

## FOR IMMEDIATE RELEASE

Case study included

### **NEW BURN ASSESSMENT DEVICE COULD SAVE THE NHS TIME AND MONEY Pioneering Diagnostic Machine on Trial in Newcastle More Accurate than Human Eye and Previous Technologies**

Newcastle upon Tyne - April, 2024 - Evaluating burn injuries quickly and accurately is a challenge for burns surgeons, but new technology that uses Artificial Intelligence (AI) to calculate if a patient requires an operation could reduce inpatient time, a time and cost saving device that could benefit many surgeons, patients and NHS trusts.

Surgeons typically achieve accuracy rates of around 50-75% when assessing burns by eye and older scanners, which are cumbersome and difficult to use - their results subjective as they ultimately rely on interpretation by human analysis. However, the Northern Regional Burn Centre based at the Royal Victoria Infirmary, Newcastle upon Tyne is currently trialling a new device that can be used by trainee doctors and nurses, is faster and more accurate than older technology, and can be used within 24 hours of a burn injury occurring.

Spectral AI's DeepView® Wound Imaging Technology is a mobile technology platform to diagnose wound healing at the bedside and is as simple as taking an image using a phone camera. The image acquisition takes 0.2 seconds, and the output takes approximately 20 to 25 seconds. The groundbreaking device was presented at the British Association of Plastic, Reconstructive, and Aesthetic Surgeons' (BAPRAS – [www.bapras.org.uk](http://www.bapras.org.uk)) North-East Meeting in Newcastle last month. Spectral AI's DeepView® Wound Imaging Technology is a first-of-its-kind predictive wound healing technology. It provides a healing assessment within 24 hours of burn injury; two-second image acquisition with AI prediction in seconds; a simple yes/no prediction; a prediction of the healing trajectory; the ability to see what the human eye cannot to distinguish tissue characteristics; and noncontact, painless, radiation free imaging technique.

Unlike its predecessors, DeepView® can be used by anyone, even those not used to technology, and its ability to conduct assessments within 24 hours of injury means there is no delay going into theatre. It is trained using real burns photos and can ascertain if a burn will require surgery and tissue viability simply by processing photographs of the burn. It is more accurate than the human eye and thousands of pounds can be saved per patient by not having to keep the patient in hospital whilst they await a Private and Confidential, Property of Wavelength Marketing Communications, Ltd. 21 scan, which would usually be 48 hours after injury.

Consultant plastic surgeon and burns specialist Chris Lewis, who has been using the technology at Northern Regional Burn Centre, says:

***“This is a pioneering diagnostic tool, changing the landscape of burn injury assessments. We have not yet tapped into every benefit of the technology, but so far can see its potential in many ways, not least from a time-saving perspective. Its binary output means that we no longer need to make subjective decisions regarding operations, and its accessibility to junior doctors and nursing staff is advantageous. The landscape of AI within burns surgery is loaded with potential - we are excited to see what the future holds.”***

Accurate evaluation of burn injuries is a longstanding challenge in the medical field. Burn surgeons typically achieve accuracy rates between 50% and 75%, with significant variability among observers. Despite the availability of devices aiding burn wound assessment, they are most effective 48 hours post-injury and still rely on subjective interpretation. DeepView® is cheaper than its predecessors, and could lead to substantial savings in healthcare expenditure.

Consultant plastic surgeon and BAPRAS President Mani Ragbir, says:

***“It is exciting to witness the evolution of artificial intelligence within the surgical arena. This trial has demonstrated the true value of AI in assessing burns injuries and providing comprehensive reports, allowing surgeons to make more objective decisions regarding operating. Additionally,***

***DeepView's capability to assess burns within 24 hours and its accessibility to non-surgical staff can alleviate the burden on surgeons and streamline patient care.***

## **CASE STUDY**

Claire Ross, a 50-year-old resident of Dalton, West Lancashire, sustained burns to her leg when an indiate hot water bottle burst. Claire, who has secondary progressive MS, used hot water bottles to ease the pain in her hip, diligently checking they were still in date.

Claire, who uses a power-chair full-time, explains:

***"On this particular evening, I had the hot water bottle on my hip for some time, before removing it to go to sleep. I have reduced sensation and, although I knew that something had happened, I wasn't quite sure what. When I realised I had been burned I held a cold compress on my leg for 40 minutes as I was unable to get to the shower. When I removed the compress, a lot of skin came off, but I still wasn't aware of the extent of the damage. It was only the next day when I called the district nurse and was told to go to A&E that the extent of the injury started to become clear."***

Claire went to A&E and was eventually moved to the Royal Victoria Infirmary at midnight. The next day, she was scanned by both the existing technology and Spectral AI's DeepView® Wound Imaging Technology. Claire says:

***"There was definitely a difference between the two experiences. The old machine was larger and more cumbersome, requiring a lot of manoeuvring and adjustments to get the scan right. In contrast, the second machine was quicker and more streamlined. It felt like just taking a photograph - seamless and effortless. There was no pressure to move my body in certain ways, and the logistics were much smoother."***

Claire did not undergo any surgical procedures due to fears that the recovery process would impact her MS. She spent three weeks in hospital, with her burns treated using Manuka honey dressings.

Consultant plastic surgeon Chris Lewis says:

***"DeepView® was of immense value when it came to scanning Claire - the original machine Private and Confidential, Property of Wavelength Marketing Communications, Ltd. 22 required us to manoeuvre the machine, and for Claire to position her body in a specific way. In addition, we needed to balance the benefits and risks of operating. Using DeepView® to take an image of Claire's burn and using the AI to predict the healing outcome was incredibly useful."***

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## **Notes to Editors:**

About the British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS)

The British Association of Plastic, Reconstructive and Aesthetic Surgeons is the voice of plastic surgery in the UK, advancing education in all aspects of the specialty and promoting understanding of contemporary practice. BAPRAS speaks for the majority of reconstructive and aesthetic plastic surgeons providing services to patients in the UK today.

For more information visit [www.bapras.org.uk](http://www.bapras.org.uk) or @BAPRASvoice on Twitter/Instagram.

For media enquiries, please contact Tingy Simoes via [tsimoes@wavelengthgroup.com](mailto:tsimoes@wavelengthgroup.com) or 020 7549 2863/07973 147388