

Supporting Information

Transparent, 3D-printed microneedle patches that co-deliver ALA and guide blue light for preclinical acne photodynamic therapy

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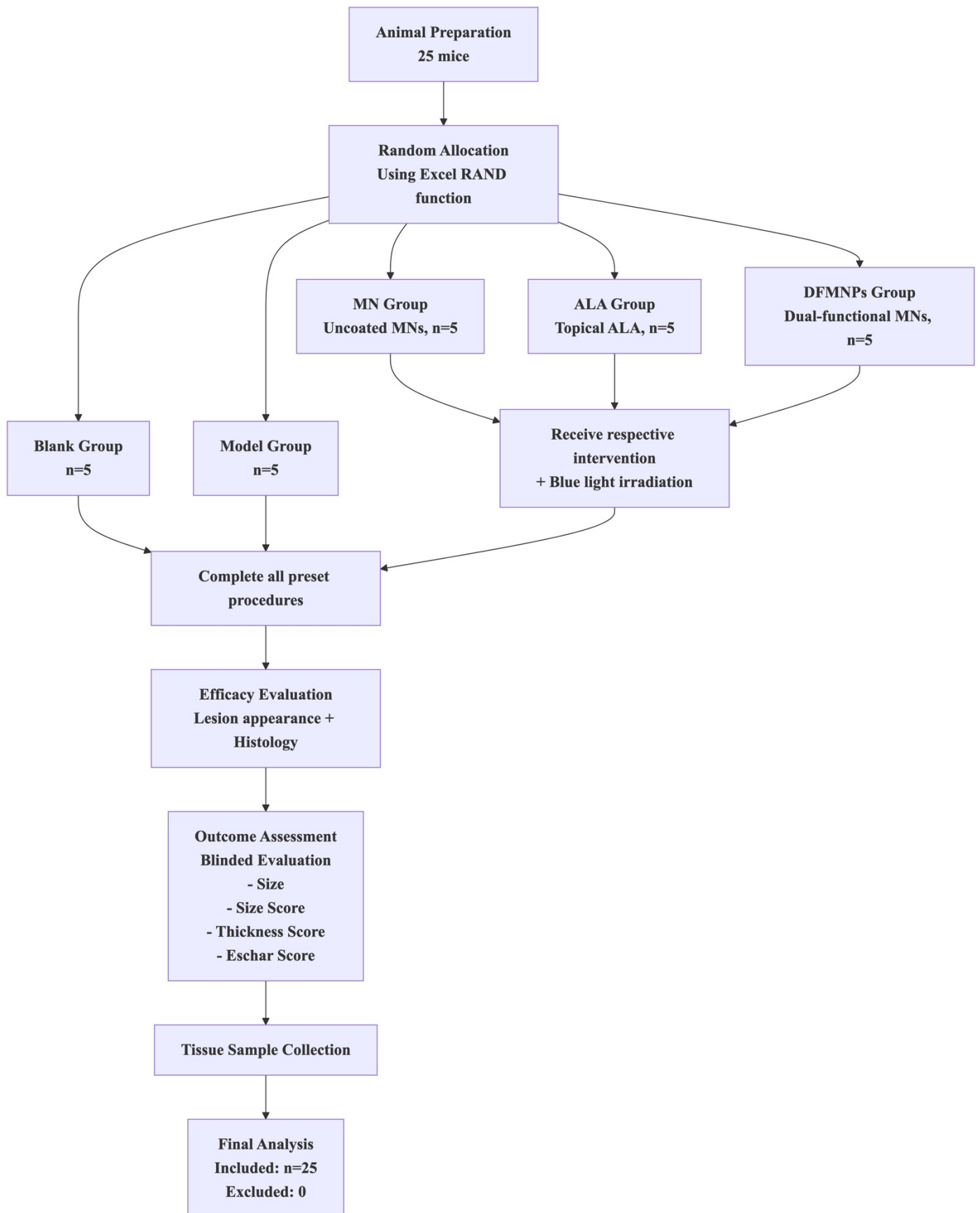


Figure S1. Flow diagram of animal allocation, experimental design, and outcome analysis in compliance with ARRIVE 2.0 guidelines.

