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Fast and easy diagnostic imaging from head to toe

**Ingenia 1.5T with dStream provides speed and convenience,
IntelliSpace Portal provides flexibility**

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Dr. Tobias Rother (left) and **Dr. Gerwin Schmidt** (right).

Fast and easy diagnostic imaging from head to toe

The Radiology Practice Munich Center is using the speed and convenience of the Ingenia 1.5T with dStream and the flexibility of IntelliSpace Portal

The [Radiology Practice Munich Center](#) (Munich, Germany) offers a broad variety of radiology exams. Cross-sectional imaging stands out, with particular emphasis on MRI for musculoskeletal and oncology imaging. To differentiate themselves from other practices, they acquired the completely digital Philips [Ingenia 1.5T](#) to help them broaden their capabilities, particularly in MRI of oncology patients. In addition, they are now using [IntelliSpace Portal](#) for viewing, postprocessing and analyzing. It allows combining data from multiple modalities to easily facilitate combined diagnoses.



“In the past, whole body exams were reserved for special cases only due to the long exam time. Now, the reduced scan time creates a viable option for a wider patient group.”

Expanding to advanced examinations

“With the Ingenia we can now also offer MRI examinations that are not so typical for outpatient clinics but more usually offered in clinical settings, such as specialized abdominal and whole body scans,” says Dr. Gerwin Schmidt, radiologist with a focus on musculoskeletal and oncology imaging. He is enthusiastic about the advantages provided by Ingenia: “We are flexible now and can adjust our examination to each patient and specific diagnostic question. We can fine-tune our whole body imaging to the specific request, for instance to demonstrate a primary tumor size and location or to visualize smaller lesions in an affected area.”

Dr. Tobias Rother is radiologist with a special interest in cardiovascular, abdominal and musculoskeletal imaging. “The high quality of the Ingenia images provides an important benefit,” he says. “High image quality reduces the uncertainty in reporting – we see abnormalities very clearly. We now also run complex examinations, such as dynamic contrast-enhanced multi-planar imaging. Additionally, we are using newer, special techniques, like whole body diffusion weighted imaging which provide additional information to assist in diagnosis. With Ingenia’s digital coil technology and its large field of view of up to 55 cm, we need fewer stations and at the same time we get images of consistently high quality, virtually free of artifacts, all the way to the edge. This high image quality combined with the time saving allows us to now perform these advanced exams in an economically interesting way within a private practice.”

“We now also use the mDIXON technique, which provides different contrast types from a single examination. Its fat saturated images demonstrate excellent uniformity in fat suppression, which is very useful in contrast-enhanced examinations. At the same time mDIXON provides in-phase and opposed-phase images as well, which we use for organs like the liver and the adrenal gland.”

“With all this extra information, Ingenia is giving us confidence in our diagnoses,” says Dr. Schmidt.

Excellent results, reproducibility and comfort for patients

“For a practice specializing in oncology, the challenge is to capture also the small lesions. This requires a high image quality over a large coverage and the flexibility to combine methods. Ingenia addresses this combination of needs,” explains Dr. Schmidt.

“In the past, whole body scans were reserved for special cases only because of the length of the examinations. Now, with the short examination times we can extend Ingenia’s technological advances to more patients. The large field of view means children and teenagers can be scanned in just two or three steps. Today, we perform whole body imaging whenever indicated,” says Dr. Schmidt. “Ingenia has made it economically viable for the practice to offer such examinations to referring physicians and their patients.”



Skeletal and splenic manifestation of non-Hodgkin lymphoma

A 33-year-old male with history of non-Hodgkin lymphoma underwent an MRI exam on Ingenia 1.5T to visualize clinically suspected recurrent disease. Whole-body MRI was performed using T1W TSE and STIR imaging (4 stations, matrix 400x400, 6 mm slices). Additional whole-body diffusion imaging (3 stations, matrix 192x192, 6 mm slices) with MIP unmask a focal area of diffusion restriction in the left scapular region. Subsequent contrast-enhanced 3D mDIXON imaging reveals a bone manifestation of a lesion in the left scapular angle. Furthermore, multifocal splenic infiltration is depicted. Note that the splenic lesions are veiled by the high physiological background diffusion signal in splenic tissue.

The findings are compatible with skeletal and splenic tumor recurrence of non-Hodgkin lymphoma. Further total body follow-up imaging according to therapeutic regime is advised.

Whole-body MRI allows rapid visualization of lesions in this lymphoma patient. A finding of multifocal organ manifestations has a decisive impact on further patient management and therapeutic regime. The fully digital Ingenia 1.5T MR system allows rapid whole body MRI with homogeneous, high image quality in depicting these lesions. Additionally, state-of-the-art techniques such as whole body DWI can be included in the exam protocol, which further enhances the capability for visualizing lesions in oncology patients.



“In both our locations, we only need to login to IntelliSpace Portal for immediate access to multimodality viewing and processing of all our imaging data.”

“Ingenia coils are much lighter than the coils we had before, and easily adapt to the body form,” he reports. “This not only leads to higher quality images, it is also easier for the patients. The automatic selection of coil elements by SmartSelect simplifies patient positioning, makes the work easier for the technologist and reduces examination times still further. Particularly for patients with pain this is a great benefit.”

Viewing and processing independent of location and device

The practice also invested in IntelliSpace Portal, Philips solution for multimodality image viewing and processing. “We have 13 radiologists working at our two sites and we need to view, process and analyze MRI, CT, PET and other images – both our own, and referral images, from a variety of different systems,” explains Dr. Rother. “That is why we need a centralized system that allows us, wherever we are, to efficiently evaluate all such results and present these in our reports. IntelliSpace Portal is ideal because we only need to login to have access to multimodality viewing and processing of all our imaging data in consistent and comparable ways.”

“IntelliSpace packages help us to use diagnostic time effectively and make the most of the ever-improving image quality. For example, the Multimodality Tumor Tracking application lets us calculate the volume of a tumor and easily evaluate its RECIST criteria and compare the results across modalities, such as MRI and CT,” Dr. Rother adds.

Prepared for the future

“With dStream technology and the Ingenia system, we are well prepared for the ever increasing requirements and needs from our referring clinical colleagues,” says Dr. Rother. “The all-digital and channel-independent system architecture makes it possible to easily connect new high-channel coils without system hardware upgrade.”

“Moreover, we experience Ingenia as a very stable and mature system, which satisfies another important criterion for outpatient use. This bodes well for the future of the Radiology Practice Munich Center and of the Ingenia,” he concludes. ■

“With Ingenia, we are well prepared for the ever increasing requirements and needs from our referring clinical colleagues.”