



## PARKINSON'S DISEASE NEWS

<http://www.viartis.net/parkinsons.disease/news.htm>

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### SONOGRAPHY FOR DIAGNOSIS OF PARKINSON'S DISEASE

Transcranial sonography is a non-invasive diagnostic technique that makes use of sound waves to create a digital image to aid the diagnosis of Parkinson's Disease. The sound waves are typically produced by a transducer. Strong, short electrical pulses from the ultrasound machine make the transducer ring at the desired frequency. Materials on the face of the transducer enable the sound to be transmitted efficiently into the body. The sound wave is partially reflected from layers between different tissues. Sound is reflected anywhere there are density changes in the body. Some of the reflections return to the transducer. The return sound wave vibrates the transducer, which turns the vibrations into electrical pulses that travel to the ultrasonic scanner where they are processed and transformed into a digital image. For more information go to : <http://www.biomedcentral.com/1471-2377/10/9>



The primary area of the brain concerning Parkinson's Disease is the substantia nigra. The substantia nigra echogenic area was found to be larger in those people with Parkinson's Disease. Substantia nigra echogenicity was also larger in males than in females. Age did not correlate with substantia nigra echogenicity in any group. After multivariate analysis, only the substantia nigra hyperechogenicity was associated with the diagnosis of Parkinson's Disease.

Transcranial sonography consequently showed good diagnostic validity for the diagnosis of Parkinson's Disease. However, in a previous study the diagnostic accuracy in the early stages of Parkinson's Disease was not sufficient for routine clinical use.

Reference : Journal of Ultrasound in Medicine [2014] 33 (12) : 2069-2074 (A.Alonso-Cánovas, J.L.López-Sendón, J.Buisán, A.deFelipe-Mimbrera, M.Guillán, N.García-Barragán, I.Corral, M.C.Matute-Lozano, J.Masjuan, J.C.Martínez-Castrillo, U.Walter)

Complete abstract : <http://www.ncbi.nlm.nih.gov/pubmed/25425362>

<http://www.viartis.net/parkinsons.disease/news/141202.pdf>

mail@viartis.net

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