and the future

Integrative project support

With a site development project of this size and complexity, it's essential to have an experienced advisor. Our consultants and project managers will help you develop a concrete vision and build a solid business case for the new facility. A variety of clinical and financial scenarios will help you make decisions around finances and feasibility, applications, equipment and staffing.

We will support you through the entire process, from our first meeting to design, construction, setup and operation.

Through the Philips users community, your clinicians will be able to share experiences with peers, do clinical observations in other countries and learn from each other. Moreover, our experts will support you throughout the lifetime of your nuclear medicine department, providing the training, updates and maintenance that gives your new facility a sustainable future.

Built for reliability

IBA has 30 years of expertise in developing innovative features for the production of tracers, installing and supporting more than 220 cyclotrons on 5 continents. This long-lasting experience in the field has allowed IBA to gain in-depth comprehension and mastery of radiopharmaceutical manufacturing, offering you high performance cyclotrons with a very high level of reliability.

Philips brings an equally high level of expertise to the collaboration, with more than 800 PET/CT systems installed around the world. Both the Ingenuity TF and Vereos employ the same CT sub-system as the KLAS-award winning Ingenuity CT. The digital PET technology in the Vereos PET/CT allows hospitals to expand their clinical procedures. Both the Ingenuity TF and Vereos have built-in monitoring capabilities, on-site and remotely, so we can anticipate problems before they happen.

Ready for the future with IBA and Philips

IBA provides continuous support in furthering the skills and applications of your staff, boosting your equipment uptime and return on investment with all the latest innovations, services and training. The cyclotron itself can also be upgraded to keep providing the high level of quality you are used to.

IntelliSpace Portal, the advanced integrated visualization solution from Philips, delivers more of what you need to increase diagnostic confidence, while reducing complexity and life cycle cost. With IntelliSpace Portal, you have continuous access to software and hardware upgrades, application improvements, training and education. According to the KLAS Mid-Term Performance Review Ratings report, Philips IntelliSpace Portal outperforms similar solutions. You can expect it to evolve continuously, keeping you connected to the latest technological and clinical developments that will shape healthcare in the years to come.

Together, IBA and Philips help you stay up to date with the latest developments in tracers, should you want to go beyond 18-FDG. Beyond the oncology applications nuclear medicine is known for, it also holds great promise in cardiology and neurology applications. Your center will already have the basis you need to expand to new tracer production, and will already have the imaging equipment that can keep up with these tracers.



The advantage of the leading experts

If you have the opportunity to shape the field of healthcare for your community, you want to work with the experts. IBA invented the modern cyclotron and are the market leaders in cyclotrons for the healthcare field. Philips has always focused on pushing the limits on what's possible, introducing the first commercially available Time-of-Flight system and now the first digital PET-CT system. And together, we can help you deliver the standard of care you aspire to.

IBA

INTEGRALAB®

a solution for reliable, high-quality isotope production

IntegraLab® is a fully integrated solution for radiopharmaceutical production centers, combining equipment and services. IntegraLab® includes building design, achieving full regulatory compliance, the selection, integration, supply and installation of suitable high-technology equipment to match your radioisotope production goals, and much more.

