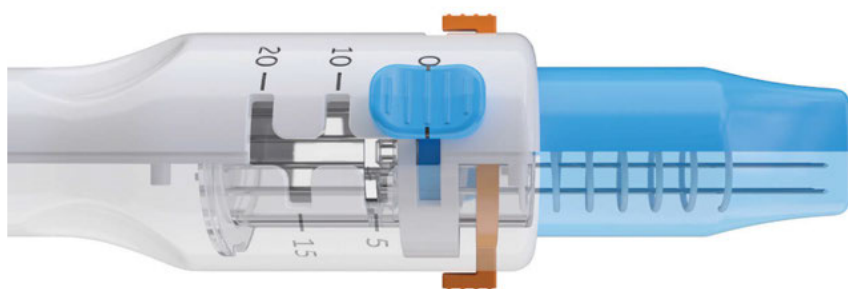
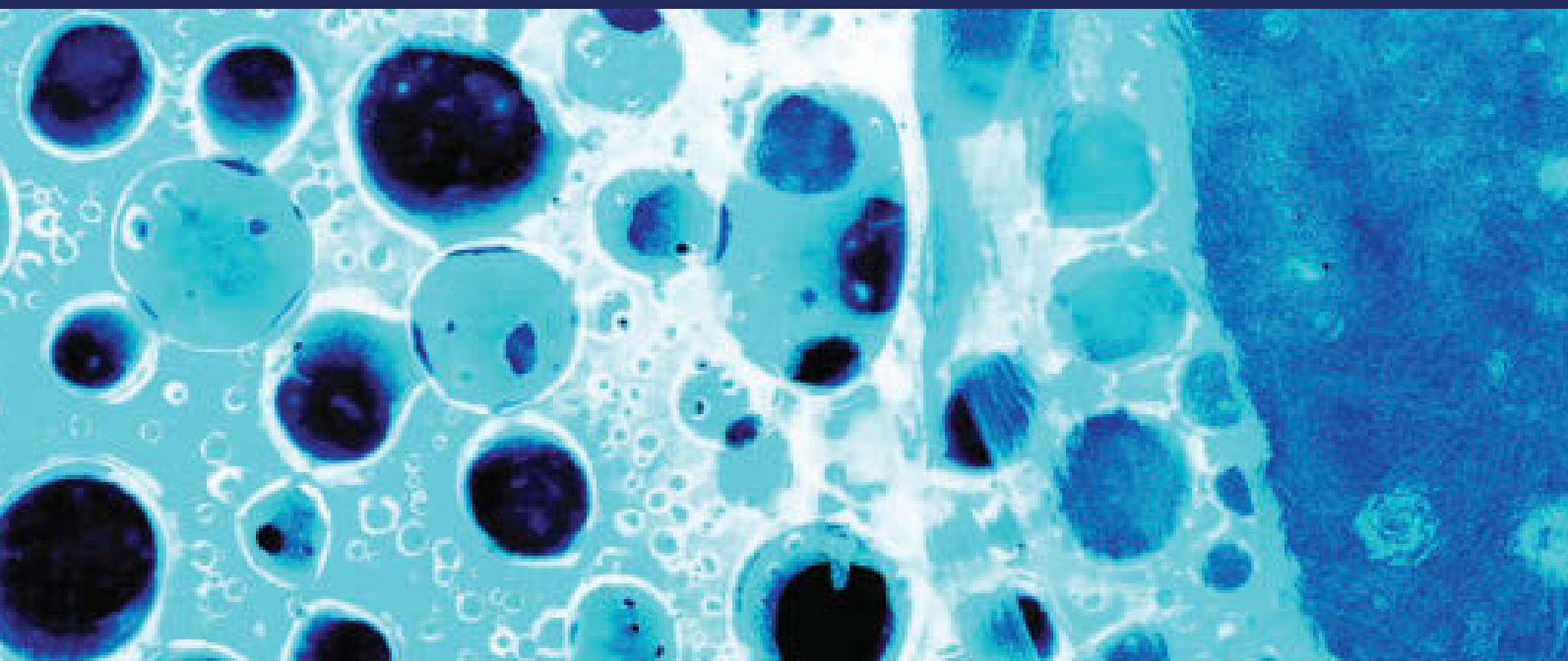


