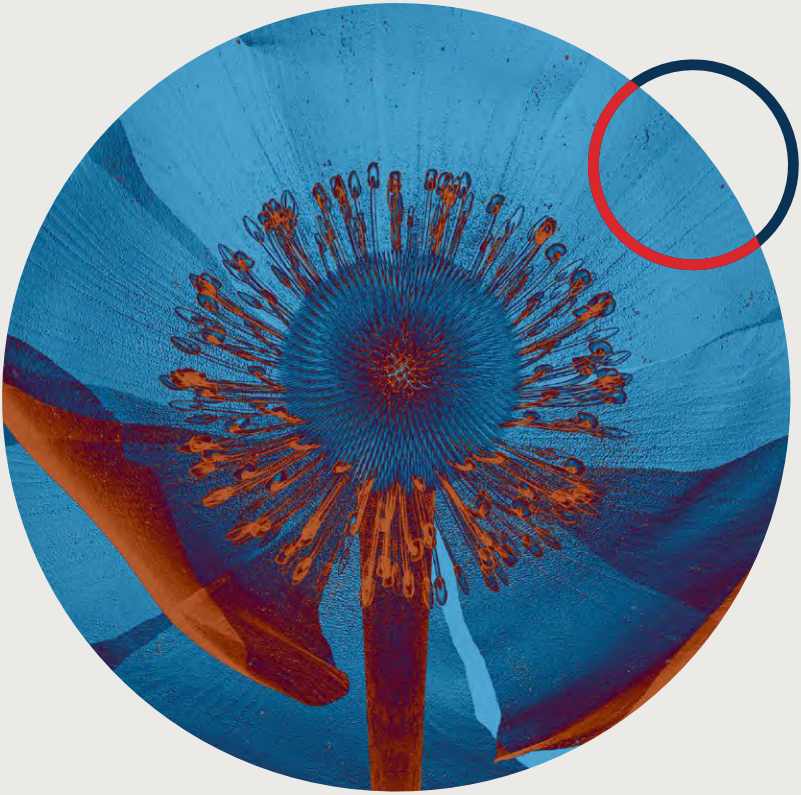
Life Diagnostics

PET-CT

A clearer picture for cancer care



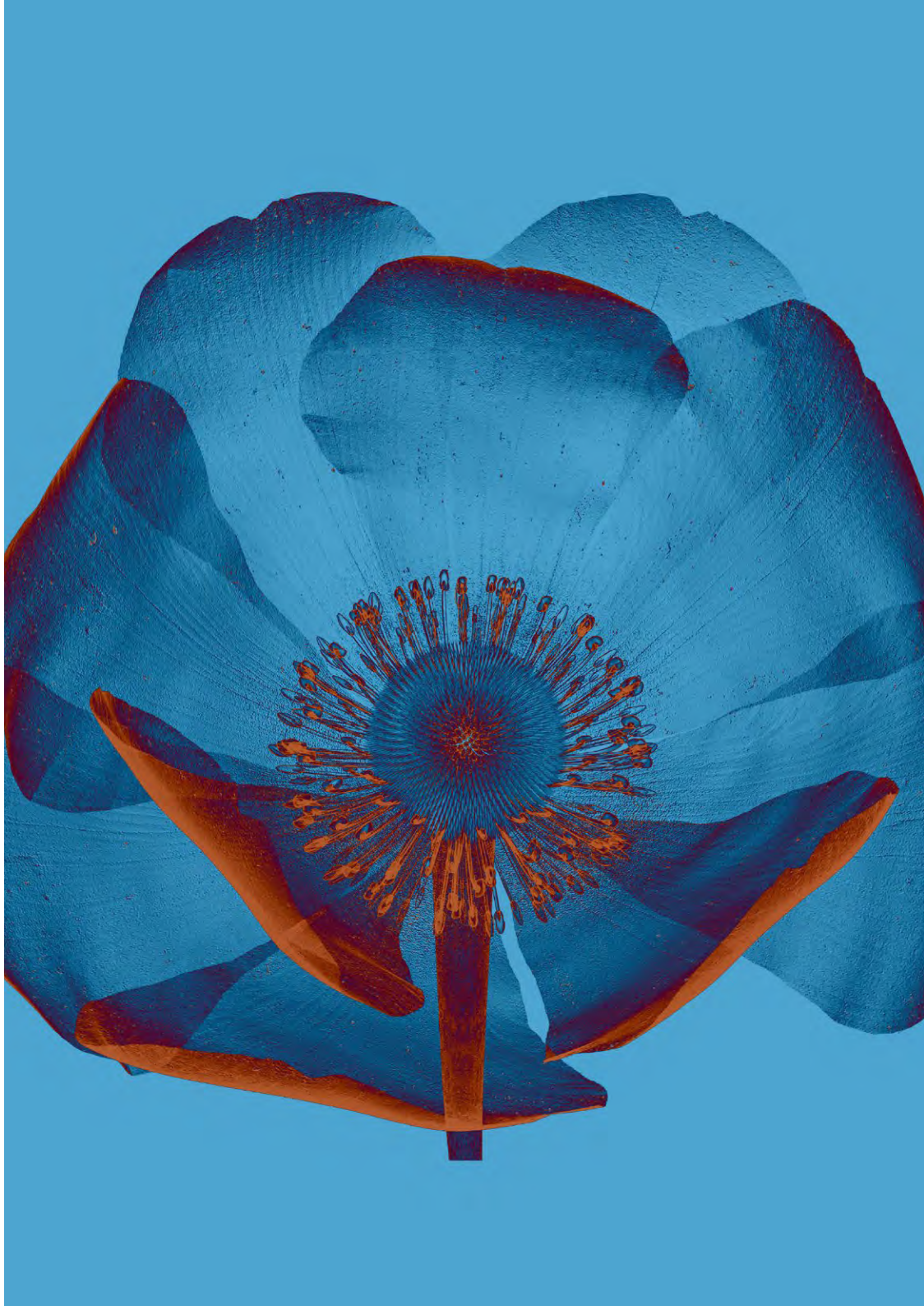
Life Healthcare

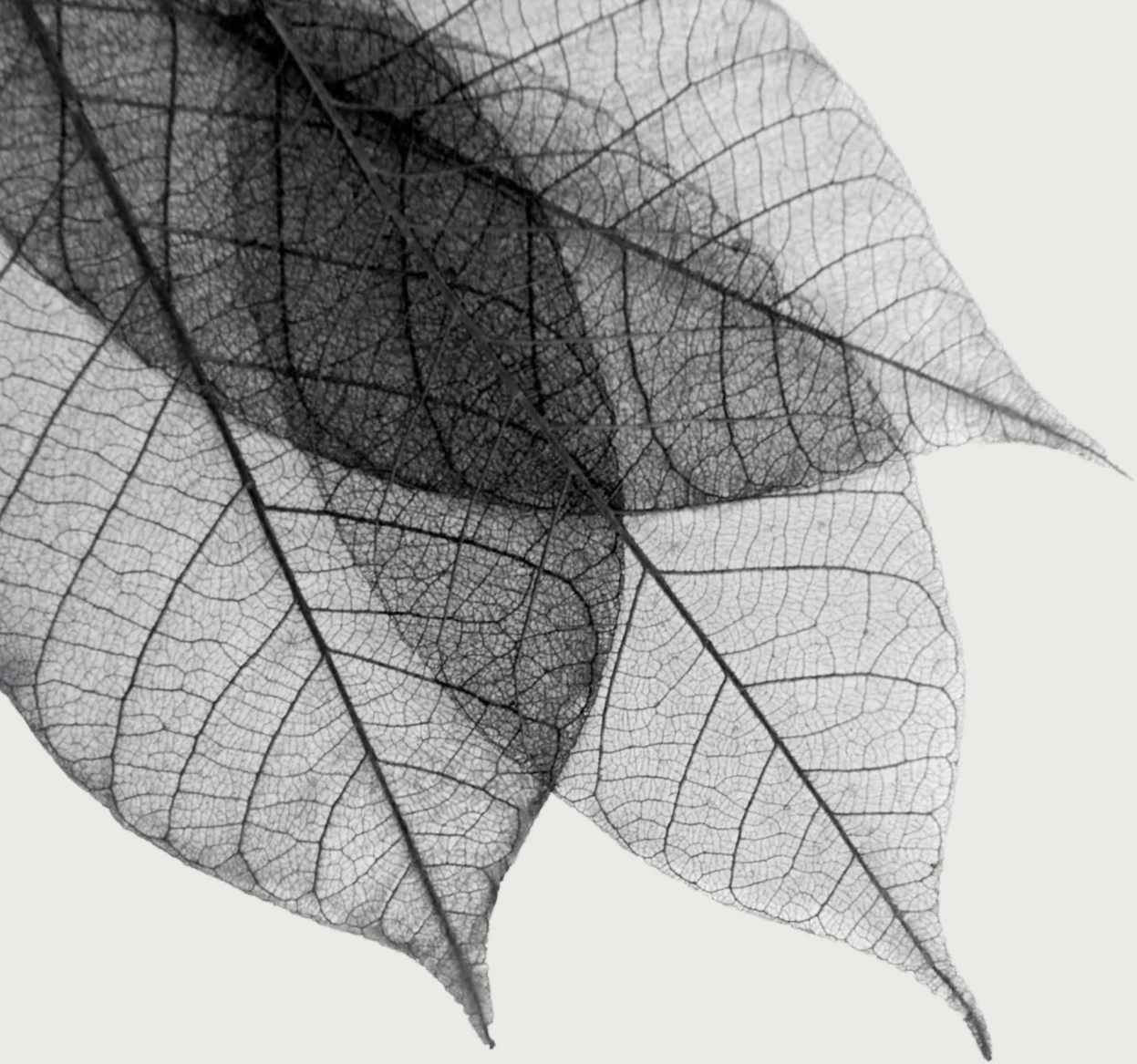
Making life better

Being scheduled for a PET-CT scan can bring up a lot of questions. What is it? What will happen? Will it help? This booklet is here to guide you through the process and help you feel informed, confident and supported, whether you're just starting your treatment or undergoing follow-up care.

At Life Healthcare, we believe that knowledge is empowering. That's why we've created this guide; to explain what PET-CT is, why it matters in cancer treatment, and how it fits into your care journey. You'll find everything from step-by-step preparation tips to the technicalities that make PET-CT so revolutionary – all in simple, clear language.

LET'S BEGIN





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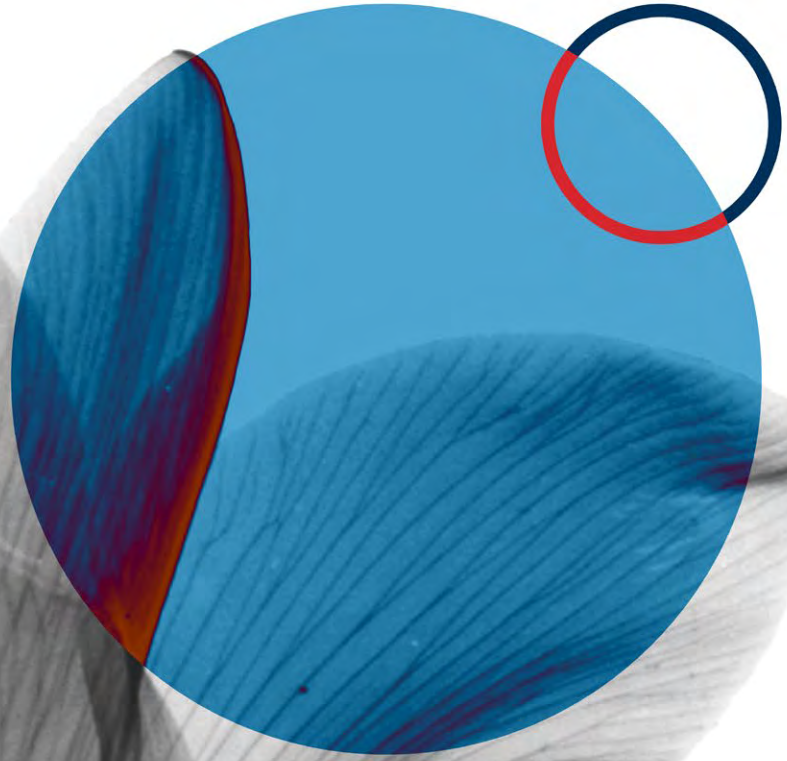
PET-CT EXPLAINED: WHAT IT IS AND WHY IT MATTERS



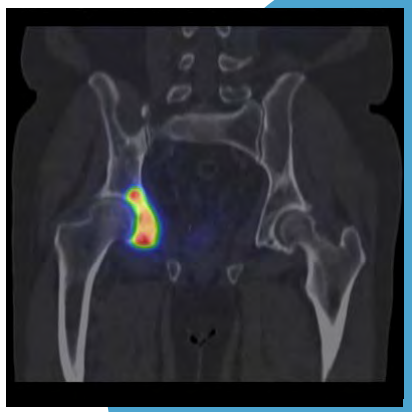
A smarter way to see what's happening inside the body

PET-CT stands for Positron Emission Tomography – Computed Tomography. It's a scan that combines two powerful technologies in a single procedure, offering a more complete view of what's happening inside your body.

Let's break it down:

