What Can a Full Body MRI Detect?

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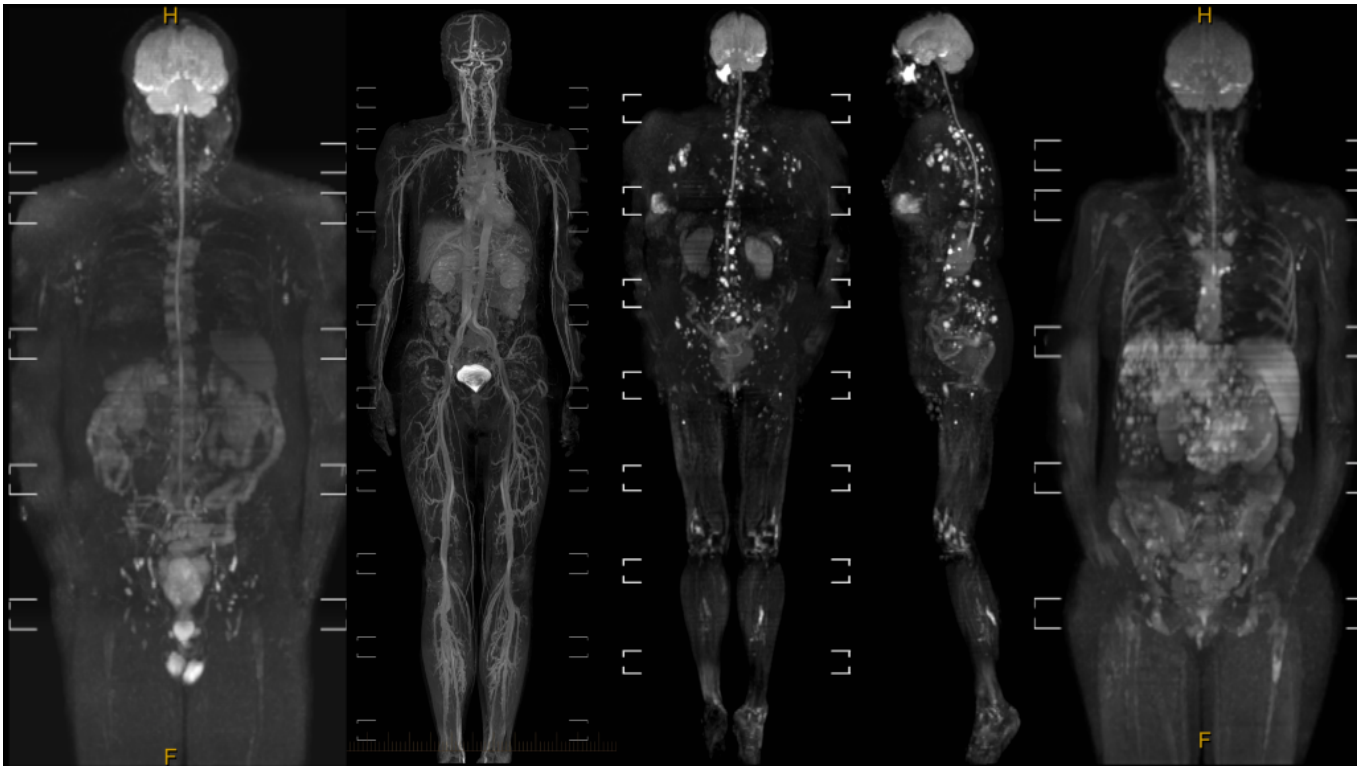

What is a Full-body MRI?

Full-body MRI, also called whole-body or total-body MRI, is a non-invasive, radiation-free scan that evaluates the entire body in a single session.

At MBR Health, our whole-body MRI scan was built for oncology, and is regularly used for cancer staging or to monitor treatment response. We also offer this scan for cancer screening for individuals without symptoms. The focus of this article will be on full-body MRI as a cancer screening tool.

Not all full-body MRI scans are the same

It is important to recognise that not all full-body MRI scans are equivalent. At present, there are no universally adopted minimum standards for protocol design. Differences in sequence selection, spatial resolution and signal-to-noise ratio directly influence the ability to detect small tumours and subtle disease. Image quality and technical fidelity therefore play a critical role in diagnostic confidence.

