Digital X-ray imaging with dicomPACS® vet
at the surgical and gynaecological clinic for small animals at Ludwig-Maximilians-Universität
in Munich, Germany

Ludwig-Maximilians-Universität (LMU) in Munich is one of Europe’s leading universities with more than 500 years of tradition. At 18 faculties, around 700 professors and some 3,600 staff lecture and conduct research. Every year, some 48,000 students, about 14 % thereof from abroad, make use of approximately 150 study options and numerous combinations on offer.
The faculty of veterinary medicine has been one of the university's specialised facilities since 1914 which includes the surgical and gynaecological clinic for small animals under the head of the clinic Prof. Dr. med. vet Andrea Meyer-Lindenberg (photo) who also holds a chair in surgery for small pets. Apart from teaching students and newly qualified veterinarians, the clinic is also dedicated to training animal caretakers and technical staff in veterinary medicine.

The surgical and gynaecological clinic for small animals is an internationally recognized state-of-the-art university clinic with over 80 staff members offering small animal patients superior medical care through diagnosis and therapy. Areas of expertise are: soft tissue and bone surgery, anaesthetics incl. intensive care and emergency medicine as well as pain therapy, radiology, reproductive medicine, ophthalmology and dentistry.

The range of procedures in the field of small animal surgery includes orthopaedics (e.g. hip joint endoprosthesis, corrective osteotomy) and traumatology (e.g. fracture care) as well as minimally-invasive surgery (arthroscopy), soft tissue surgery (e.g. gastroenterology, urology), thorax surgery, neurosurgery and surgical procedures in the fields of ophthalmology and dentistry.

This is where animal holders find in-patient as well as out-patient care of the highest scientific standard for their small companions. Keeping up with these demands requires specialised staff and state-of-the-art appliance technology as well as optimal image management software for diagnostic evaluation of medical imaging material (X-ray images, ultrasound, scintigraphy, endoscopy etc.) of the small animals examined.

Apart from three digital X-ray and two fluoroscopy units the radiology department of the surgical and gynaecological clinic for small animals owns a state-of-the-art ultrasound unit, a computer tomography scanner (CT) and a magnetic resonance imaging (MRI) scanner which are also used on humans in routine diagnostic examinations.
Based on her positive experience with the dicomPACS®vet image management programme by OR Technology which Prof. Meyer-Lindenberg gained in her previous position as a professor at the clinic for small animals at the Veterinary University of Hannover, this established high-tech solution now replaces the previous system (PACS) at the surgical and gynaecological clinic for small animals at LMU in Munich, Germany.

The dicomPACS®vet diagnostic evaluation software has already been installed at more than 30 workstations. Prof. Dr. med. vet. Andrea Meyer-Lindenberg was impressed by the numerous functions of dicomPACS®vet and in particular by the tools designed specifically for veterinary medicine.
These include, among others, HD measuring including the determination of the Norberg angle, endoprosthesis planning, measuring aids, for instance for MMP (Modified Maquet Procedure) and TPLO as well as the distraction index tool. TPLO and MMP measuring is of particular importance in the daily diagnosis work of staff at the surgical and gynaecological clinic for small animals at LMU in Munich. In case of cruciate ligament injuries of dogs, for instance, the size of the most suitable implant for operative cranialisation of the tuberositas tibiae can be easily calculated by means of the sophisticated measuring tool in the so-called MMP.

Of course, Buchanan’s vertebral heart score, for instance, has also been included in OR Technology’s diagnostic evaluation software.

Diagnostic evaluation of CT and MRT series includes standard functions such as MPR (multiplanar reconstruction), MIP (minimum and maximum intensity projection) and hanging protocols.

**dicomPACS® vet** can easily be integrated into all common management systems and allows users paperless workflow management. All images as well as any type of document such as diagnostic evaluations and recovery reports are saved in a digital patient file and can be accessed immediately by a mouse click. All images and supporting documents are exclusively stored in the international DICOM standard. The user interface can be adapted individually to a particular section and special requirements. The animal owner can be provided with the images and diagnostic reports on a patient CD directly after the examination.
The latest appliance technology, coupled with the professional image management solution by OR Technology, allows the staff of the surgical and gynaecological clinic for small animals in Munich to make a fast and unequivocal diagnosis and thus to apply the required therapy. dicomPACS®vet is not only a wise but also a secure investment for the future. The system is standardised but modular upgrades are possible. All data is archived in the DICOM format in a SQL database.

Apart from the numerous beneficial functions of dicomPACS®vet, another criterion supporting Prof. Dr. med. vet. Andrea Meyer-Lindenberg’s decision to purchase the image management system, is the fact that queries, suggestions and problems are always dealt with promptly and competently by the OR Technology team.

dicomPACS®vet offers its users a wide range of subject-specific basic application functions. at an optimal price-performance ratio and can be customised in consultation with the specific user in accordance with his requirements.
Innovative image management solutions

\textit{dicomPACS\textsuperscript{vet}} will make your dream of a paperless veterinary practice come true. All images as well as any type of document (e.g. diagnostic reports, records of healing processes, faxes) are stored by \textit{dicomPACS\textsuperscript{vet}} in a digital patient file and can be accessed immediately with a simple mouse click.

Well designed archiving and backup solutions guarantee fast access to all data while observing the highest security standards in accordance with the internationally recognised guidelines for human medicine. In addition, \textit{dicomPACS\textsuperscript{vet}} can be integrated easily with all the popular practice management systems.

The \textit{dicomPACS\textsuperscript{vet}} software includes acquisition, diagnosis, transfer and archiving of image material. Since it has been designed and developed in close cooperation with practising vets, you will find it easy to operate and well suited to daily diagnosis.

Boasting several thousands installed workstations locally and abroad (as of March 2013), the system has proven itself many times over. \textit{dicomPACS\textsuperscript{vet}} handles simple image processing requirements as brilliantly as complex radiological networks.

Further information is available under www.or-technology.com