CT (Computed Tomography) is a type of scan that takes multiple X-ray images from different angles to create a detailed 3D picture of the inside of your body. It shows the structure. This means the size, shape, and position of organs, bones, and tissues. Think of it like a high-resolution map: it shows what's there, and where.

PET (Positron Emission Tomography) goes one step further: it looks at function. Before the scan, a small amount of radioactive glucose (a type of sugar), called a radioactive tracer, is injected into your bloodstream. Cancer cells usually thrive on energy (glucose) more than normal cells, which means that they absorb the tracer. The tracer then lights up on the scan, helping doctors identify areas of concern.



Why combining PET and CT matters

By merging these two scans into one, PET-CT provides both structural and functional information in a single image.

Imagine you're looking at a map of a city. A CT scan is like seeing the layout of roads, buildings, and parks. You know where everything is, but you don't know what's happening there.

Now add live traffic data. A PET scan is like seeing where the traffic is flowing smoothly, where it's backed up, or where an unexpected jam has formed.

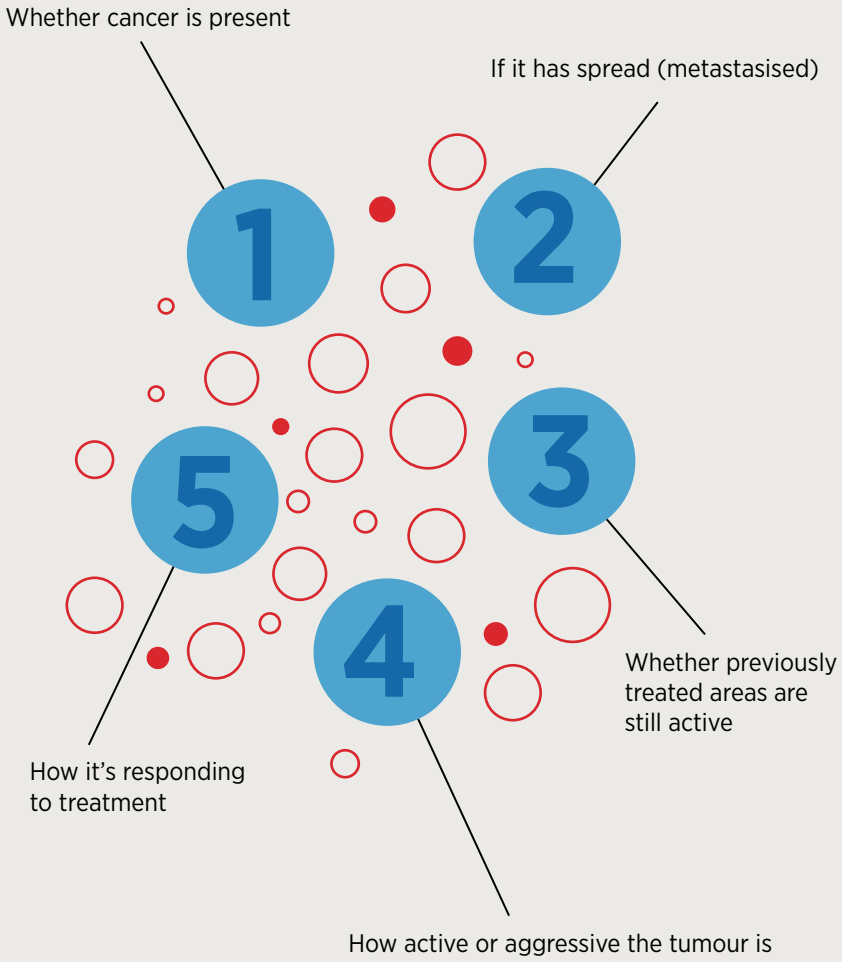
Together, the PET and CT scans work like a GPS with live updates. You're not just looking at a place; you're seeing how it's working. For doctors treating cancer, this level of insight is incredibly powerful. It helps them spot abnormalities sooner, target treatments more accurately, and track changes with confidence.

