

## Fast and Reliable

medavis RIS convinces through the Years and has Integrated Speech Recognition

In the imaging center Muehlhausen, three doctors and a team of 22 employees care for the patients as comprehensive and carefully as possible today. The imaging center founded in 1992 continuously improves not only with new diagnostic methods and therapeutic procedures, but also with its software. Since 2000 the radiology information system (RIS) of the company medavis supports the doctors in optimising the daily business of the imaging center. In Spring 2016, an extensive workflow analysis brought new insights for optimisation potential. A central aspect: Introducing the integrated speech recognition.



### Growing together

Dr. phil. Uwe M. Schuchard is one of the owners of the imaging center Muelhausen. He can still remember the requirements he and his colleague had in 2000 when medavis RIS was being introduced: "Seventeen years ago it was important to have a good scheduler. The software mainly focused on simple patient management. The health insurances still received the original letters of referral, the automatisisation level was very low." A scenario that would be unthinkable today with more than 50,000 patients a year and the growing information density. "Our RIS grew with our management processes. Many things, e.g. billing works almost fully automatic. This led to a decreasing error quote and the imaging center can care for more patients with the same amount of employees. Today, the imaging center does not have to close a couple of days before the end of a quarter to do the billing," the radiologist explains. He also describes that the software grew into the medical processes more and more in addition to the administrative tasks. One workflow that improved significantly in the view of the radiologists, is reporting. "The report documentation became more and more extensive. In the past, the secretary typed the reports which the doctors dictated on tape. This is unthinkable today. If you have a look at the core of the patient record in RIS, the Diagnostic Patient Center, you have the clarification, legacy and 3rd party reports and all images on the patient available in this file. We are more precise now. As the frequency of the patients necessary to generate relevant turnovers also increased, you need a system that provides everything at a glance. With the RIS 16 years ago we never could have managed to care for this number of patients.



### Comfortable, flexible and time-saving

Dr. Schuchard is glad, that the digitalisation of the medical processes creates freedom in spite of a high work density. "Thanks to the RIS I can work efficiently the whole day. As I have all information available at one spot, the patient consultation is much more expedient. Since September 2016, Dr. Schuchard and his colleagues use the integrated Speech Recognition for reporting. "I have a look at the images and talk them through with the patient so that they understand their diagnosis. After all, they came to the imaging center with symptoms and are looking for a solution. In such a situation, it is necessary as a radiologist to take time for the conversation to reduce anxiety. With the integrated Speech Recognition I can dictate the report instantly when the patient has left the room. In this way I still remember everything and have all the records available. As I can directly see how the report looks, I correct errors instantly and the document is comple-

ted. Nothing has to be sent to the secretary and I do not have to work on it several times," Dr. Schuchard explains. "medavis solved this in a comfortable, flexible and time-saving way. In this way I have more time for the consultation with the patient and other tasks in the imaging center."

### The Benefits of an Integrated Speech Recognition in the Opinion of Dr. Schuchard:

- **The dictations are more exact:**  
The recognition rate is very good, without time consuming training
- **Quicker report generation:**  
In most cases the patient can directly take their reports with them
- **Simpler workflow for the doctor:**  
Exchanging reports with the typist pool several times has been dropped
- **Higher report quality:**  
Errors in the dictation can be corrected instantly or dictated again if you want to change the report

In the imaging center Muelhausen we have the rule that a report needs to be ready at the latest on the following day of the examination. The reports generally are finished on the same day. The speed of the report creation depends of course on the examination and the diagnosis. Dr. Schuchard says on this topic: "I can report the exclusion of a fracture very quickly with a text module, but for a multi parameter prostate MRI, the image analysis takes longer and the case discussion with colleagues as well. In these cases, it takes longer until the report is ready." With 50000 patients per year of whom many receive two reports, it is only possible to abide to this time frame that is economical and keeps the workload in a healthy dose with the help of the IT.

### Workflow oriented - fast and reliable

RIS is also workflow oriented in other situations and accompanies Dr. Schuchard and his team during the daily business. In addition to the digital patient record

that is quickly and completely available, billing and reporting, especially two functions show Dr. Schuchard clearly how RIS has over time and with the demands developed: One is the scheduler and the other the statistic. "Radiological resources are scarce in our region. Especially for MRIs there are long waiting times. This is why it is important to have clear scheduling that can be broken down to individual examinations. We have a workstation used only for scheduling and therefore cancellations and changes can be coordinated quickly and optimally to avoid modality vacancies. The employee responsible for scheduling is very happy with the software. I, myself, take care of statistics. With this function I can query everything I want to know, e.g. how the waiting times are developing or the occupancy rate of the modalities and what effect it has on the financial outcome."

### Improvement Potential through Workflow Analysis

When asked about the workflow analysis he had done at the beginning of the year, Dr. Schuchard laughs: "We still suffer the consequences of this check-up today! But in the positive sense! We should have done it earlier. It was a very good project as we had a medavis employee on site who trained us in the newest software functions." The users that have been working with the program for many years found new optimisation potential due to the structured analysis of their workflow. Connecting the RIS with the telephony system made working at the registration easier. Thanks to an optimised master data care, billing could be further automated, templates were optimised and clarification letters are scanned via barcode. "Most results help out the employees at the registration desk. For us doctors the topic Speech Recognition was essential," Dr. Schuchard concludes. As he is very satisfied with the system, everything runs stably, updates are done in the background and the support is organised very professionally, Dr. Schuchard would always recommend medavis.