

CONE-BEAM CT PERFUSION

Bringing Advanced Perfusion Imaging Into the Angio Suite.





A NEW ERA FOR STROKE TREATMENT

Acute Stroke Imaging in the Angio Suite

Thrombectomy has transformed acute stroke care. Yet, in some patients, microvascular obstruction—known as the no-reflow phenomenon—prevents full reperfusion, limiting recovery despite technically successful procedures. Detecting this phenomenon can provide crucial insights into treatment outcomes. The missing link is the ability to see beyond the vessel — to assess tissue health and viability in real time.

Cercare Medical builds on decades of expertise in perfusion imaging, from **Leif Østergaard's pioneering work at Harvard University in the 1990s** to the advanced **Cercare Medical Neurosuite (CMN) perfusion engine** used worldwide today.

Cercare Medical uniquely provides maps of oxygen availability alongside blood flow and volume using CTH, OEF, and CMRO₂ to assess microvascular conditions and support precise clinical interpretation. Now, this heritage powers a breakthrough: **Cone-Beam CT (CBCT) Perfusion**.

By enabling perfusion imaging directly in the angio suite, CBCT perfusion helps clinicians see what matters, when it matters — and act immediately.

PERFUSION WHERE IT MATTERS FROM CONTRAST TO OXYGEN METABOLISM

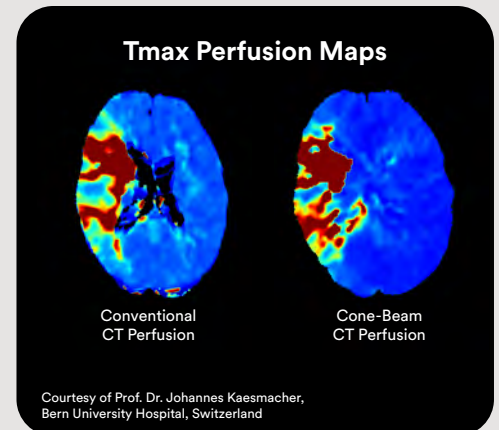
Cone-Beam CT Perfusion delivers conventional CT perfusion-quality maps directly in the angio suite, using standard C-arm systems.

CLINICAL USE CASES

- Directly impacts the patient treatment pathway, both intra- and post-intervention.
- Potentially enables direct-to-angio workflows.
- Assess outcomes post-intervention: detect missed stenoses, distal occlusions, or microvascular disturbances.
- Guide complementary therapies on the spot based on perfusion status.
- May detect the no-reflow phenomenon — providing insight into cases where recovery may fail despite successful thrombectomy.

TECHNICAL HIGHLIGHTS

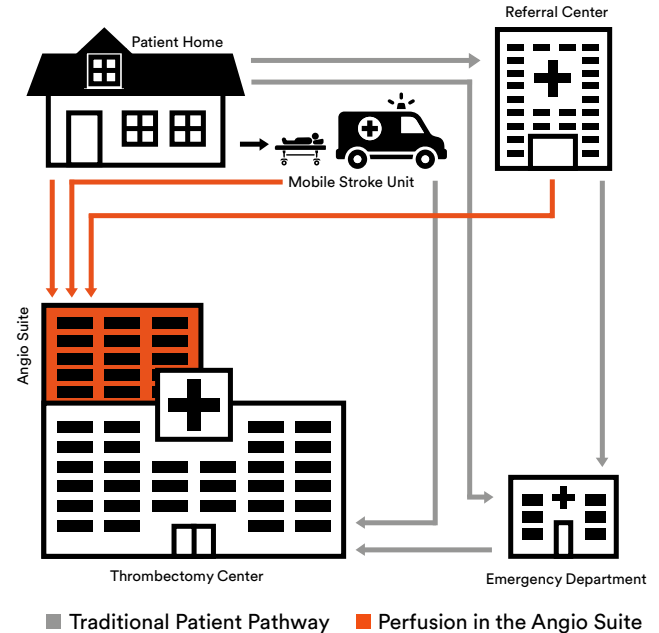
- Full set of perfusion markers: CBF, CBV, MTT.
- Advanced oxygen metabolism imaging: OEF, CMRO₂, CTH.
- Reliable results with just 10 CBCT acquisitions.



CONE-BEAM CT PERFUSION



PATIENT PATHWAY



CURRENT WORKFLOW. CURRENT DELAYS. EVERY MINUTE COUNTS

Today's stroke workflow still reflects a pre-thrombectomy era:

- > Stabilization and initial imaging in the emergency department
- > CT or MRI perfusion performed away from the angio suite
- > Transfer to angiography for thrombectomy

This process typically delays treatment by 30–60 minutes — precious time when every minute means lost brain tissue. Even after thrombectomy, hidden challenges may remain: missed distal occlusions, microvascular issues, or incomplete reperfusion*.

*Presentation at the Perfusion Summit 2025 (Dr. Sebastien Soize, CHU de Reims).

> STROKE CARE NEEDS PERFUSION INSIDE THE ANGIO SUITE

YOU CAN ONLY TREAT WHAT YOU CAN SEE

From Imaging Biomarkers to Actionable Treatment

Cercare CBCT Perfusion transforms raw imaging data into meaningful clinical guidance — directly in the angio suite. By converting biomarkers such as blood flow, blood volume, and oxygen metabolism into clear, actionable maps, it empowers faster, evidence-based decisions at the point of care.

For clinicians, this means reliable perfusion data during interventions - helping to confirm success or guide additional treatment. For patients, trials* are ongoing to test whether this translates into faster therapy and a lower risk of residual occlusions remaining undiagnosed, possibly supporting timely administration of adjuvant therapies, and improving overall recovery. For hospitals, the benefits would potentially include lower rehabilitation costs, higher efficiency, and the prestige of being at the forefront of stroke care innovation.



"You can only treat what you can see. CBCT perfusion delivers crucial insights when standard imaging is not immediately available — right in the angio suite!"

Prof. Johannes Kaesmacher,
Inselspital, Bern University Hospital,
Switzerland

*PerfusiOn Post tHrombEcTomy (PROPHET)
A Prospective Observational Cohort Study
– Kaesmacher, et al., 2024

CLINICAL WORKFLOW



SHAPE THE FUTURE OF STROKE CARE

From Research License to Clinical Standard

VALUE FOR CLINICIANS, PATIENTS, AND HOSPITALS

- **Interventional Neuroradiologists** gain real-time insight into tissue viability, reducing uncertainty during complex procedures.
- **Stroke Neurologists** benefit from reliable triage decision support without losing time to transfers or additional scans.
- **Hospital Administrators** see the downstream advantages of cost savings and resource efficiency.

REGULATORY STATUS

- CE-Marked According to the European Medical Device Regulation 2017/745.
- FDA Cleared.

Early adopters gain unique influence on shaping future clinical guidelines.