PET-CT

WHY GLUCOSE?

The PET scan uses a radiotracer made from glucose, because cancer cells often need more energy than normal cells. They absorb the glucose faster and in greater amounts. When the tracer is injected into your body, areas with high glucose use, such as active tumours, stand out clearly on the scan.

5 things PET-CT can reveal



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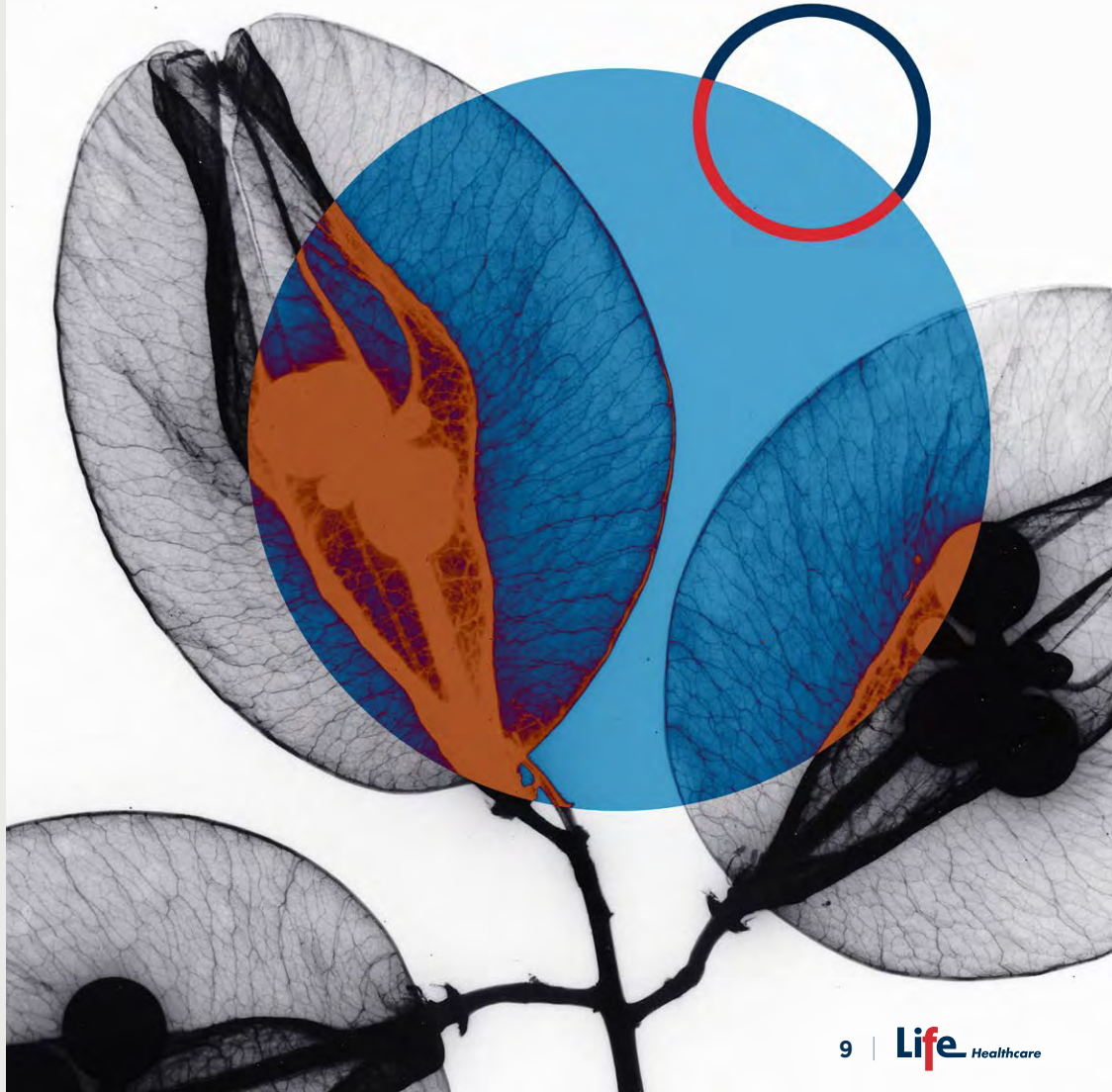
WHAT TO EXPECT: BEFORE, DURING, AND AFTER YOUR PET-CT SCAN



Knowing what to expect can make all the difference

It's natural to feel a little uncertain about your PET-CT scan, but the scan itself is simple, safe, and painless. Understanding the process can help you feel more at ease.

Before your scan: How to prepare

Your care team will give you personalised instructions, but note these general guidelines:

1. Remember not to eat anything for 4–6 hours
This keeps your blood sugar low and stable to help your body absorb the radiotracer correctly. You may drink water.

2. Keep physical activity to a minimum for at least 24 hours
Overexerted muscles can absorb more glucose and may interfere with scan results.

3. Inform your doctor of any medications or conditions
These factors can affect how your body absorbs the tracer and how the scan is interpreted.

4. Dress comfortably and remove any metal accessories
This includes jewellery and watches. You may need to change into a hospital gown.

BEFORE

DURING

During the scan: Step-by-step

Your care team will guide you through each step of the process, which will take roughly 1.5 – 2 hours.

1. Radiotracer injection
A nurse or technician will insert a small IV line into your arm and inject the radiotracer (usually FDG, a glucose-based substance). This is painless and involves a very low dose of radiation.

Next, you'll rest quietly for about 45–60 minutes while the radiotracer travels through your body. Try to stay relaxed, as moving can affect the absorption.

2. The scan itself
After resting, you'll be taken to the scanner for a procedure that lasts 20–30 minutes.

You'll lie still on the bed as it moves through the scanner. You may hear quiet whirring sounds, but the machine won't touch you. You'll be monitored throughout, and you can speak to the technician if you need anything.

After the scan: What happens next

After your scan, you can return home and resume normal activities. Keep the following in mind:

1. Minimal side effects
Most people feel completely normal after their scan. Drink lots of water to rehydrate and help flush the tracer from your body through urine, which will happen within a few hours.