CYCLONE®

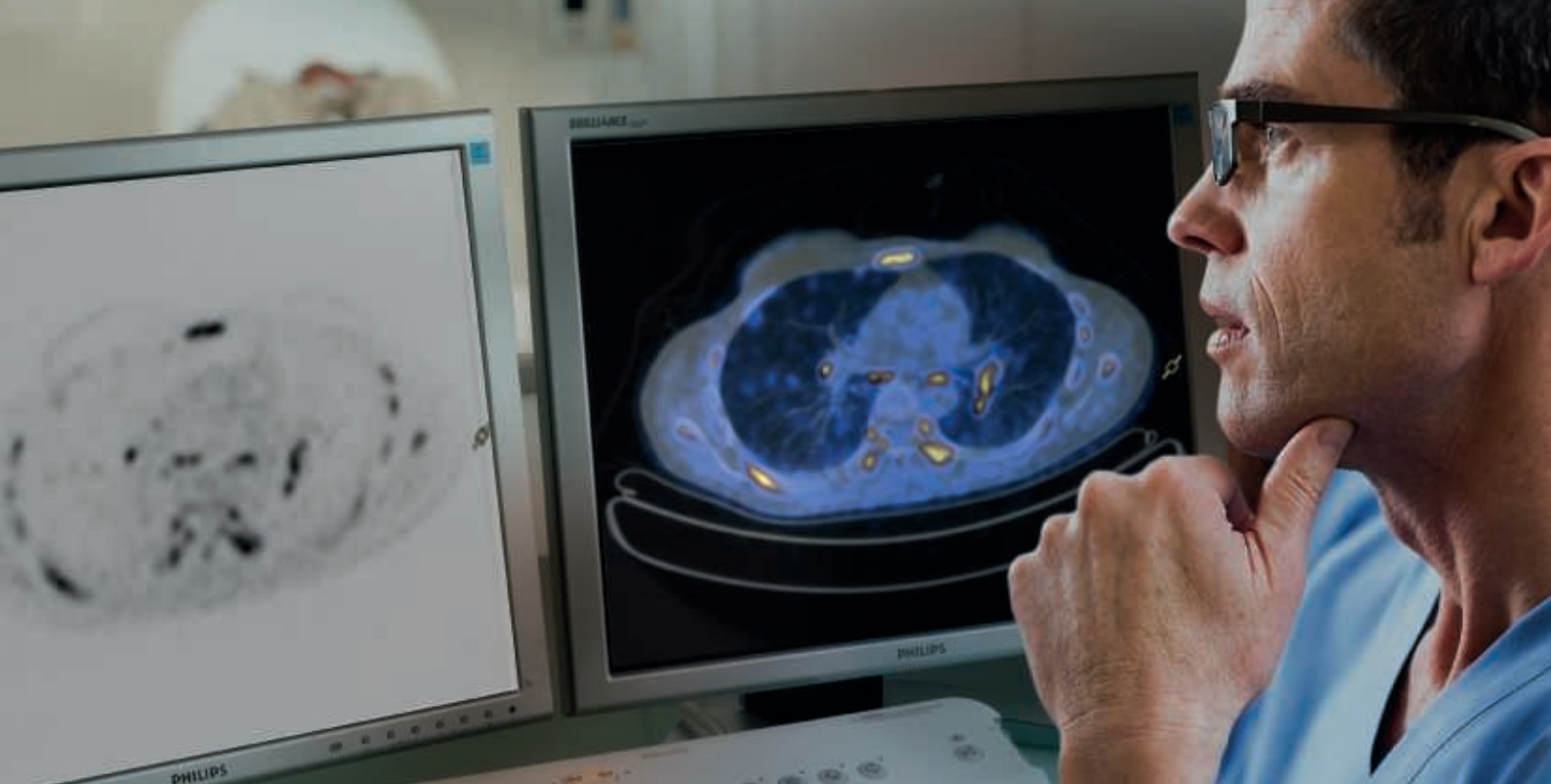
meets high requirements for safety and reliably

Cyclone® 18 is a high-energy cyclotron built for reliability, with redundant proton sources for superb uptime. It is also designed for excellent performance in operations and cost efficiency, providing excellent yield of 18F at a low power consumption. Cyclone® 18 has low personnel exposure and offers real flexibility with a full range of Nirta® targets.

SYNTHERA®

for easy, automated isotope production

Synthera® is a multi-purpose automated synthesizer for the production of 18F-FDG and other 18F-labeled compounds and radiopharmaceuticals. Synthera® is designed to accommodate a wide range of radiochemistries.



