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A machine that has  
read your mind even  
before the

# SCAN

The all-new **MIOT SIGNA Pioneer 3T MRI** understands what you expect from an MRI machine and is everything that you wanted it to be. This **highly sophisticated machine** strives every inch of the way to be extremely **patient-friendly** while taking MR imaging to a whole new level.

So if claustrophobia, ear-shattering noise levels and other concerns have been preventing you from taking an MRI, worry not. Because the new 3T has already read your mind to present itself as the **most patient-friendly 3T MRI machine in the world.**



A silhouette of a person in a meditative lotus position sits on a rock in the middle of a calm blue ocean. The background is a bright blue sky with soft, wispy white clouds. The sun is visible on the left side of the frame, creating a lens flare effect. The entire scene is framed by a thick, irregular grey border.

## Feel the silence

The noise generated during an MRI scan can be a nightmare for patients. It is so unbearable that patients become restless and are anxious to get out of the machine as soon as possible. And because they are unstable during the scan, the images (study) obtained are incomplete and rendered useless.

To address this major issue, the new 3T MRI **cuts off the machine noise** during the all-important neuro examination.

With only the usual ambient sound audible, **Silent MRI** ensures that the patient is in a **relaxed state of mind** during the entire scan. This technological boost, combined with the superior 3T magnet and dedicated coils, produces **better images** of the neuro parts, and that too in no time. Therefore, the patient can avoid a rescan.

Also, the **noise levels** are only a few decibels above the ambient noise while scanning the spine and musculoskeletal system, thanks to the innovative **acoustic reduction technology**.

A man in a blue shirt and jeans stands in a vast green field with his arms raised, symbolizing a non-claustrophobic experience.

## A non-claustrophobic experience

When it comes to taking an MRI scan, what puts off any patient first is the claustrophobic ambience. Going through a small bore can be a traumatic experience for anyone, especially the elderly and children. Which is why, the new **MIOT SIGNA Pioneer 3T MRI** is designed to be **patient-friendly**. It comes with a **broad and roomy 70 cm bore** at its core, where patients can expect a **relaxing MRI experience** and not worry about being cramped for space.



## MRI and entertainment? Yes, it is a reality now.

The **best MRI images** are obtained only when the **patient is at ease** and not distracted by the fear of being in an MRI machine. So to divert the patient's attention and calm his / her nerves and senses, a **world of entertainment** awaits inside the 3T MRI. The patient can customise **music and videos** and **be at peace** during the scan. The videos can be viewed through specially designed glasses.





## Breathe easy now

Most patients (the ones very ill, the elderly and children) find it very difficult to hold their breath due to their physical condition, anxiety and the fear of being in an MRI machine. This completely defeats the purpose of taking an MRI (e.g., abdominal scan for the liver, kidneys, etc.) as the images obtained are poor in detail. But, in the all-new 3T MRI, it is more than enough if the **patient holds their breath** for a mere **8 seconds**, and not 20-25 seconds like in the past.

And for patients who find it difficult to hold their breath for even 8 seconds, there's a new feature called **Free Breathing Sequence**. So advanced is this technology that it powers the 3T MRI to **scan real quick** and obtain **high-quality images** while the patient is breathing.

NOW KNOW  
YOURSELF  
LIKE YOU NEVER  
DID BEFORE

## MAGiC for neuro

*A machine that will work its magic on you*

Typically, when an MRI of the brain is taken, multiple sequences are acquired. Each sequence takes 6 minutes (a total of 40 minutes with all sequences combined), making it a nightmare for patients. But this 3T MRI comes with a **patient-friendly feature** called **MAGiC (MAGnetic resonance image Compilation)**. MAGiC is truly magical as it helps scan the brain **3 times faster** than the 1.5 MRI. Imagine, **within just 5 ½ minutes**, it gets **six sequences** of the brain **at one go**. While you can be out of the machine in no time, the 3T doesn't compromise on the diagnosis.