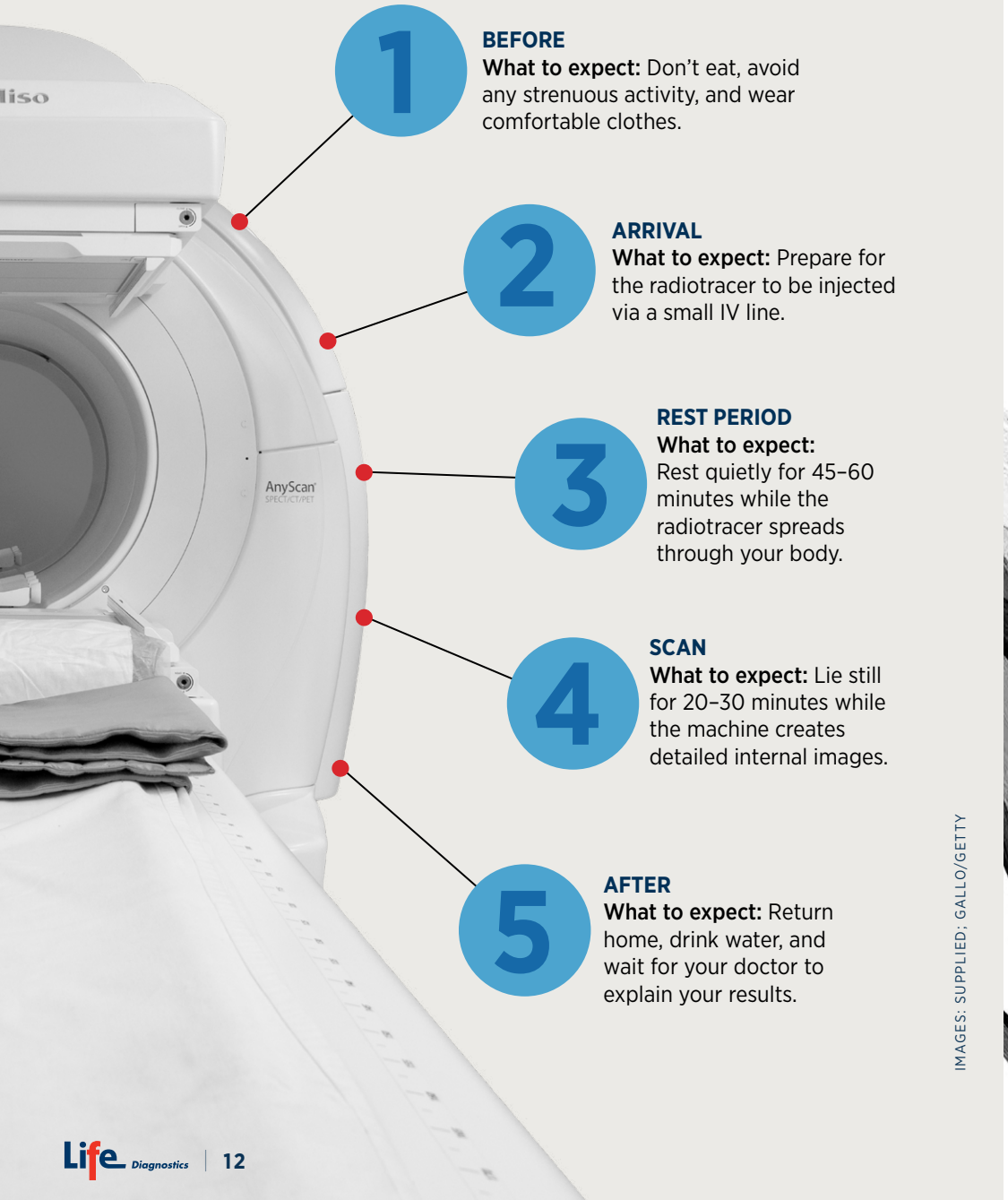
2. Results take a few days
A nuclear medicine specialist will review the results and discuss them with your oncology team.

We know this waiting period can be difficult. In fact, many patients refer to it as 'scanxiety': a mix of stress, anticipation, and hope. These feelings are entirely normal.

3. Radiation safety
The amount of radiation used is minimal and considered safe, but avoid close, prolonged contact with pregnant women and young children for a few hours after the scan. This is because their bodies are more sensitive to radiation.

AFTER

Your scan day at a glance



1 BEFORE
What to expect: Don't eat, avoid any strenuous activity, and wear comfortable clothes.

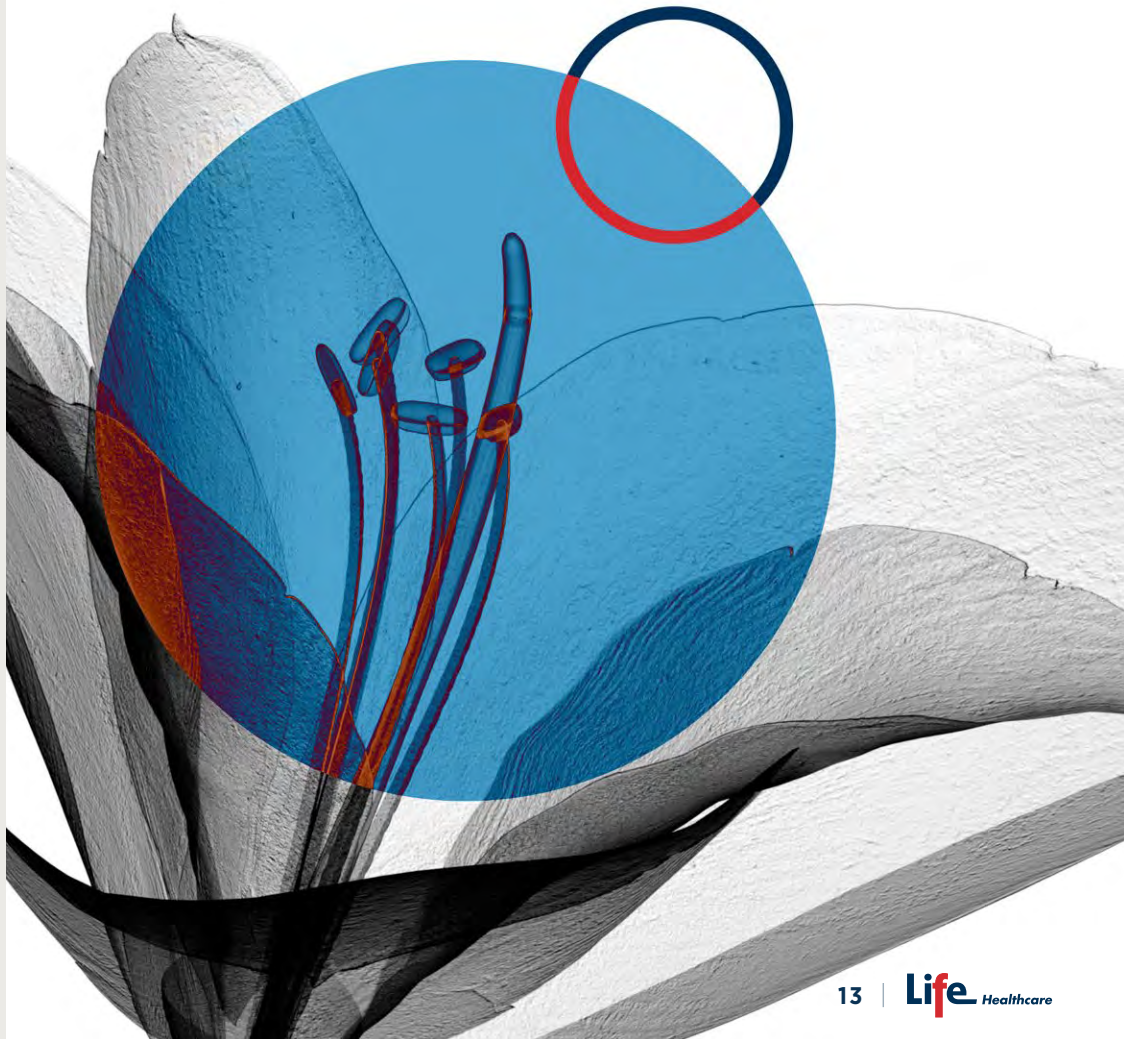
2 ARRIVAL
What to expect: Prepare for the radiotracer to be injected via a small IV line.

