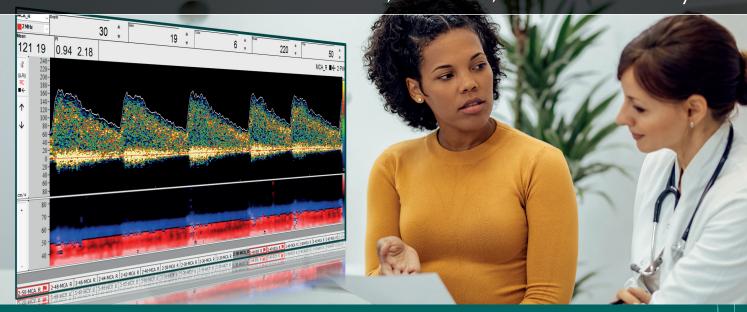


Reliable, efficient, and user-friendly.



DWL TCD – The gold standard screening tool for diagnostics and treatment of Sickle Cell Disease (SCD)

- Gold standard TCD

TCD is the gold standard for assessing cerebral blood flow velocities and predicting the risk of stroke.

- The use of TCD for Sickle Cell Disease

With TCD, healthcare professionals can detect steno-occlusive lesions in large cerebral arteries and microangiopathic lesions, which can cause ischemic stroke and silent infarcts in people with SCD.

- DWL for Sickle Cell Disease

The SCD specific software functions ensure reliable and accurate findings not only for diagnostics, but also for prognosis and for guiding therapy and treatment.

- DWL specific Sickle Cell Disease examination program

The SCD specific examination program automatically displays the vessel sections with the highest blood flow velocities and determines the relevant findings quickly and easily.

- DWL specific Sickle Cell Disease report

The SCD specific report highlights the highest mean velocity segment for fast identification of critical conditions and quick and accurate diagnosis.



Sickle Cell Disease

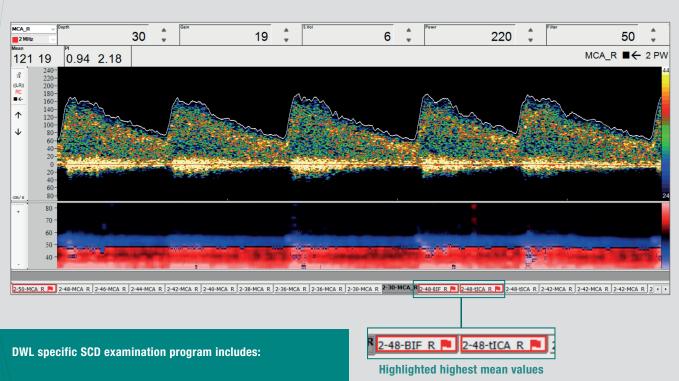
Sickle Cell Disease (SCD) is one of the world's most prevalent genetic diseases and the result of sickle-shaped deformations of the erythrocytes due to a genetic defect. People with Sickle Cell Disease frequently show steno-occlusive lesions in large cerebral arteries and microangiopathic lesions, causing ischemic stroke and silent infarcts that impact their neurocognitive development and quality of life. The disease is mainly found in areas with widespread cases of malaria and occurs from a gene mutation in the descendants of infected people. Through migration, sickle cell anemia is spreading globally and has become a global public health issue.

TCD recommended as screening tool

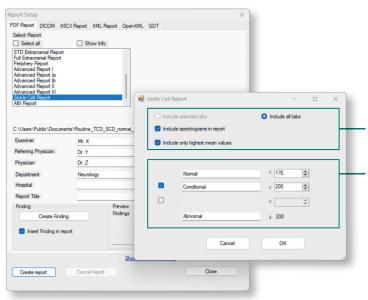
Transcranial Doppler sonography (TCD) is the gold standard to assess blood flow velocities in the vessels of the Circle of Willis in SCD patients and predict the risk of stroke. TCD is highly recommended as a routine screening tool not only for Sickle Cell Disease diagnostics, but also for prognosis and for guiding therapy and treatment: exchange transfusions, hydroxyurea, allogeneic hematopoietic stem cell transplant, recently approved drugs and new therapeutic options (gene therapy, gene editing).

DWL specific Sickle Cell Disease examination program

Sickle Cell Disease leads to occlusions of smaller and larger arteries with recurrent circulatory disorders, recognized by increased blood flow velocities. During an examination with the DWL specific routine program, the user is given the opportunity to automatically display the vessel sections with the highest blood flow velocities and therefore determine the relevant findings quickly and easily. The data obtained in this way can be made available in a specific SCD report for faster diagnosis.



- Customizable auto label list
- Auto examination program standard or customizable
- Saving options of single spectra or extended recordings
- Automatic identification of the segment with the highest mean velocity for each vessel and side
- Marking of the recording (single spectra/extended recording) by a flag symbol



Report options

Customizable target values for up to 4 different conditions

	Standard Target Values								
ſ	Normal	< 170 cm/s	Unmarked (black)	\					
	Conditional	170 to 200 cm/s	Orange						
	Abnormal	> 200 cm/s	Red						

*Adams, et.al.

Patient ID: Name:SCD_normal Routine_TCD DOB: 1/1/0001

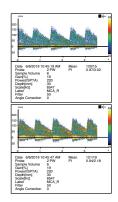
Date of examination: 6/6/2019

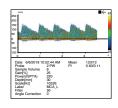
			Right		Unilateral		Left	
	Probe	Depth	Mean	Mean	Mean	Mean)	Mean	Mean
	(MHz)	(cm)	(cm/s)	(cm/s)	(cm/s)	(cm/s)	(cm/s)	(cm/s)
			■-	■→	■-	■→	■-	■→
MCA	2	30	120	15			123	12
MCA	2	30	121	19				
MCA	2	32					121	15
MCA	2	34					128	14
MCA	2	36	0	0			136	22
MCA	2	36	131	24				
MCA	2	38	145	29			166	19
MCA	2	40	150	27			171	23
MCA	2	42	159	20			162	25
MCA	2	42	153	20				
MCA	2	42	158	19				
MCA	2	42	151	24				
MCA	2	44	145	43			127	26
MCA	2	46	137	53			128	53
MCA	2	48	141	70			125	91
MCA	2	50	187	77			103	90
MCA	2	50					117	101
MCA	2	52	205	82			103	86
BIF	2	48	108	109				
BIF	2	54					113	56
tICA	2	48	34	23				
tICA	2	48	114	112				

* manually recalculated values are highlighted in yellow

Normal < 170

High conditional 185 - 200 Abnormal ≥ 200





DWL specific SCD report includes:

- Customizable SCD report in PDF format
- Customizable target values for up to 4 different conditions (e.g., normal/low conditional/ high conditional/abnormal)
- Highlighted target values for fast identification of critical conditions
- Automatic color marking of the target values
- Options to include only highest mean values or selected recordings for simple assessment of critical conditions
- Option to include spectrograms
- Export options via DICOM and HL7



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Sickle Cell Disease

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