## Musculoskeletal

*Dedicated coils leave no part unchecked*

Coils are an integral part of generating a better MRI scan quality. They are placed around the body part that is to be imaged to achieve a high level of accuracy. Apart from the regular coils one gets with an MRI machine, the **3T MRI at MIOT** brings with it **exclusive coils for the wrist, finger, ankle and elbow**. These **highly specialized and dedicated coils** capture **high-resolution images** of tissues in these **small body parts** like never before. When it comes to the musculoskeletal system, the coils work with **precision** to get the **best imaging** possible, while at the same time ensuring that the patient is not in discomfort.





## Dedicated breast coils

**Breast MRI** is done using **dedicated breast coils** to **obtain high resolution images** for the **characterisation of lesions** which are unclear on a conventional mammogram. And while **tumors in dense breasts** generally go unnoticed during a mammography, these dedicated breast coils play an effective role in picking them up with **great precision**.





## Abdomen (Liver fat quantification)

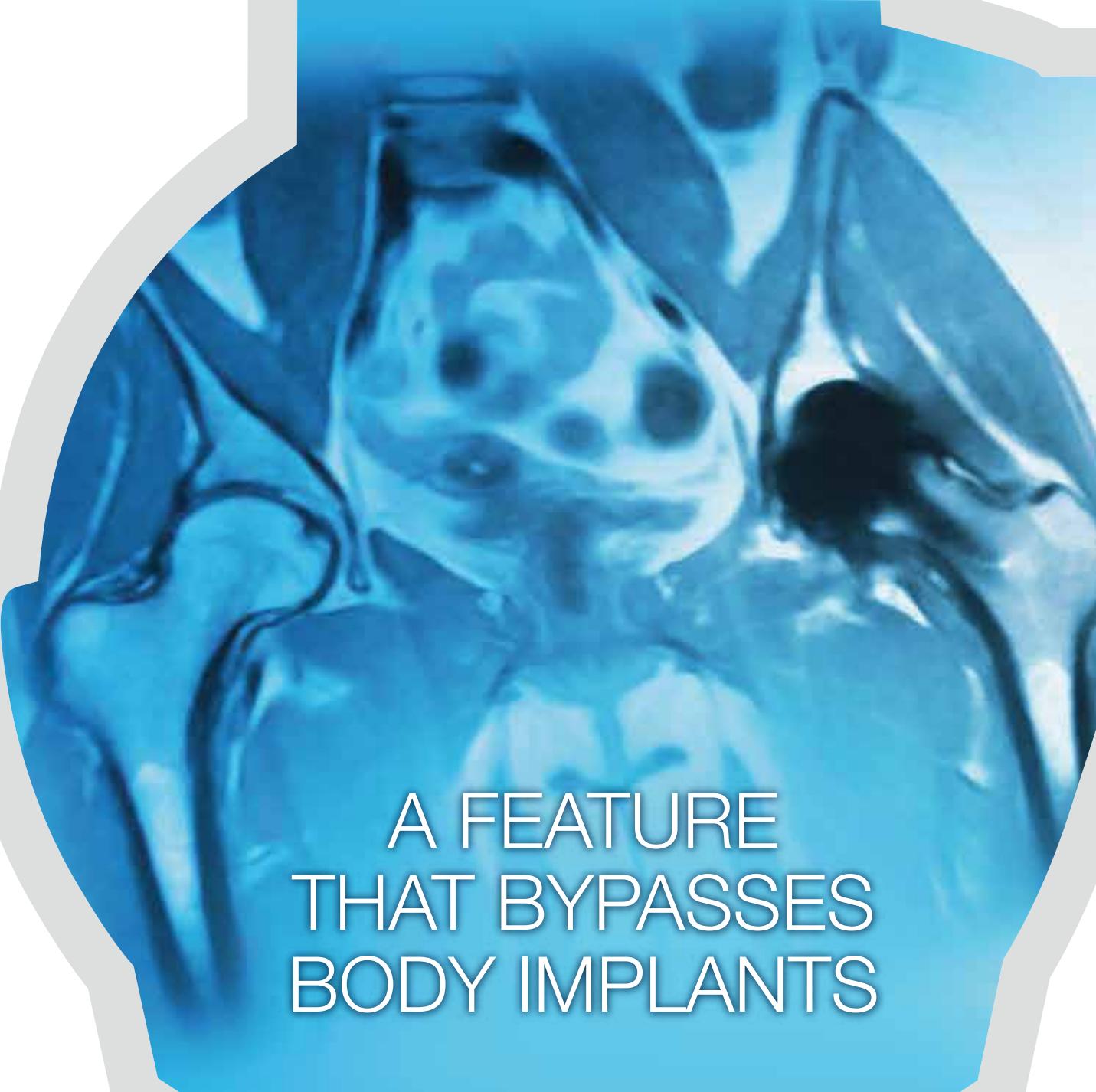
This new 3T MRI has a **novel sequence** that **assesses** the amount of **liver fat**. It is a **very important feature** that helps in **evaluating patients with fatty liver diseases** and **monitoring changes following treatment** for the same. While ultrasound used to be the default method for diagnosing fatty liver, the 3T MRI has emerged as the **most superior option**.