3 REST PERIOD
What to expect: Rest quietly for 45–60 minutes while the radiotracer spreads through your body.

4 SCAN
What to expect: Lie still for 20–30 minutes while the machine creates detailed internal images.

5 AFTER
What to expect: Return home, drink water, and wait for your doctor to explain your results.

HOW IT WORKS: HOW PET-CT SUPPORTS YOUR CANCER JOURNEY



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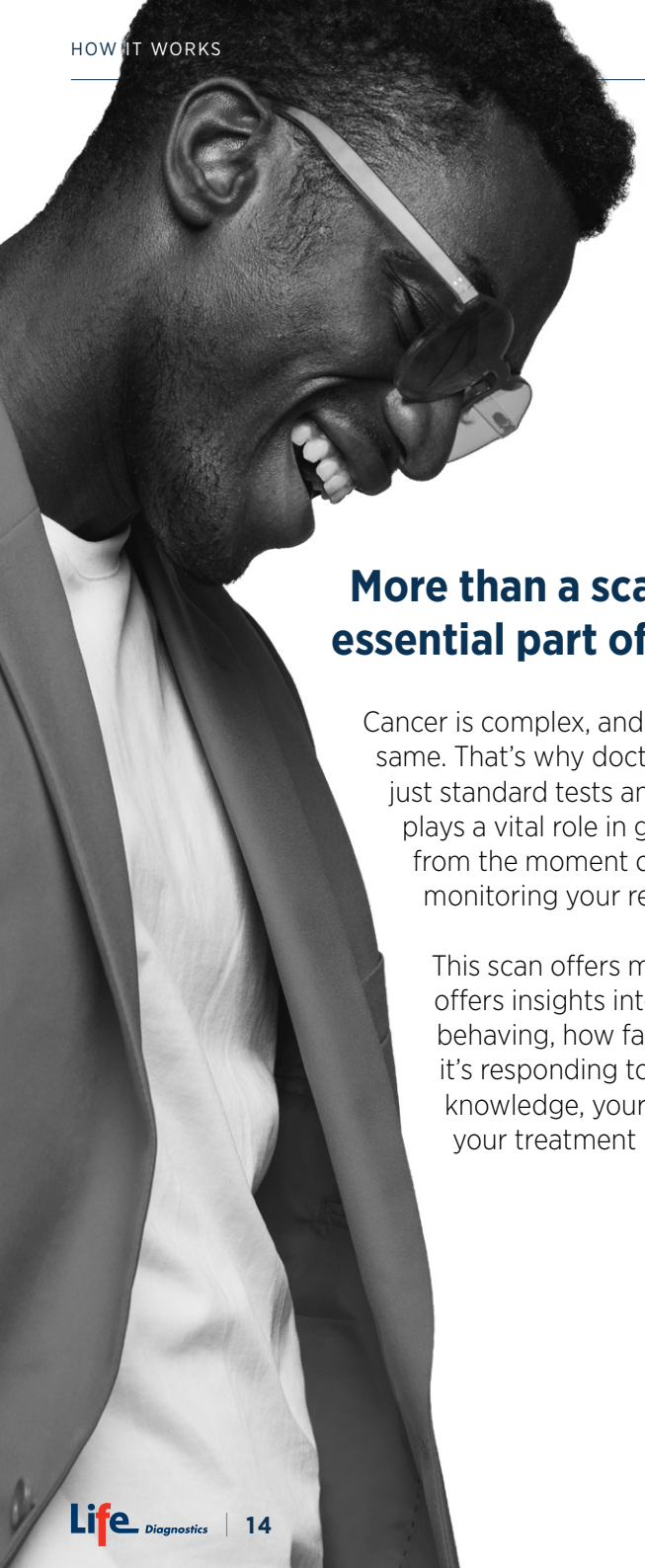


More than a scan; it's an essential part of your care plan

Cancer is complex, and no two journeys look the same. That's why doctors rely on more than just standard tests and check-ups. PET-CT plays a vital role in guiding your treatment from the moment of staging through to monitoring your recovery.

This scan offers more than images. It offers insights into how the cancer is behaving, how far it has spread, and how it's responding to treatment. With this knowledge, your care team can tailor your treatment plan specifically to you.

Understanding where you are: Staging

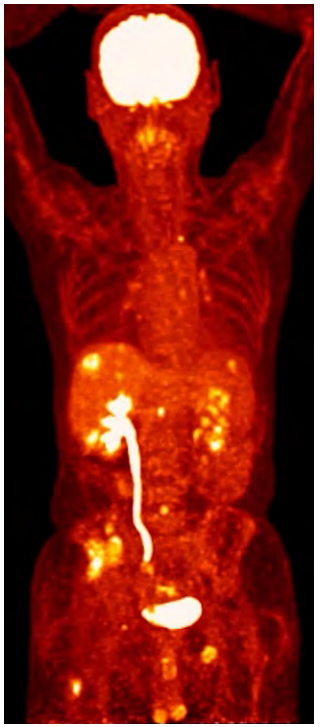
ONE

Once cancer is diagnosed, the next step is determining its stage or how far it has progressed. This is one of the most important steps in deciding what comes next.

PET-CT is extremely effective at:

- **Pinpointing** whether cancer is localised or has spread.
- **Detecting** smaller areas of cancer activity that other scans might miss.
- **Helping to differentiate** between active tumours and scar tissue or inflammation.

This matters because even a small change in staging can shift your entire treatment plan. For example, if a PET-CT scan shows cancer in nearby lymph nodes, your care team may recommend chemotherapy instead of surgery, or adjust the type and duration of treatment to match what your body needs.



WHY STAGING MATTERS

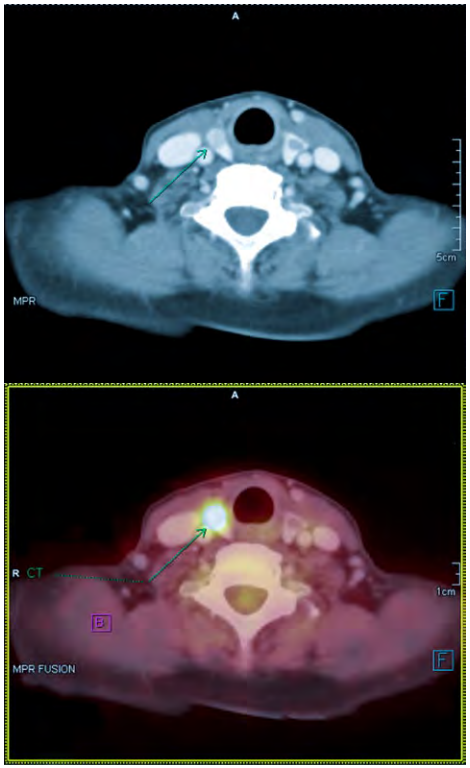
Accurate staging is the foundation of personalised care. It ensures:

- You get the right treatment at the right time.
- You receive effective treatment that is aligned with your individual needs.
- Your care team can set realistic expectations and goals.
- Your recovery is monitored with precision.

Where PET-CT is most helpful

PET-CT scans are used across a wide range of cancers, particularly when doctors need more than just a snapshot of what the cancer looks like.

They are commonly used in:



PET-CT scan of a thyroid gland

- Lymphoma
- Lung cancer
- Breast cancer
- Prostate cancer
- Cervical and other gynaecological cancers
- Colorectal cancer
- Melanoma
- Head and neck cancers
- Oesophageal cancer

In each of these, PET-CT helps your care team determine how advanced the cancer is, whether treatment is working, and what the best next steps might be. Remember, the use of PET-CT will vary depending on the cancer type and patient.

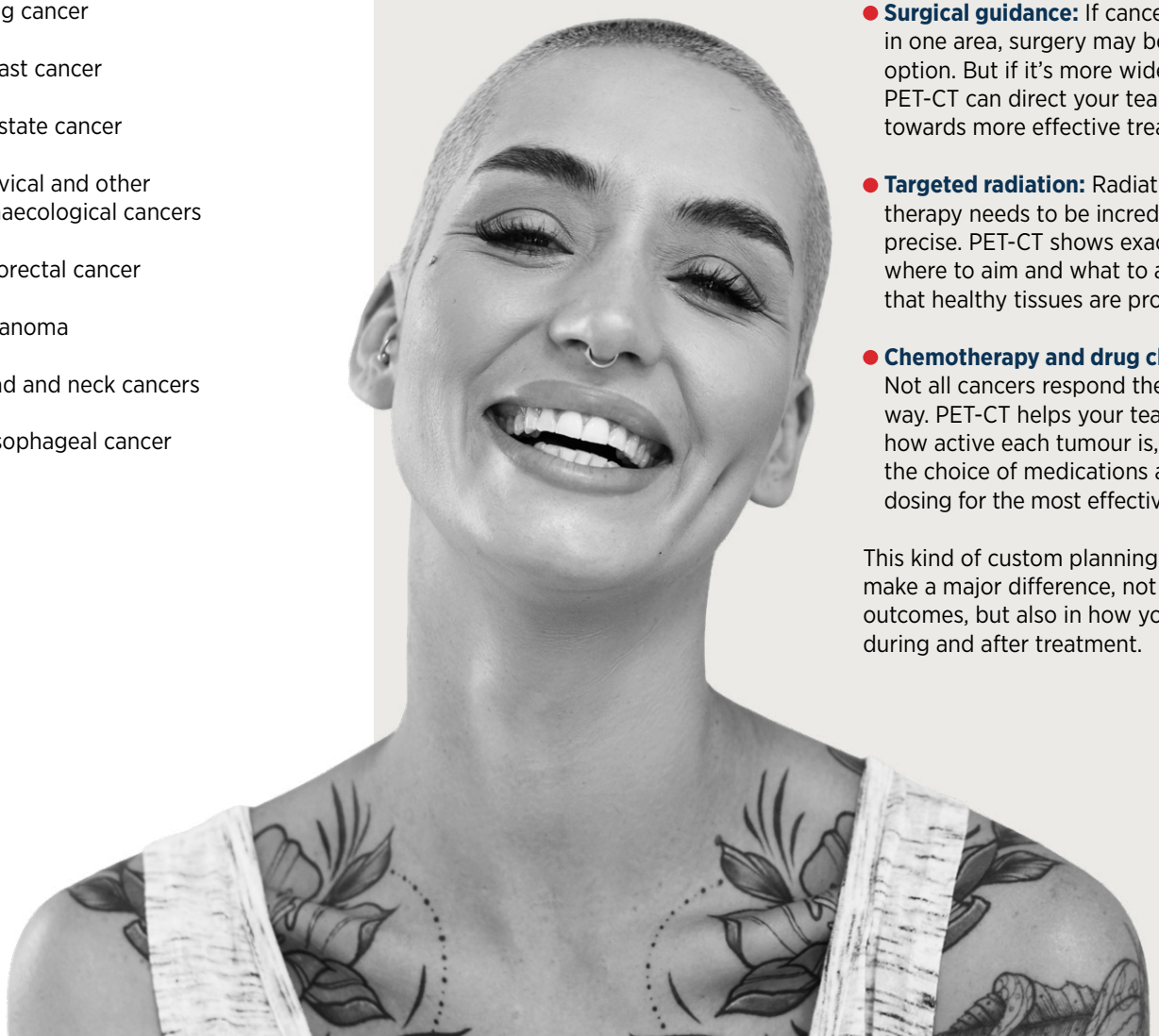
Tailoring your treatment: One size doesn't fit all

