

## **Excellent performance of smart needle demonstrated in clinical tests**

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A research paper about **tissue-identifying smart needle in lumbar puncture** has been published on August 4<sup>th</sup>, 2016 by Journal of Clinical Monitoring and Computing. The clinical research was conducted with adult patients in three hospitals in Tampere region, Finland.

The Term **Smart Needle** implies a smart component has been added on an established healthcare product – the needle. The intelligence of the studied smart needle is its capability to identify the tissue at the tip of the needle. Traditionally physician has to rely on haptic perception through the needle handle to estimate where the tip penetrates patient. In lumbar puncture extreme care has to be taken so that excess tissue damage in sensitive spine area does not occur.

The smart needle improves current practice by providing an alert when the tip of the needle becomes in contact with spinal fluid. The physician is then alerted that the needle has reached spinal canal and the tip is in close proximity to sensitive nerves of the spine.

Excellent performance is no surprise to developers. “Based on both literature and our previous research, we knew that Injeq IQ-Needle™ can identify various tissues in real-time. We are, nevertheless, positively surprised for such excellent results achieved in clinical use.” comments Kai Kronström, CEO, Injeq.

Injeq continues clinical research of the IQ-Needle™ with new patient groups undergoing lumbar puncture to obtain diagnostic spinal fluid sample. The company is also running clinical trials with IQ-Biopsy™ system that integrates tissue identification to core biopsy needle. Mr Kronström concludes “We’ve seen smart phones to take over the mobile phone business. There’s no doubt eventually the Smart Needle will replace traditional needle and Injeq is in good position to drive this transformation.”

On-line article: <http://link.springer.com/article/10.1007/s10877-016-9915-8>

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### ***About Injeq.***

*Injeq is a young development stage medical device company based in Tampere, Finland. The company has developed its IQ-needle, equipped with electrodes and related bio-impedance measuring tissue analyzer for advanced real-time information. The products and technology can be applied for multiple clinical areas, including regional anesthesia, diagnostic lumbar punctures and intra-articular injections.*

*The products are expected to benefit the patients, by improving the quality of tissue samples, by reducing puncture related tissue damages and by optimizing the patient care process. The product do not have yet regulatory clearance, but they have been clinically tested as part of other clinical trials.*

More Information and picture material can be requested:

[info@injeq.com](mailto:info@injeq.com)

Kai Kronström, CEO  
Injeq

Tel. + 358 40 751 6763