

December 2023

External NEWSLETTER

THE DIGMINE project

Improved diagnostics by digital gold mining in historical neurophysiological data

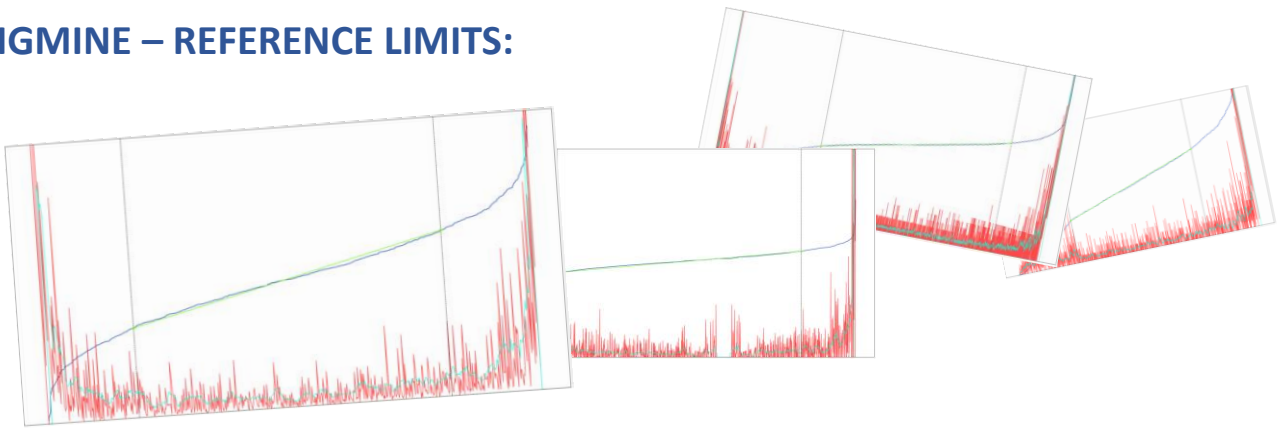
WHAT'S NEW?

- **New national Norwegian reference limits for most commonly used motor and sensory nerves**
- Received funding for two PhD student positions
- Submitted an EU HORIZON and a related postdoc application
- New collaborators
- **New report about quality of neurophysiological measurements in Norway**
- E-norms validation article submitted

DIGMINE – TWO PARTS:

The DIGMINE project will continue as two closely related PhD projects. The first, taken on by **Tomasz Szczepanski** (Siv.ing., M.D.), will focus on finding high quality reference values for various neurophysiological reference limits using historical data. **John Anker Zwart** (professor and neurologist at University of Oslo) and **Kerstin Bach** (professor in artificial intelligence at Norwegian University of Science and Technology) have joined the team as supervisors. The second PhD project, taken on by **Sindre Rike Eng** (M.D.), will focus on the quality of the measurements collected.

DIGMINE – REFERENCE LIMITS:



We have calculated new Norwegian **national reference limits** using the e-norms method on historical data collected from the Oslo, Trondheim, Bergen, Tromsø and Stavanger hospitals. They can be found at our webpage: <https://www.ous-research.no/home/digmine>

We have also submitted a paper where we compare the traditional way of calculating reference limits to the E-norms method using historical neurophysiology measurements from Trondheim.

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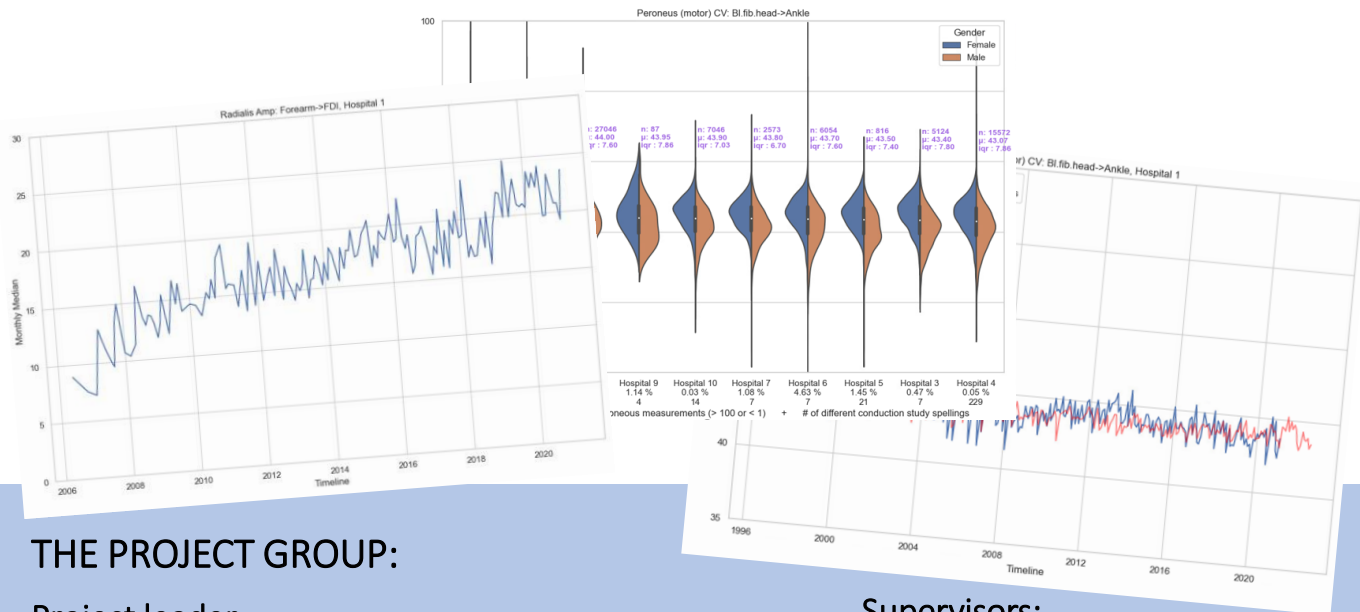
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DIGMINE – QUALITY INDICATORS:

We developed DIGQUAL, an application for assessing coherence between nerve conduction studies between different hospitals as well as internally for each individual hospital. The app was used for analyzing 610 000 conduction velocities and amplitudes of the radial, sural and peroneal nerve measured between the years 1998 to 2023 at 10 different Norwegian hospitals. Most notably, we found significant differences between the labs when comparing amplitudes of sensory nerves. The report can be accessed from our project website:

<https://www.ous-research.no/home/digmine>



THE PROJECT GROUP:

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