TWO

Once the stage is clear, your doctors will build a treatment plan tailored to your specific case. PET-CT provides key insights that help them personalise your care:

- **Surgical guidance:** If cancer is only in one area, surgery may be the best option. But if it's more widespread, PET-CT can direct your team towards more effective treatments.
- **Targeted radiation:** Radiation therapy needs to be incredibly precise. PET-CT shows exactly where to aim and what to avoid so that healthy tissues are protected.
- **Chemotherapy and drug choices:** Not all cancers respond the same way. PET-CT helps your team see how active each tumour is, guiding the choice of medications and dosing for the most effective results.

This kind of custom planning can make a major difference, not just in outcomes, but also in how you feel during and after treatment.



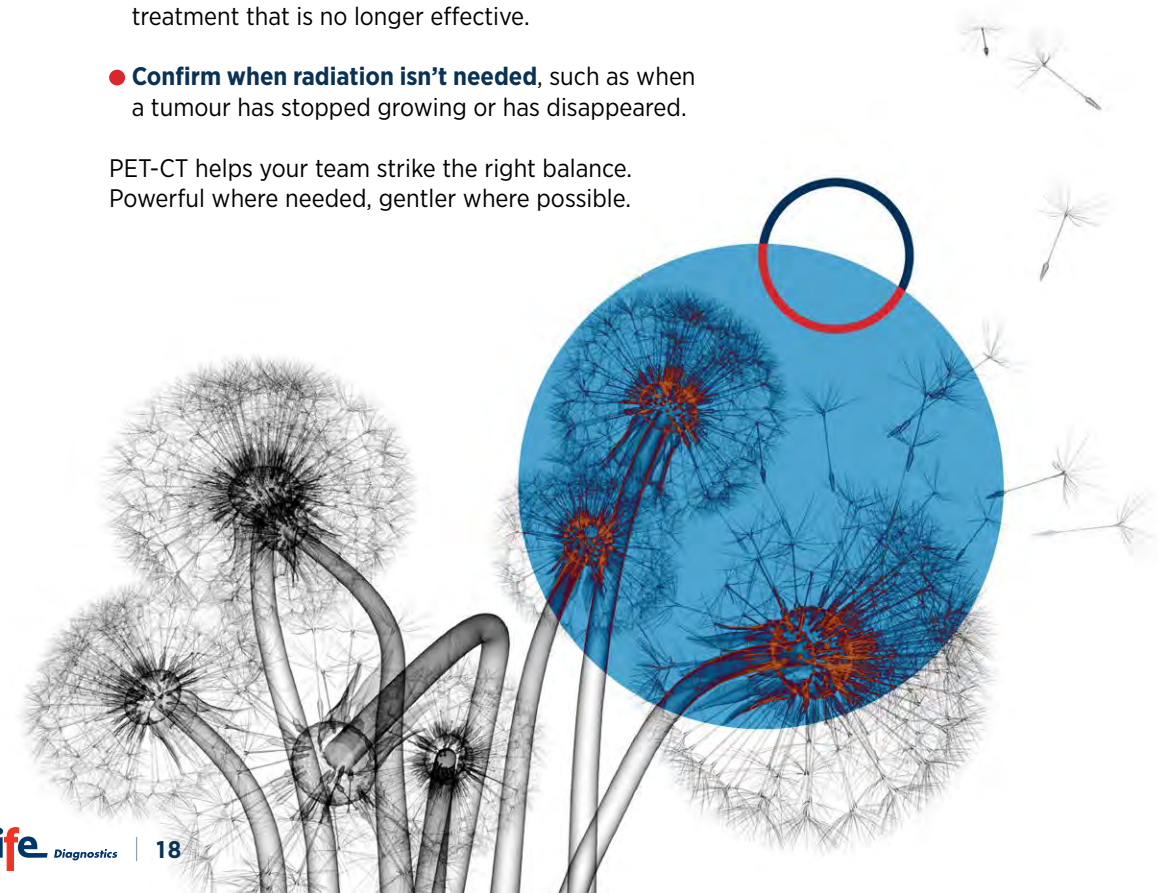
THREE

Focusing on what will work best for *you*

Cancer treatment can have severe side effects, which doctors always try to minimise where possible. Because PET-CT targets treatment more precisely, it can:

- **Rule out surgery**, helping doctors decide if another treatment, like chemotherapy, would be more appropriate.
- **Show if chemotherapy is helping**, so you don't continue treatment that is no longer effective.
- **Confirm when radiation isn't needed**, such as when a tumour has stopped growing or has disappeared.

PET-CT helps your team strike the right balance. Powerful where needed, gentler where possible.



FOUR

Checking if treatment is progressing

A major strength of PET-CT is its ability to track progress in real-time.

During treatment, your care team may schedule additional scans to see:

- Whether your tumour is shrinking or becoming less active.
- If new areas of concern have appeared since the last scan.
- Whether a change in medication, dosage, or strategy is needed.

This feedback loop means you are getting feedback on treatment as it is progressing. It gives your team flexibility and the ability to monitor and adjust as they go – checking responsiveness to treatment.

For example, if a scan shows that a tumour is responding very well to treatment, your doctor might reduce the number of chemotherapy cycles to minimise side effects. If the response is weaker than expected, they can adapt the plan sooner.