Philips

Ingenuity TF PET/CT for high-fidelity imaging without tradeoffs

With Ingenuity TF, clinicians are well equipped to face the most challenging issues: accuracy, speed and dose. The Ingenuity TF PET/CT images the entire body or a specific region of interest in just one scan. For typical procedures, data acquisition can be done within five minutes and PET image reconstruction in as fast as 30 seconds per bed. The Ingenuity TF PET/CT features the xPand5 quantification tools to enhance image quality, support quantification and show changes happening over time.

Vereos PET/CT redefines your PET imaging

The Vereos PET/CT is the world's first and only digital PET/CT system, offering dramatic improvements in qualitative imaging and quantitative performance compared to analog systems*. The Vereos PET/CT scanner features Digital Photon Counting, which marks a new era in clinical performance. In a recent survey**, 9 out of 10 referring physicians prefer Vereos Digital PET images over analog*.

* GEMINI TF 16, **In a recent survey of referring oncologists

Intellispace Portal Platform promotes efficient collaboration

IntelliSpace Portal allows clinicians to review, analyze, diagnose and share nuclear medicine images from their PCs, laptops, or any networked device, anytime, virtually anywhere. It is a scalable, cost-effective solution that lets your staff tap the power of NM and other multimodality applications directly from your PACS. Its image sharing and tools improve collaboration with referring physicians in real time to confirm diagnoses.

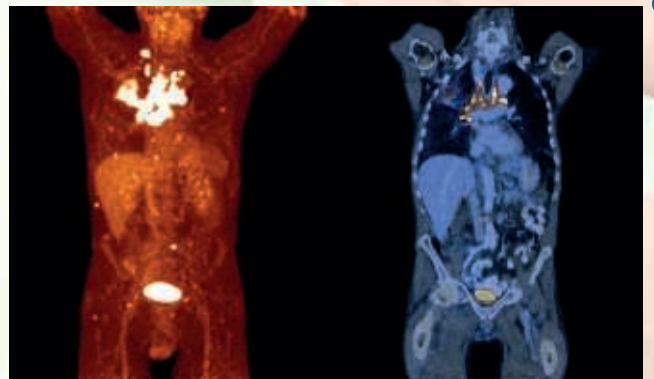


Enhanced patient care

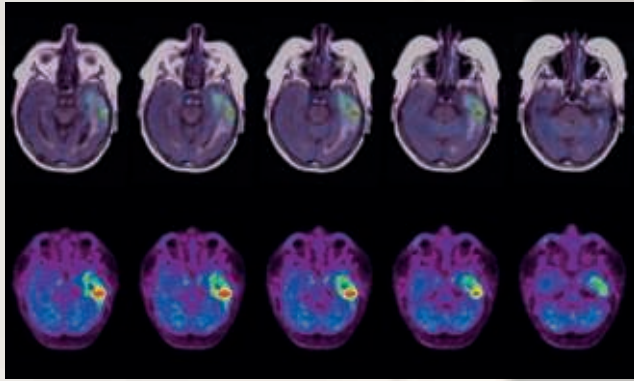
Provide your staff with access to advanced radiopharmaceuticals for more specific diagnosis of severe diseases, and high-quality images for enhanced diagnostic confidence.



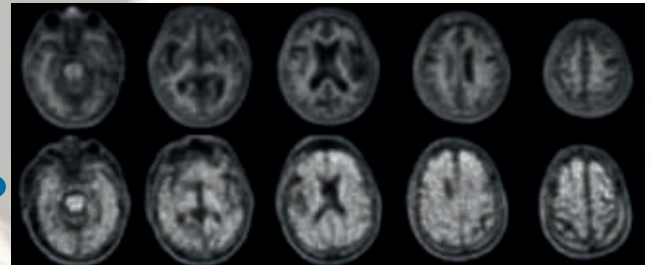
[18]-F-Choline reflects the uptake of that amino acid in cells



