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Applications of Cone Beam Computer Tomography in Anatomical studies

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Researchers and educationalists in the field of Anatomy constantly seek representations of structures that reflect the realm in which clinicians need to operate. Along with newer radiographic techniques creating new possibilities in diagnosis and treatment, the required anatomical knowledge to interpret these images also evolved. The high resolution images derived by Cone Beam computerized Tomography (CBCT) and the more advanced Micro-focus X-ray Radiography located at Necsa (Nuclear Energy Corporation of South Africa), render it appropriate for the three dimensional (3D) representation of anatomical structures for educational and research purposes. The ability to analyse the sample in sequence without destruction ensures successive assessment of the internal anatomy of a structure for example the ventricles of the brain; the pterygopalatine fossa; the inner and middle ear and the inner structures of the mandible and maxilla in dental studies. Outer structure may also be evaluated eg. the shape of the mandible which includes many morphological features associated with age, sex or population group identification of unknown individuals. The external appearances of the ventricles of the brain and the inner ear structures have also been reconstructed. To this purpose the Anatomy Department of the University of Pretoria in collaboration with Necsa are developing a digital database of skulls and mandibles called the Pretoria Pelindaba Skull Collection.

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(SA Journal of Science)?
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Yes

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