FIVE

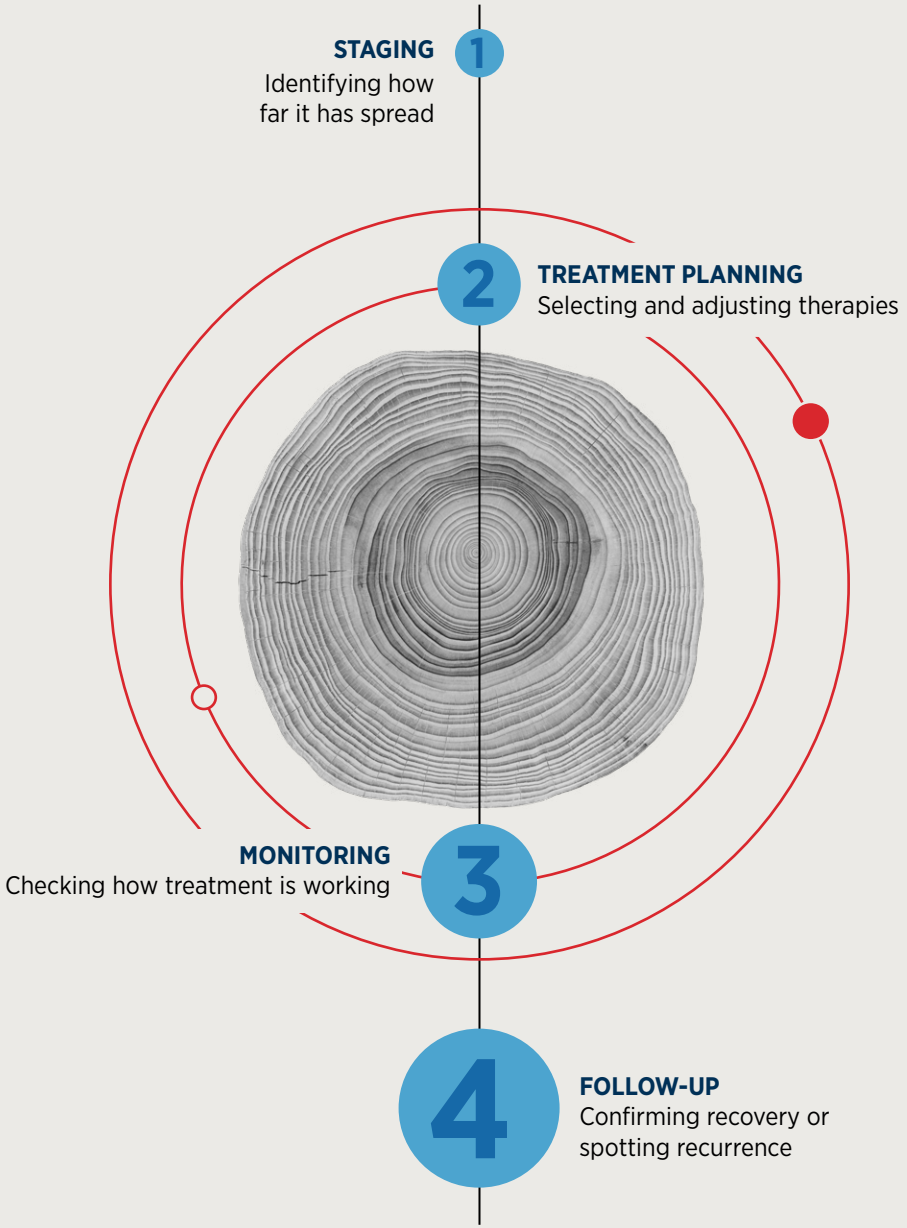
Following up and monitoring effectively

Even after treatment ends, PET-CT continues to play a role in follow-up care. It's often used to:

- Make sure that no active cancer remains.
- Watch for signs of recurrence before symptoms appear.
- Give patients peace of mind between check-ups.

This ongoing insight helps your team detect any changes early and act quickly, giving you more control over what comes next.

PET-CT across the cancer care journey



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FAQs: COMMON QUESTIONS, ANSWERED

What patients ask us most about PET-CT

It's completely normal to have questions before a medical scan, especially one that sounds as technical as PET-CT. The good news? It's simpler than it sounds, and our teams are here to support you through every step. Below are answers to some of the most frequently asked questions we hear from patients.

Is the scan painful?
No. The scan itself is completely painless. The only part you might feel is a small pinch when the IV line is inserted to deliver the radiotracer. After that, all you need to do is rest and lie still during the scan.

Will I feel the radiation or tracer?
No. You won't feel the radiotracer in your body, and the level of radiation used is very low. It's similar to what you'd be exposed to during a standard CT scan or long-haul flight. It leaves your system naturally within a few hours.

How long will I be at the facility?
From arrival to completion, the whole process usually takes about 1.5–2 hours. This includes time to check in, get the radiotracer, rest while it circulates, and complete the scan itself.

FAQs

What if I'm claustrophobic or nervous about enclosed spaces?
The PET-CT scanner is open on both ends and not enclosed like some MRI machines. If you're concerned, let your care team know beforehand. They can talk you through what to expect and offer calming techniques or mild medication if needed.

How should I prepare for the scan if I have diabetes?
Managing blood sugar is especially important before a PET-CT scan. Your care team will give you specific guidance, which may involve adjusting insulin or timing your meals differently. Be sure to tell your doctor ahead of time if you are diabetic so they can help you prepare properly.

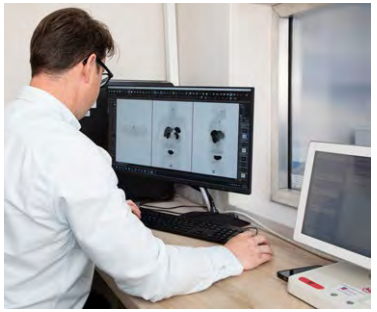
Can I bring someone with me?
Yes, you can bring a friend or family member for support. However, because of the radioactive tracer, they may be asked to wait outside the scan room during certain parts of the process. Your care team will let you know what's possible at your specific facility.

Can I drive myself home afterwards?
Yes, you will be fine to drive yourself home, except if you've been given medication that makes you drowsy. Your care team will let you know if it's best to arrange for someone to accompany you.

What should I eat or drink after the scan?
It's advisable to drink plenty of fluids post scan to help flush the radiotracer from your system. You can return to your normal diet, unless your doctor gives you specific instructions.

Will I get my results straightaway?
The scan images need to be reviewed by a nuclear medicine specialist, which can take a few days. Your doctor will schedule a follow-up appointment to explain the results and what they mean for your treatment.

CARE



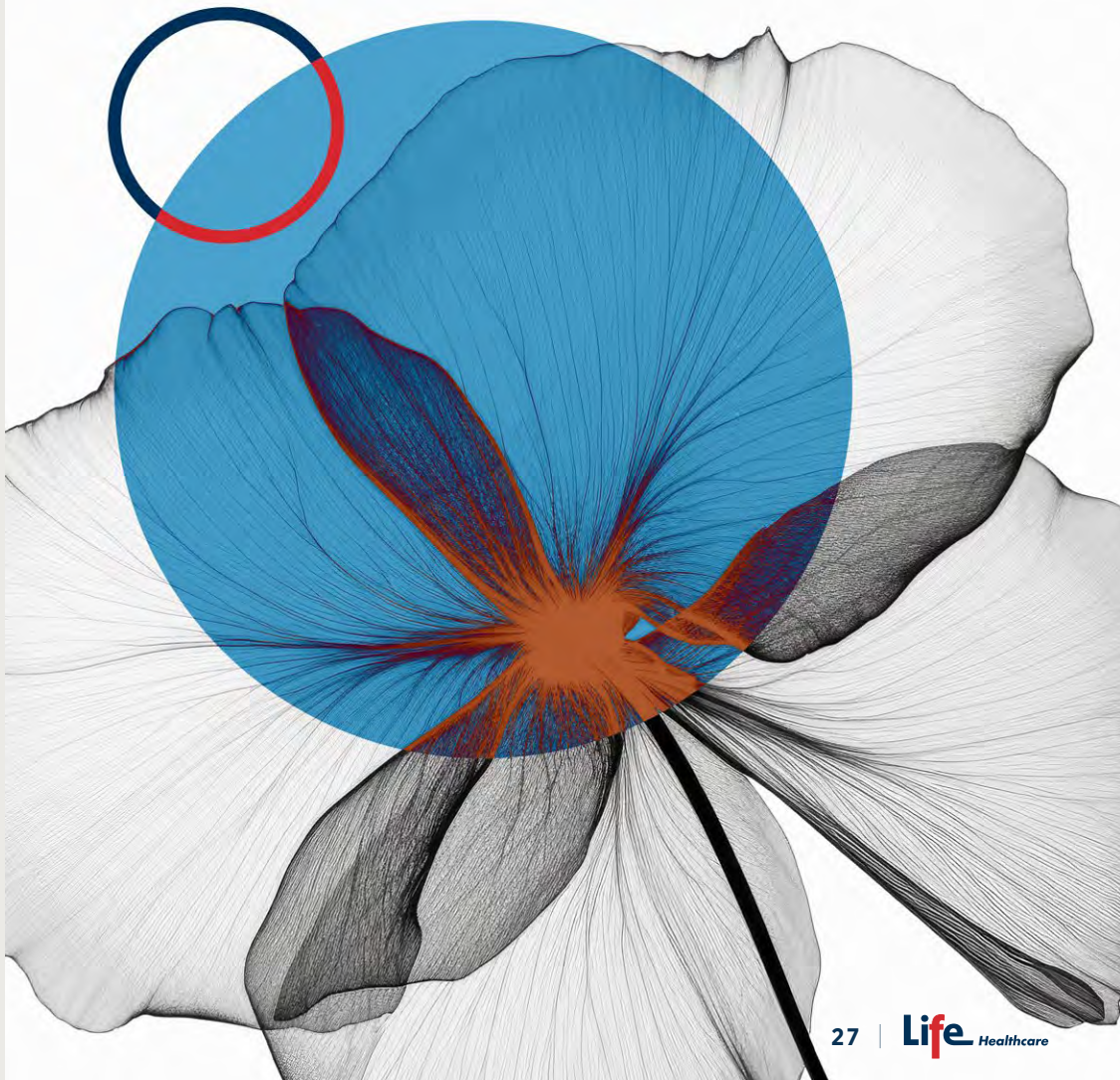
What if I feel anxious about the scan or the results?

