

MRI of the musculoskeletal system is used to view muscles, tendons, ligaments, cartilage, meniscus and labrum, joint capsule and also bones. In addition to traumatic damage, MRI reveals inflammatory and degenerative changes, developmental abnormalities and tumours of the musculoskeletal system.

MRI arthrography (administration of a contrast medium directly into the joint) is used in the diagnosis of changes within joint structure due to inflammatory diseases and traumatic and postoperative changes.

MRI of blood vessels is used for a detailed view of the blood vessels of the brain (aneurysms, vascular malformations) and neck (narrowing of the arteries due to atherosclerosis).

Optional sedation is available during MRI procedures for children and adults.

We are among the hospitals that provide breathing support during MRI for all patients with the need for assisted or controlled respiration, as well as patients in coma.

Numerous worldwide patients have been diagnosed in our hospital, including: Garry Kasparov (former World Chess Champion), Marin Čilić (Winner of the US Open 2014), Aleksandr Viktorovich Khoroshilov (the first Russian male to win a World Cup race (Schladming, 2015) since 1981) Gordan Giriček (NBA player: Memphis Grizzlies, Orlando Magic, Utah Jazz), Bojan Bogdanović (NBA player: Brooklyn Nets), Mario Mandžukić (football player: Juventus, Italy and Croatian National Soccer Team), Luka Modrić (football player: Real Madrid, Spain and Croatian National Soccer Team), Ivan Rakitić (football player: Barcelona, Spain and Croatian National Soccer Team), etc.

Opening hours

Zabok: Monday to Saturday
8 am - 8 pm

Zagreb: Monday to Saturday
8 am - 8 pm



365
days of excellence

CENTER FOR RADIOLOGY & IMAGING

St. Catherine Specialty Hospital

Bračak 8 / 49210 Zabok / Croatia
phone +385 49 296 600 / Fax +385 49 296 699
info@svkatarina.hr

Trpinjska 9 / 10000 Zagreb / Croatia

phone +385 1 286 74 00 / Fax +385 1 286 74 99
info@svkatarina.hr

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CENTER FOR RADIOLOGY & IMAGING

The Center for Radiology & Imaging at St. Catherine's Specialty Hospital is nationally and internationally recognized as the premier center for cutting edge musculoskeletal, orthopaedic, and spine clinical imaging.

Approximately 12,000 musculoskeletal imaging examinations are performed annually including magnetic resonance imaging (MRI), computed tomography (CT), and ultrasound.

The mission of the Center for Radiology and Imaging is to provide the highest quality diagnostic imaging for musculoskeletal conditions and provide image guided treatment options to support restoration of function and mobility. Our goal is to enhance the quality of patient lives through cutting edge diagnostic imaging in MR, CT, Ultrasound through development of new techniques that optimize early detection and treatment of musculoskeletal conditions

The Center for Radiology & Imaging uses state-of-the-art equipment to permit extended field of view imaging which is easier for referring physicians to review.

St. Catherine Specialty Hospital is equipped with the most advanced MRI device – MAGNETOM Avanto by Siemens, featuring a magnetic field strength of 1.5 T, thanks to its technical characteristics and unique accessories. A device of such potential brings immeasurable benefits:

- ▶ **high diagnostic reliability because of images with high spatial and contrast resolution**
- ▶ **short time of examination because of strong gradients**
- ▶ **accurate imaging allowed by Tim technology**
- ▶ **improved image processing and better resolution thanks to the latest generation of computer software**
- ▶ **biochemical imaging of cartilage - early diagnostics of cartilage damage thanks to the use of advanced software support**
- ▶ **this MRI device is the only one in the region with the possibility for specific diagnosis of early cartilage damage (dGEMRIC and T2 mapping).**



Those device characteristics are of great importance for a successful diagnostic procedure, especially in restless patients, young children and claustrophobic individuals. MRI scans of young children and adults can be performed with sedation and/or anaesthesia.

We are able to provide breathing support during MRI for all patients in need of assisted or controlled respiration, which include comatose patients.

Using the most advanced radiological equipment, St. Catherine's Specialty Hospital is happy to provide the following procedures:

Magnetic resonance imaging (MRI)

MRI of the brain / MRI of the orbits / MRI of the sinuses / MRI of the middle ear / MRI of the spine / MRI of the soft neck tissue / MRI image of the brachial plexus / MRI of the abdomen / MRI of the pelvis / MRCP (bile and pancreatic ducts imaging) / MRI of the musculoskeletal system / MRI arthrography / MRI of blood vessels of the head and neck

Ultrasonography (US)

Ultrasonography of the locomotor system (joints, muscles, tendons, ligaments)

Ultrasonography (US) is a non-invasive imaging method based on harmless ultrasonic waves. Ultrasonography is used in the examination of the musculoskeletal system for analysis of:

- muscles, tendons, ligaments (contusion and sprain, partial or full ruptures, bleeding, haematoma, degeneration with or without calcifications)
- joints (joint capsule sprains or fractures, joint ligaments, joint effusion, synovial membrane)
- bone surface (in small fractures, inflammations and tumours)
- tumour formations and muscle tissue surface (assessment of perfusion, internal structure, limitations).

MRI procedures

Brain MRI is used to detect congenital anomalies of the brain, vascular disorders (stroke, bleeding, narrowing of blood vessels, aneurysms, arterio-venous malformation), metabolic and degenerative diseases, traumatic and inflammatory and neoplastic conditions.

MRI of the spine is used to detect degenerative, traumatic and inflammatory changes of the spine, intervertebral disc changes (protrusions, extrusions) and changes in the spinal cord (inflammation, tumours).

Neck MRI is used to display pathologic changes of soft tissue structures of the neck (muscles, thyroid gland, salivary glands, lymph nodes, throat).

MRI of abdominal organs is used to detect changes in the liver, pancreas, spleen, kidneys, adrenal glands, and abdominal lymph nodes. It enables analysis of the bile and pancreatic ducts in cases of stones or other causes of narrowing (MRCP). MRI examination of the pelvis shows changes in the pelvic organs, including the uterus and ovaries in women and prostate in men.

St. Catherine's radiological team:

Igor Borić, M.D, PhD, radiologist, Hospital director

Renata Prpić-Vučković, M.D., M.Sc, radiologist, Head of center

Krunoslav Štefančić, Radiological technologist

Davor Fekeža, Radiological technologist

Ida Fekeža, Radiological technologist