

A NEW MILESTONE IN TRANSCRANIAL DOPPLER

TCDx

THE FIRST TRANSCRANIAL HOLTER

- Angiologist
- Vascular specialist
- Neurologist
- Cardiologist
- Physiologist



Long time monitoring for emboli detection with a robotized probe and a portable recorder.



TCDX

Ambulatory monitoring for emboli detection

STANDARD TRANSCRANIAL DOPPLER ARE ILL-ADJUSTED

Emboli detection monitoring by transcranial Doppler (TCD) has been available for more than 15 years. Such monitoring requires the patient to be stationary during the recording period with a bulky and uncomfortable headframe that is prone to movement artefacts and loss of signal.

Monitoring, although possible, is impractical and not well tolerated by patients. Besides, it lasts at most one hour as it has been documented that, because of the temporal variability in embolization, long time monitoring is highly desirable to prevent missing the embolic episodes.

THE TCDX, AN INNOVATIVE AND UNIQUE SYSTEM

Atys has developed the **TCDX** to make emboli detection easier, reliable and clinically useful.

- The probe fixation is lightweight and comfortable.
- The probe is robotized and thus self-adjusting. An autosearch algorithm restores vessel insonation should quality fall.
- The **TCDX** recorder is small, lightweight and battery operated with recording time higher than 5 hours.
- The patient is no longer attached to a TCD. The patient may engage in normal daily activities, even perform exercise or sport.
- The post-processing of the recorded TCD signal for emboli detection is automatic and fast. Each embolic event is tagged and the operator has full access to both its spectral signature and its audible characteristic.

AUTOMATIC FUNCTIONS FOR MORE EFFICIENCY

At installation of the probe on the patient's head, the **TCDX** is connected to a PC fitted with the dedicated Doppler software. The robotized probe is positioned on the acoustic window. The Doppler spectrum is viewed in real time on the display of the PC. Set-up and control are performed via this PC.

The Doppler signal is optimized using the autosearch software module.

Then the **TCDX** is disconnected from the PC and placed in a small bag carried by the patient. The TCD signal is recorded and automatic searches for the best signal are performed at preset interval or when the signal gets weak.

The full Doppler signal is stored on a memory card. After the monitoring period, it is downloaded to a PC for its analysis with Doctor **Rune Aaslid's** high speed and reliable emboli detection software. Embolic events are isolated and presented so that the operator does not have to review the whole monitoring session.

Novel insight into cerebral embolization

FEATURES

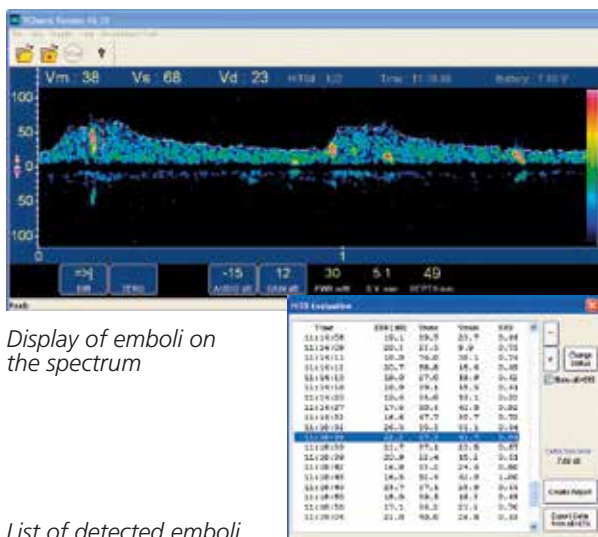
Unilateral transcranial Doppler	Recorder dimensions (mm): 150 X 92 X 28
Frequency: 1.5 MHz	Recorder weight: 0.35 kg
Internal battery	EC classification: class II a
Universal external charger	Quality system: ISO 13485 certified



Probe fixation and recording system with an inbuilt loudspeaker



TCDX case



Display of emboli on the spectrum

List of detected emboli



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