### FOCUS

**FOCUS** is a unique application that is used to obtain **high resolution images** of the **liver, pancreas and prostate**. It is especially useful in **evaluating cancers** in these three organs with **unmatched accuracy**.

### DISCO

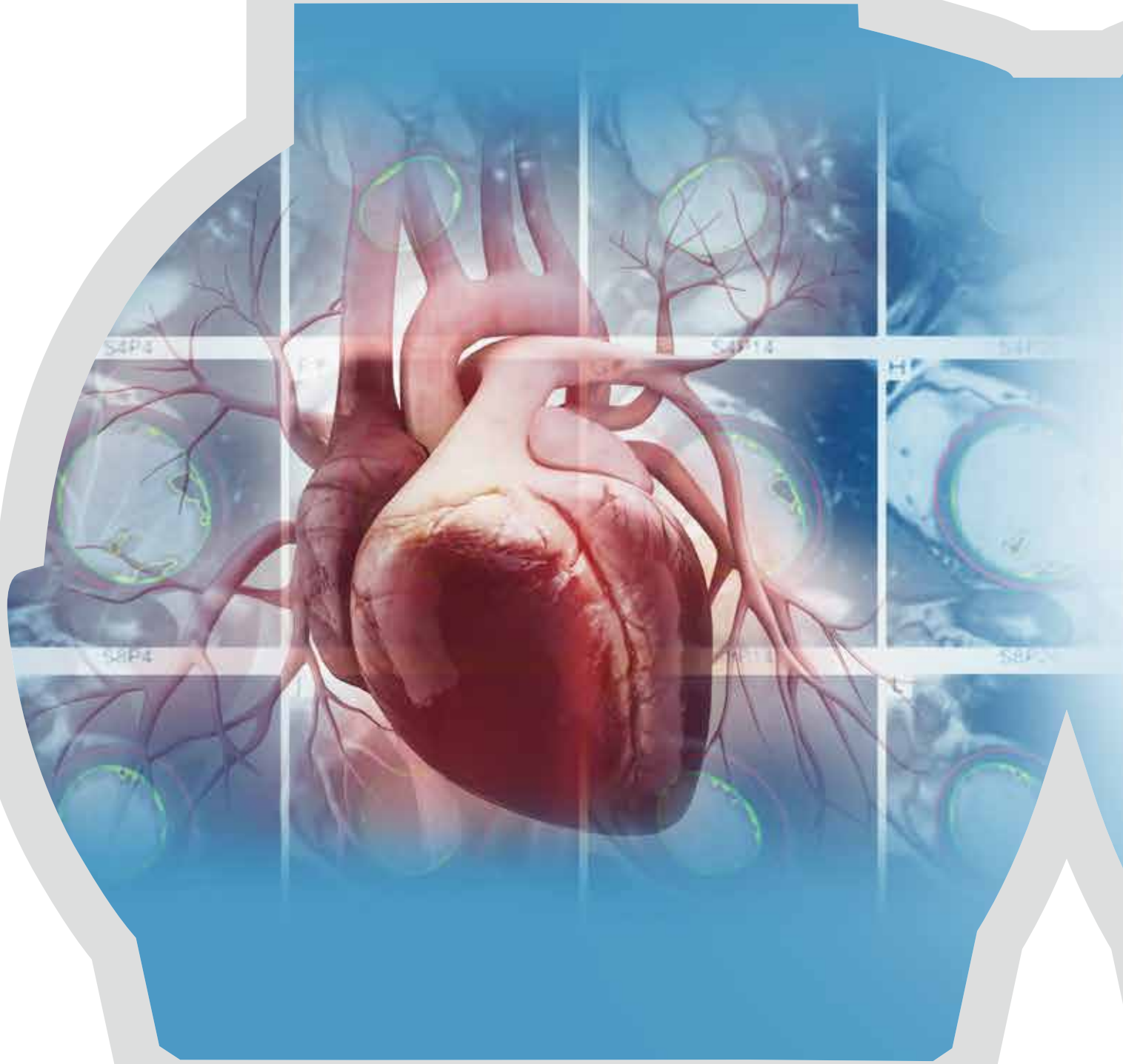
The **DISCO** application in the 3T MRI reiterates the fact that time is of the essence when it comes to diagnosis. It assists in **capturing the entire liver volume** in a **mere 6 seconds**, generating **multiple 4D images** in a single breath-hold. Besides, the DISCO application is so **uncompromising on precision** that it gets each scan right at the very first attempt.