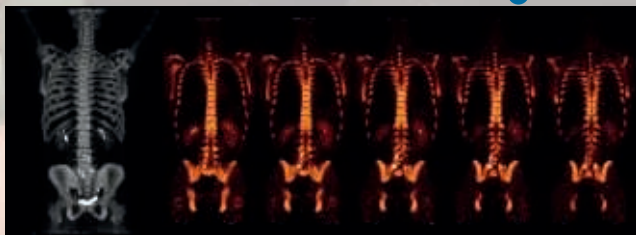
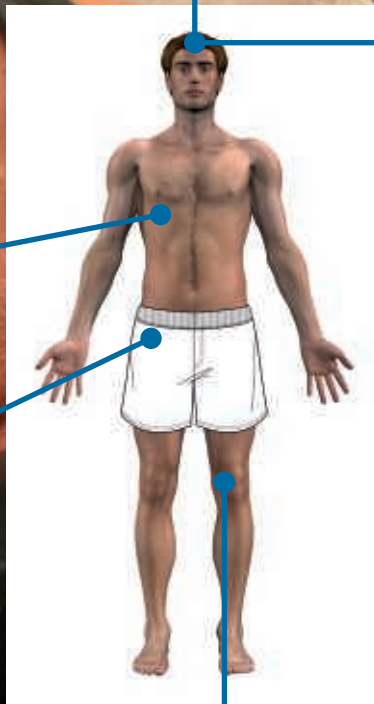
[18]F-FDG is used to assess the relative phosphorylation rate of cells



[18F]-L-tyrosine reflects the uptake of that amino acid in cells



[18F]-Florbetapir reflects the uptake in the brain relative to the deposition of amyloid protein



[18F]-F - Sodium Fluoride images demonstrate the metabolic activity of bone

Go beyond routine scans

- IBA equipment can be used to generate a wide range of isotopes, providing flexibility for a variety of applications both now and in the future.
- Philips PET/CT systems offer high-quality, high-resolution images to increase diagnostic confidence.
- The quantification capabilities of the Ingenuity PET/CT support a wide range of isotopes to best make use of the variety of your cyclotron.
- The Vereos PET/CT positions you to expand your PET imaging capabilities beyond FDG in areas such as:
 - Tracers with shorter half-life
 - Neurodegenerative disorders
 - Targeted radiotherapy
 - Personalized molecular medicine
- Philips iPatient provides a personalized, patient-centric workflow for excellent efficiency and high image quality at low dose levels.

Contact details

Philips

For more information about Philips products and solutions visit: www.philips.com/healthcare or for more information about Proton Therapy e-mail: eileen.sarton@philips.com

About Royal Philips

Royal Philips (NYSE: PHG, AEX: PHIA) is a diversified health and well-being company, focused on improving people's lives through meaningful innovation in the areas of Healthcare, Consumer Lifestyle and Lighting. Headquartered in the Netherlands, Philips posted 2014 sales of EUR 21.4 billion and employs approximately 105,000 employees with sales and services in more than 100 countries. The company is a leader in cardiac care, acute care and home healthcare, energy efficient lighting solutions and new lighting applications, as well as male shaving and grooming and oral healthcare.

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IBA highlights

IBA (Ion Beam Applications S.A.) is a global medical technology company focused on bringing integrated and innovative solutions for the diagnosis and treatment of cancer. The Company is the worldwide technology leader in the field of proton therapy, the most advanced form of radiation therapy available today. IBA's proton therapy solutions are flexible and adaptable, allowing customers to choose from universal full scale proton therapy centers as well as compact, single room systems. In addition, IBA also has a radiation dosimetry business and develops particle accelerators for the medical world and industry.

Headquartered in Belgium and employing about 1 100 people worldwide, IBA has installed systems across the world, from Europe and the US and to the emerging markets. IBA is listed on the pan-European stock exchange EURONEXT. (IBA: Reuters IBAB.BR and Bloomberg IBAB.BB).



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