Whole-body MRI screening should be optimised for early cancer detection.

To ensure that the correct combination of sequences is chosen, every MRI requires a predefined intent for the scan. In routine diagnostic imaging, this "intent" is usually determined by a specific clinical question, patient-reported symptoms, or important medical history. In the context of screening, where imaging is performed on individuals without symptoms, the primary intent *should be* the early detection of cancer.

Because many conditions are also visible on full-body oncology-optimised imaging, performing whole-body MRI inevitably detects additional clinically important findings beyond cancer. These may include abnormalities such as aneurysms, pre-cancerous conditions, metabolic disease, and other significant organ pathology.

What does a Full-body MRI cover?

Full-body MRI anatomical coverage can range from "eyes to thighs" or true head to toe, depending on the provider.

Our advanced whole-body MRI protocol assesses all major regions of the body:

- **Head and neck**
- **Chest and lungs (with an included low-dose CT chest)**
- **Abdomen**
- **Pelvis**
- **Skeleton including the spine**
- **Extremities***

What Types of Cancer Can a Whole-body MRI Detect?

Unlike many screening providers, our whole-body MRI protocol was built for oncology and is used clinically for cancer staging and to monitor treatment response.

Our exclusive multi-modality protocol can identify small solid tumours in over 18 organs including, but not limited to:

- **Brain**
- **Lungs**
- **Oesophagus**
- **Stomach***
- **Liver**
- **Pancreas (read more here)**
- **Kidneys**
- **Bladder***
- **Uterus**
- **Bone and connective tissues.**

It can also detect precancerous conditions such as high-risk pancreatic cysts (IPMN), allowing for earlier intervention and closer monitoring.

In partnership with Whole Body MRI, we also offer an Executive Package with an addition of 10+ dedicated scans to further expand our organ coverage to include early detection of the following cancers:

- **Breast Cancer**
- **Prostate Cancer**
- **Ovarian Cancer**
- **Thyroid Cancer**
- **Ocular Cancer (e.g. Melanoma)**
- **Salivary Gland Cancers**

Non-cancerous conditions

Although designed primarily for oncology, whole-body MRI often identifies additional non-cancerous, but clinically significant conditions.

These may include:

- **Aneurysms**
- **Neurological changes such as early dementia markers, multiple sclerosis, or prior strokes**
- **Reproductive conditions such as ovarian cysts, fibroids, endometriosis, or prostate enlargement**
- **Metabolic conditions including non-alcoholic fatty liver disease, iron overload, and high visceral adiposity**
- **Cardiovascular disease risk**
- **Musculoskeletal and spinal conditions such as arthritis of major joints, disc herniations, or spinal cord abnormalities.**

For more information about what our multi-modality whole-body screening can detect, please visit wholebodymri.com.au/our-reports

How are findings reported?

Equally important to what the scan detects is how the findings are reported and followed up. Our structured reporting system uses internationally recognised ONCO-RADS criteria, which provide a consistent framework for interpreting whole-body MRI results. Each finding is assigned a score from 1 to 5, reflecting the likelihood of malignancy.

This standardised approach ensures that both patients and referring doctors receive clear, actionable information. For example, A score of 1 represents a normal finding, while a score of 5 indicates a lesion that is highly suspicious for malignancy. By grading findings in this way, we help avoid unnecessary anxiety and reduce the number of avoidable follow-up tests, while ensuring that suspicious lesions are investigated quickly and appropriately.

This structured reporting system is designed to support informed decision-making, promote clarity in communication between radiologists and clinicians, and ensure that follow-up is both clinically justified and efficient.

We recommend consulting a trusted healthcare provider regarding any finding categorised ONCO-RADS 3 or higher for further follow-up imaging or testing.

Summary

At MBR Health, we believe whole-body MRI should always be optimised first and foremost for cancer detection. This is the most clinically meaningful use of the technology in screening asymptomatic individuals.

The additional discovery of other conditions is a valuable but secondary benefit, made possible by the scan's comprehensive anatomical coverage.

If you would like more information, please contact us.

If you have any questions please visit our frequently asked questions page.

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Read this article online: https://mbrhealth.com.au/insights/what-can-a-full-body-mri-detect/

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