A FEATURE  
THAT BYPASSES  
BODY IMPLANTS

## MAVRIC

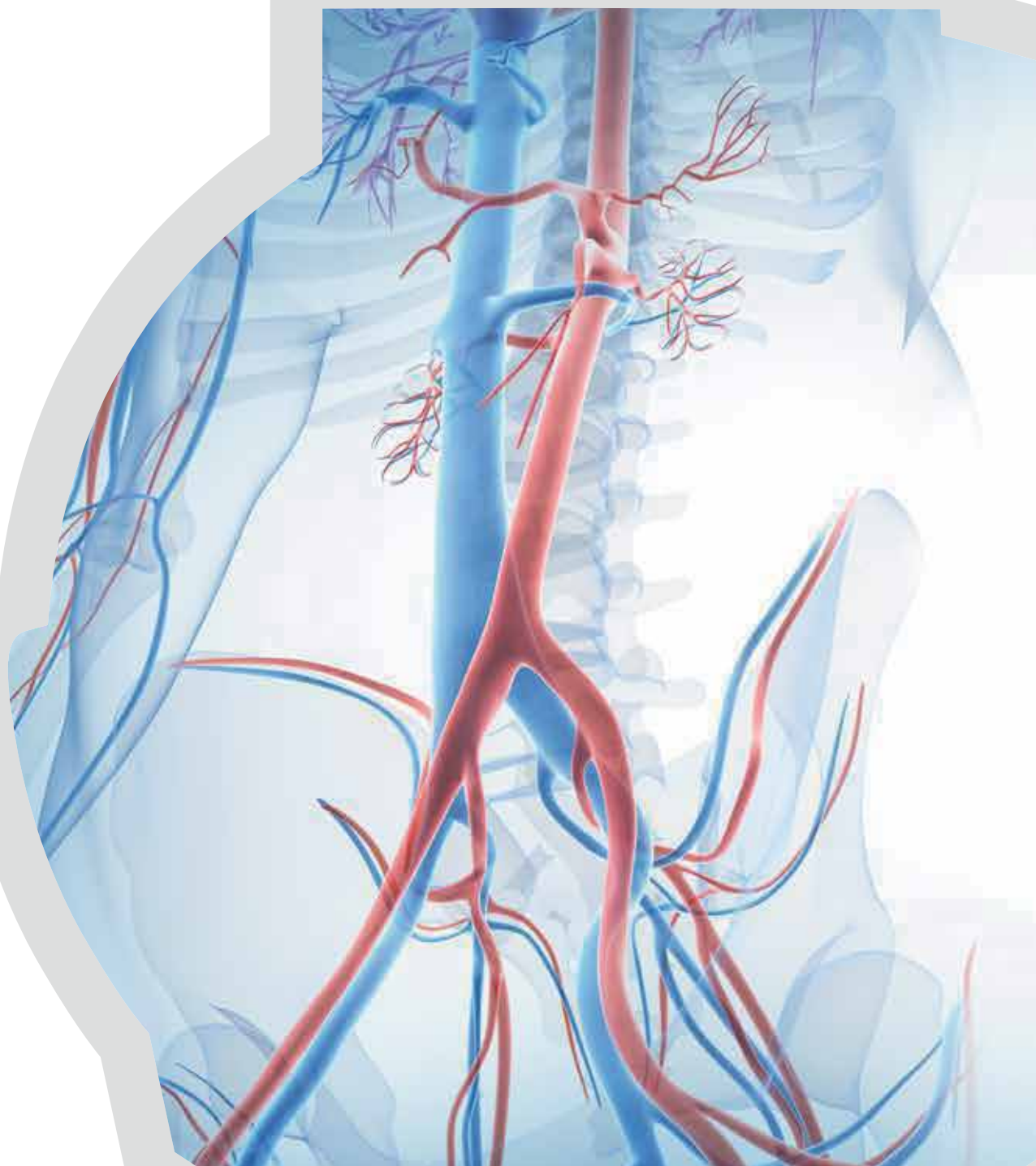
To conduct an MRI scan in a patient with metallic implants (prosthesis, screws, dental fillings, etc.) is a technical challenge due to the presence of artifacts (an abnormality seen during visual representation that is not present in the original object). The 3T MRI machine tackles this issue with a **novel sequence** called **MAVRIC**. It is designed to **reduce artifacts** caused by implants, **enhance the visualization of bone and soft tissues** and **produce high-quality MR images**.