# ePORE & CUTIS

## Precision, Electroporation for Cancers of the Skin

THE FUTURE OF ELECTROPORATION



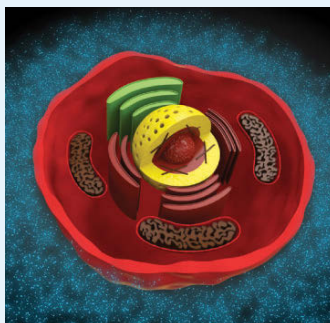
**MIRAI MEDICAL**  
Innovative Cancer Solutions

**CE**  
0051

**MIRAI MEDICAL** has developed the **CUTIS electrode** to target cutaneous and subcutaneous cancers. The adjustable length electrodes can deliver electroporation pulses to tissue up to 2cm deep.

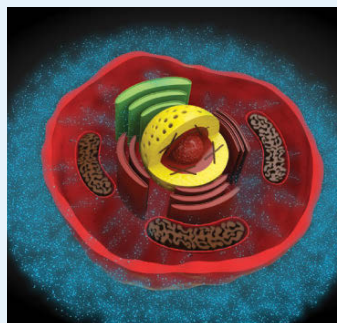
Our **ePORE** generator is unique in being capable of delivering electroporation pulses at a frequency of 250KHz which eliminates muscular contractions<sup>4</sup> and allows the procedure to be performed under local anaesthetic (LA). This advancement means that many patients will be treated under local anaesthetic in an outpatient setting, reducing the time and financial burden on healthcare resources, the treatment of patients earlier in their disease state, and the ability to offer treatment to patients that are unable to tolerate general anaesthesia.

### HOW ELECTROPORATION WORKS



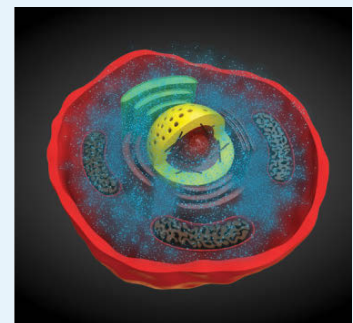
Cell membrane before pulse

Pulse  
( $< 1$  Sec)



Cell membrane during pulse

Recovery  
(5-30 mins)



Cell membrane after pulse  
(cell returned to original state)

Electroporation with chemotherapy has been in clinical use for more than 15 years and in 2006 the European Standard Operating Procedure (ESOPe)<sup>1,2</sup> which described the standard delivery of the procedure including chemotherapy dose. In the last 5 years calcium has been identified as an alternative to chemotherapy.

The effectiveness of electroporation in tumour ablation clinically has been reported by a growing number of clinicians in the US and Europe with excellent quality of life and tumour reduction reported for both cutaneous and intraluminal applications.

Electroporation pulses were typically delivered previously at 1Hz or 5KHz. The **ePORE** can now deliver these pulses at 250KHz greatly simplifying the delivery and minimizing patient discomfort.

### ePORE ELECTROPORATION GENERATOR

This significant innovation in electroporation delivery has stemmed from multiple years of R&D and a team that has been jointly involved in the electroporation field for more than 20 years.

The benefits of ePORE are:

- Simple “plug and play” set up
- Portable (17kg)
- Touch screen interface
- Standard generator for all electrodes





## THE FUTURE OF ePORE AND ELECTROPORATION

Electroporation in combination with chemotherapy has been delivering an effective treatment to many patients for more than 15 years. As well as the technical advancements Mirai Medical have delivered, through further research we feel that alternative combinations could deliver improved outcomes to many patients who are being treated with immunotherapy.



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[3] Acta Oncologica. Falk, H., et al., Calcium electroporation for treatment of cutaneous metastases; a randomized double-blinded phase II study, comparing the effect of calcium electroporation with electrochemotherapy. 2018. 57(3): p. 311-319.

[4] Kesar T, Binder-Macleod S. Effect of frequency and pulse duration on human muscle fatigue during repetitive electrical stimulation. Exp Physiol. 2006 Nov;91(6):967-76. 57(3): p. 311-319.

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### CONTACT US

Mirai Medical Ltd.  
Unit 5 | Howley Court | Oranmore  
Co. Galway | Republic of Ireland  
Email: [info@mirai-medical.com](mailto:info@mirai-medical.com)

[www.mirai-medical.com](http://www.mirai-medical.com)

