

An advanced transcranial Doppler ultrasound system

SONARA TCD system





The SONARA transcranial Doppler (TCD) system allows for non-invasive assessment of blood flow velocities in the cerebral arteries. This method of measurement has been well documented in the medical literature as a useful diagnostic tool for examining the major arteries supplying blood to the brain.¹

Transcranial Doppler (TCD) is also extremely valuable for intraoperative monitoring to help detect sudden changes in flow and potential embolic events. Emboli are small particles of foreign matter (air, clots, etc.) within the bloodstream that can potentially cause obstructions in various arteries in the body and the brain. Such obstructions can often lead to stroke.

SONARA digital TCD systems are built to optimize performance and assist the caregiver in improving patient care. Protocol driven exams and superior Doppler sensitivity are valuable time saving tools. TCD exams can be performed quickly and more efficiently utilizing M-mode or multi-depth display, pre-configured or custom protocols, touch-screen user interface and partially automated specialty tests.

M-mode in Diagnostic mode serves as an optimal acoustic window finder and vessel locator to enable quicker examination time. It provides a hemodynamic overview to aid clinicians in their diagnosis. Utilizing advanced graphics, **Spectral Summary** reports offer right to left comparison assisting in diagnosis. An exclusive **Daily Trend** feature helps the clinician manage the course of patient treatment, identifying potentially critical phases of vasospasm. The SONARA TCD system gives the physician and researchers access to patient files in multiple **export formats**, including raw data.

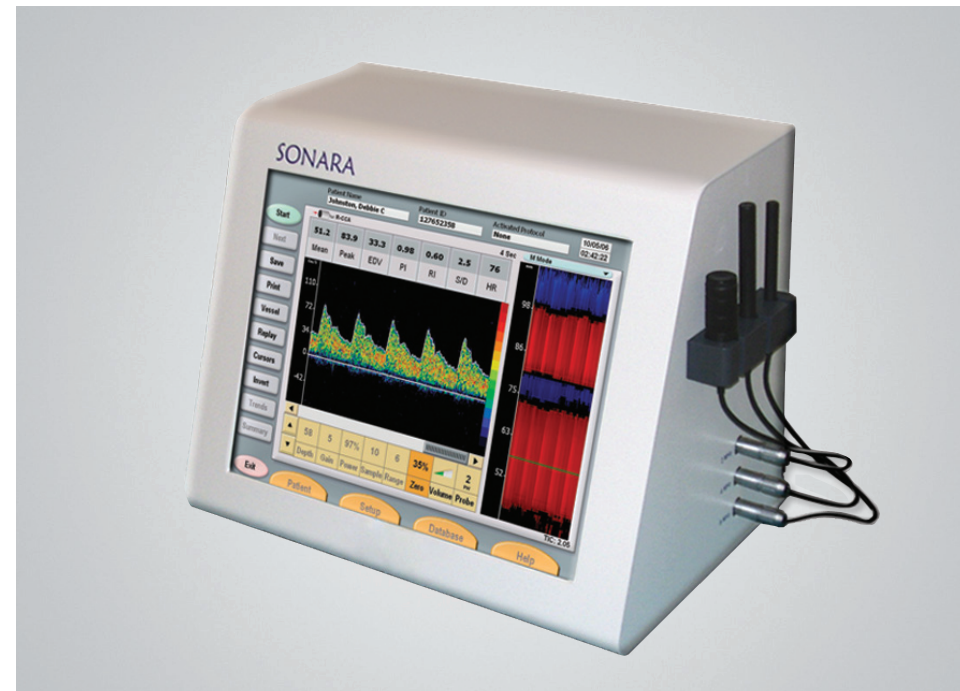
“TCD is the only non-invasive examination that provides a reliable evaluation of intracranial blood flow patterns in real-time, adding physiological information to the anatomical information obtained from other neuroimaging modalities.”²

TCD is a useful tool for the evaluation of numerous neurovascular conditions in adult and pediatric patients:

- Diagnostic cerebrovascular and extracranial investigation
- Extended-term unilateral and bilateral cerebrovascular monitoring

The systems may be used in vascular labs, operating rooms, intensive care units, emergency departments and physician offices for the following applications:

- Intracranial stenosis
- Detection of vasospasm due to subarachnoid hemorrhage
- Detection of arteriovenous malformations (AVMs)
- Assessment of collateral pathways
- Detection of embolic events occurring during surgery or other monitoring applications
- Detection of PFO (Patent Foramen Ovale)
- Track and establish trends of blood flow velocities
- Help improve surgical techniques through immediate feedback of the results of interventional procedures
- Document the informative results of Breath Hold and Vasomotor Reactivity (VMR) testing



Features at a glance

- Available in unilateral or bilateral configuration
- 250 gates of M-mode in Diagnostic and Monitoring modes
- User configurable protocols and settings
- 120 sec. of data replay in Diagnostic mode
- High quality Doppler signal
- Specialty tests: VMR and breath hold
- Emboli detection and evaluation package
- Multi-depth, multi-channel acquisition
- Configurable remote control and footswitch
- Multiple language capability
- Statistics and trending packages

1, 2 Role of Transcranial Doppler Ultrasonography in Cerebrovascular Disease.
Leonard L.L. Yeo and Vijay K. Sharma, Division of Neurology,
National University Hospital, Singapore.

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