## Dedicated cardiac software

After a heart attack, certain areas in the heart are left damaged. To **evaluate the amount of heart muscle damaged**, the 3T MRI has an inbuilt dedicated cardiac software. It also **performs functional analysis of the LV (left ventricle)**, a heart chamber that pumps oxygenated blood to the rest of the body.





## High resolution vascular imaging

Kidney patients generally hesitate getting an angiogram due to the use of dye. So to address patients with impaired renal function, the **3T MRI at MIOT promises safe, high-resolution non-contrast angiograms** of the kidneys without the usage of dye (the kidneys are unharmed because of this). The machine is also designed to produce **high resolution angiograms of the limbs and the brain.**

## BODY PART-SPECIFIC COILS



MIOT SIGNA Pioneer 3T MRI  
is highly equipped to scan

### **ABDOMEN AND PELVIS**

(including special protocols for liver and prostate)

### **ANGIOGRAPHY OF BRAIN**

(including special protocols for stroke and tumours)

### **AND NECK VESSELS**

**AORTA** (including peripheral angiogram)

### **BREASTS**

**CARDIAC** (including functional analysis)

### **JOINTS**

**MRCP** (Cholangiopancreatography)

### **NECK / ORBITS**

### **NEUROGRAPHY**

**NON-CONTRAST RENAL ANGIOGRAM**

### **SPINE**

## A proactive initiative by MIOT International

Being a **pioneer in innovations**, **MIOT International** has always been at the forefront in bringing the latest technologies from around the world to you. And, as the **Imaging Sciences** world is witnessing sweeping changes with the foray of sophisticated equipment, we at MIOT have added the **MIOT SIGNA Pioneer 3T MRI** to our imaging arsenal.

Imaging Sciences, we believe, is vital to any healthcare provider. It helps with not just diagnosis, but with the overall understanding of the human body. Which is why, we have invested in one of the **latest and most advanced MRI machines**. And, with **expert radiologists** at the helm, you can expect the **best and most reliable imaging results** at MIOT.

