JiveX Upload at Basel University Hospital

How VISUS creates knowledge

Because of the file sizes, transferring MRT imaging records from A to B is still a challenge – regardless of who is sending and who is receiving. In clinical radiology, a physical data medium is still needed even today as a crutch for transfer of a patient's data record. But what do research departments do to collect international MRT data records from 526 patients? They use JiveX Upload.

Incidentally, this is also recommended to clinical institutions, since the implementation and operation of JiveX Upload are actually very simple and efficient. In the case of data collection for the purpose of scientific research, however, the benefits of the comparatively small but refined tool are particularly significant.

Across Europe, brain MRTs are going to Basel

In the specific case, the researching neuroradiologists around Prof. Marios Psychogios, Professor of Neuroradiology at Basel University Hospital, and his team, found themselves facing the task of building an infrastructure to create the database for their DISTAL study. As part of the study, they intend to discover whether endovascular therapy, which is currently used only in stroke patients and patients with large-vessel occlusions may also be practical for medium-sized occlusions. "The challenge here is that endovascular therapy is a special procedure, which is performed mainly in university clinics or hospitals offering maximum care. To acquire a meaningful number of data records, we have set up this study internationally. Clinics with such interests in Germany are also participating. In view of the international nature, we had to set extremely high data-protection standards for communication of imaging data, in order to satisfy the requirements of all countries. A typical cloud service was out of the question for the transmission of medical data." These are the words of Alex Brehm, a member of the research team of Prof. Marios Psychogios.

The active search for a suitable solution ultimately led the team to VISUS and the Upload solution. JiveX Upload can be easily incorporated on a website to offer the capability of uploading imaging data without complications – comparable to known data-upload providers from the private sector. The decisive difference, however, is that the data uploaded via JiveX Upload arrive on a communications server in a German computing center. Here they are checked for malware, for example, and then sent to a destination PACS. Thus the solution is as easy to use as a consumer application, but at the same time it meets all relevant requirements concerning the protection of sensitive health data.

Perfect solution for science

To comply with the security requirements concerning in-hospital IT structures, a demilitarized zone (DMZ), via which the research PACS is able to receive the data, was first set up at Basel University Hospital. The clinical infrastructure and the clinical PACS are left completely untouched by the structure.

Universitätsspital Basel

In view of the international nature, we had to set extremely high data-protection standards for communication of imaging data.

Alex Brehm, Member of the research team of Prof. Marios Psychogios at the University Hospital Basel.

For the DISTAL study, it is planned that the participating clinics will transfer three data sets vis JiveX Upload: The baseline images, the images during procedures and those from follow-up examinations. Thus brisk data transfer is to be expected during the coming three years, whereupon the database should be available in early 2025. Incidentally, the data will be evaluated by an independent institution, which will probably receive the accumulated data via an encrypted hard disk. But who knows – it may well be by then that more elegant solutions for this application situation will already exist. In any case, JiveX Upload has the potential to become a permanent part of the research infrastructure in Basel, as Alex Brehm concluded: "The solution is perfectly suitable for scientific questions in studies in which the images make up an important part of the database. That's why I believe we will use JiveX Upload for further studies as well."

The DISTAL study

The DISTAL study is a multicenter, randomized, controlled trial (RCT) to investigate the clinical efficacy of endovascular therapy (EVT) in humans with acute ischemic stroke due to isolated occlusion of medium-sized brain vessels (MeVO). One central issue is the question of whether these can show better long-range functional results after 90 days if they are treated with EVT plus best medical therapy (BMT) in comparison to BMT alone. The results will be measured on the basis of the modified Rankin Scale (mRS). According to statements of the DISTAL team, this international, pragmatic, 1:1 randomized study with blinded endpoint evaluation is aimed at yielding conclusive, practical information about the efficacy and safety of EVT in stroke patients and patients with MeVO.*

endovascular therapy trial DISTAL

Here you can find more information about JiveX Upload

↗ www.visus.com/connect