You're not alone. Many patients feel nervous about the scan itself or waiting for results. It may help to:

1. **Ask questions** before the scan so you feel prepared.
2. **Focus on the facts.** The scan is a tool that helps your care team make informed, effective decisions about your treatment.
3. **Bring something comforting** for the waiting room (a book, a playlist, or a friend).
4. **Talk to your doctor** or a support group if your anxiety feels overwhelming.

Remember, this scan is there to help. It provides clarity within an accurate, personalised treatment plan.

POST SCAN: WHAT HAPPENS NOW?



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Your PET-CT results guide the next steps in your treatment

A PET-CT scan doesn't just signal the end of one phase; it opens the door to the next. With detailed insights into how your body is responding, your doctors can tailor the treatment plan for you.

STEP 1

Interpreting the results
After the scan, a nuclear medicine specialist reviews the images, analysing both the structural and functional details. This expert insight reveals not just where cancer may be, but also its activity level. The results are then shared with your doctor, who will go over them with you, usually within a few days.

STEP 2

Treatment planning with precision
Your scan helps ensure that every decision made is as informed and specific as possible. It's about continuing with a treatment path that's right for you.

Your PET-CT results might be used to:

- Confirm or re-assess the stage of cancer, which directly impacts your treatment plan.
- Decide whether surgery is appropriate, or if another approach may be more effective.
- Help guide radiation therapy, so it targets only the areas that need it.
- Adapt chemotherapy or immunotherapy, based on how the cancer is behaving.
- Establish a baseline, so your doctors can accurately compare future scans.

The clarity that PET-CT provides helps to reduce side effects through accurate treatment and determining the right course of treatment for you.

WHAT TO ASK YOUR DOCTOR AFTER YOUR SCAN
Don't be afraid to bring your questions to your next appointment. Here are a few questions you might find helpful:

- What did my scan show, and what does it mean for my treatment?
- Has my diagnosis or stage changed?
- What are the next steps, and when will they happen?
- Will I need another scan later on?
- Are there support services I should consider?

STEP 3

What to expect in the days ahead
Once the results have been reviewed, your care team will start putting your treatment plan into action. You may be scheduled for:

- An appointment to discuss your treatment options.
- Additional tests or blood work.
- Consultations with specialists, such as surgeons or radiation oncologists.
- A follow-up scan in the future to monitor how the treatment is progressing.

You'll also have a chance to talk about supportive care options, such as nutrition, mental health support, or rehabilitation services.

Behind every scan is a team that sees you, not just your diagnosis

Cancer care isn't something that one person does alone. At Life Healthcare, your journey is supported by a multidisciplinary team of experts who bring together different skills, perspectives, and compassion to guide you through every step.

Each team member plays a unique role in making sure you get the most accurate information, the most appropriate treatment, and the support you need along the way.

Nuclear medicine specialist
This is the specialist who interprets your PET-CT scan. They have advanced training in nuclear imaging and understand how to read both the structure of your body and the activity of your cells. Their role is to provide your care team with detailed insights that guide your treatment plan.

Oncologist
Your oncologist is responsible for overseeing your cancer treatment plan. They'll use the insights from your PET-CT scan to make key decisions about surgery, chemotherapy, radiation, or other treatments. They also coordinate your care with other members of the team to make sure everything works together.

TEAM

Radiographer

Radiographers are the trained professionals who operate the PET-CT scanner and ensure that your scan is completed safely and accurately. They'll walk you through what to expect on the day of your scan, help you feel comfortable, and monitor you during the process.

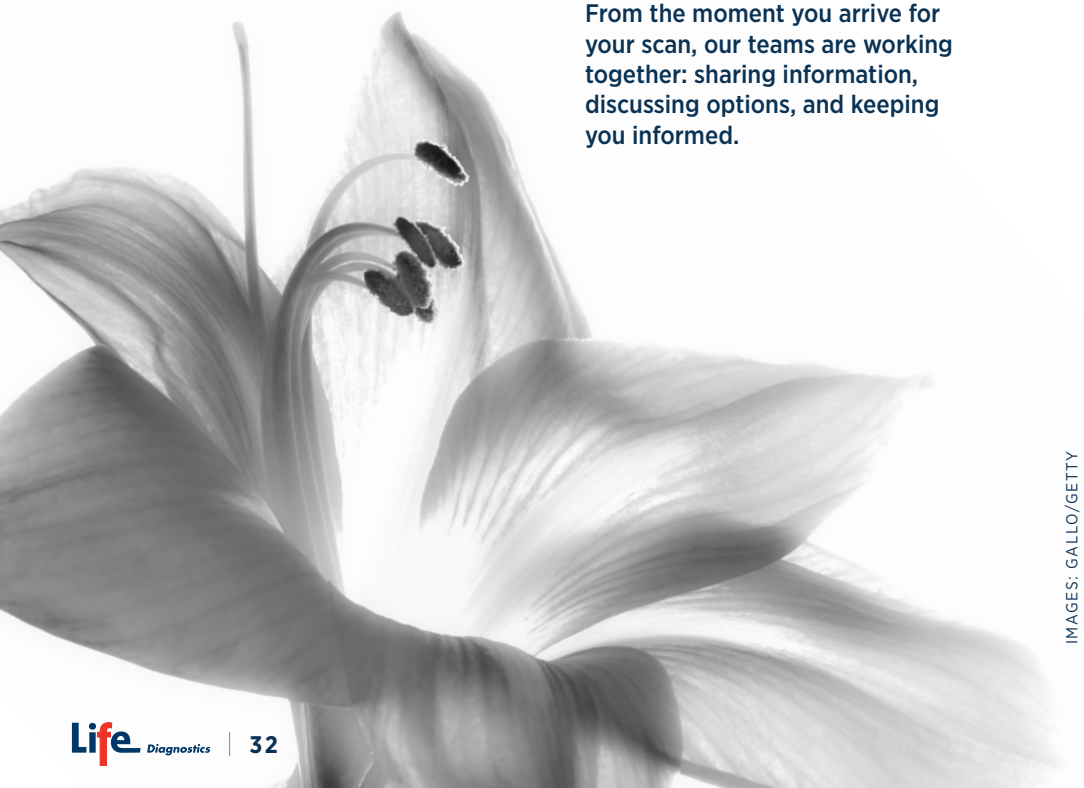
Nursing and support team

Our nurses and care coordinators are there to support you before, during, and after your scan. Whether helping with preparation, answering questions, or offering reassurance on a tough day, they're an essential part of your care experience.

WE WORK AS ONE TEAM, FOR YOU

At Life Healthcare, we believe in patient-centred care. That means treating the cancer, but also supporting the person behind the diagnosis.

From the moment you arrive for your scan, our teams are working together: sharing information, discussing options, and keeping you informed.



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Visit our website

Want to read more about PET-CT, cancer staging, or what to expect from treatment? Our Life Diagnostics and Life Oncology webpages have easy-to-understand articles designed to support you, wherever you are in your journey.

Scan the QR code to access resources, watch videos, or read patient-friendly explainers reviewed by medical experts.

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Life Healthcare offers advanced imaging and oncology services, including PET-CT, at several specialist centres around the country. To find a facility near you, visit our website or speak to your referring doctor.

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