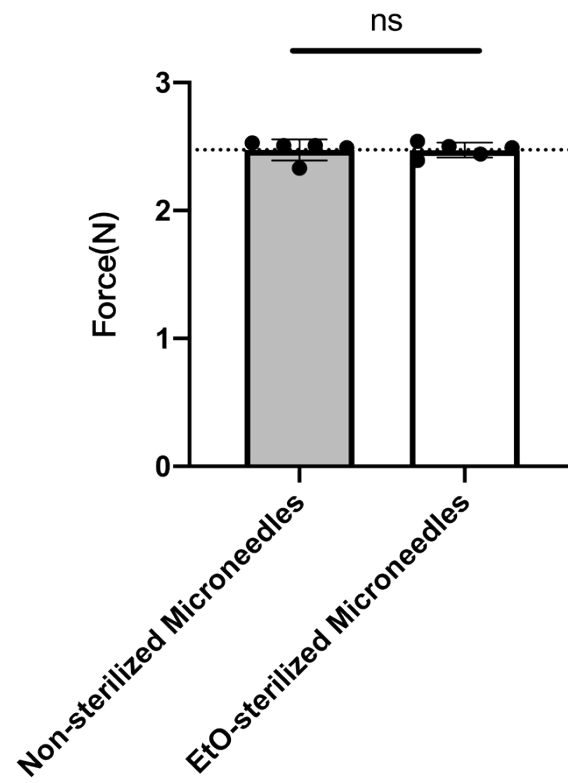
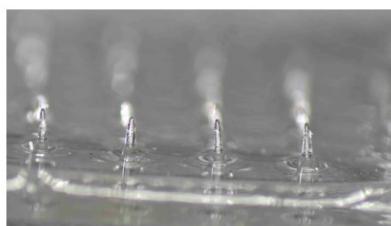
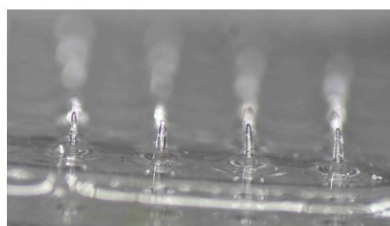


Figure S2. Mechanical properties of microneedles before and after sterilization (n=5).

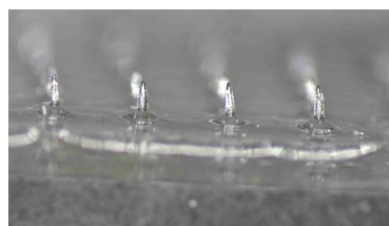
Figure S3. Photographs of the microneedle patch after repeated insertions into mouse



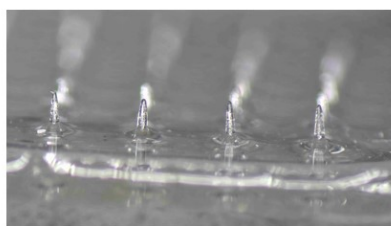
pristine



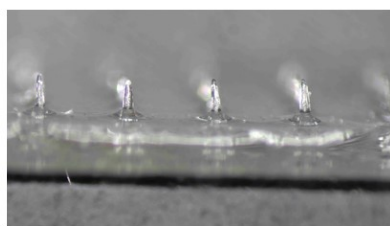
1st insertion



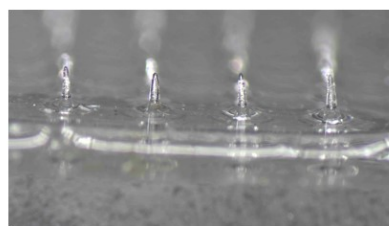
2nd insertion



5th insertion



10th insertion



20th insertion

skin for varying durations.

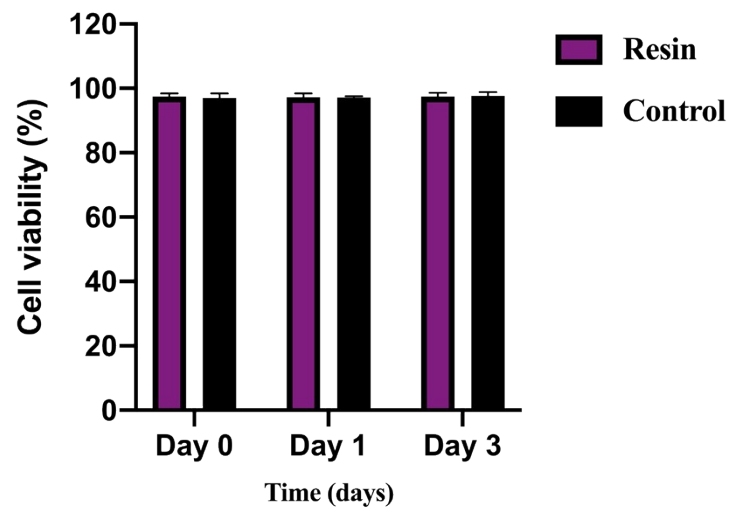


Figure S4. Cell viability tests at different time points (n=6).

Table S1. Evaluation results of different experimental groups at day 7.

Group	Size(mm)	Size Score	Thickness Score	Eschar Score
Model	3.96± 0.35	1.60± 0.55	1.40± 0.55	0.40± 0.55
MN	3.41± 0.59	1.00± 0.00	1.20± 0.45	0.40± 0.55
ALA	2.87± 0.52	1.00± 0.00	1.00± 0.00	1.60± 0.55
DFMNPs	1.53± 0.30	0.00± 0.00	0.20± 0.45	0.60± 0.55

Note: The data is represented by mean± standard deviation.