

Establishing and validating a murine model of endometriosis recurrence

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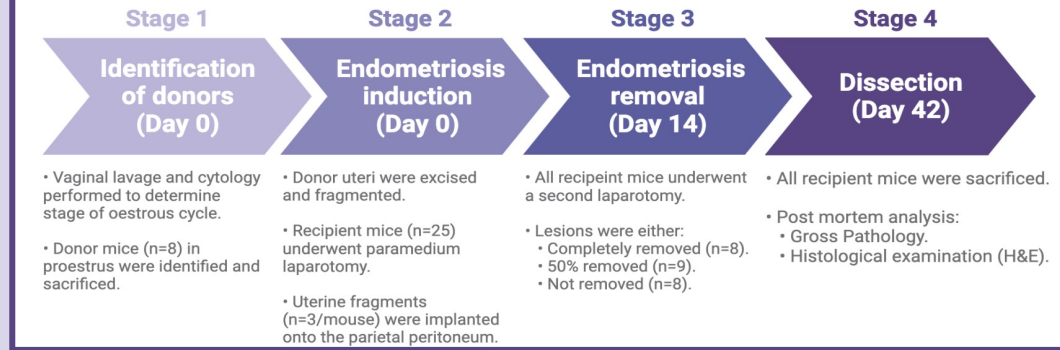
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Introduction

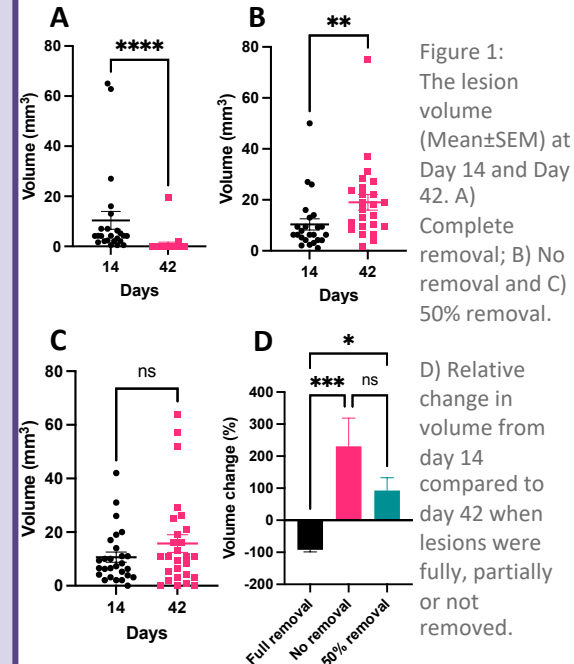
- Currently the only curative option for endometriosis is surgical removal of the lesions.
- Whilst conservative surgery is preferable for women hoping to conceive, re-operation rates are high due to lesion recurrence.
- Despite this, there are very few pre-clinical models of endometriosis recurrence.
- The aim of this study is to establish and validate a clinically relevant murine model of endometriosis recurrence.

Methods

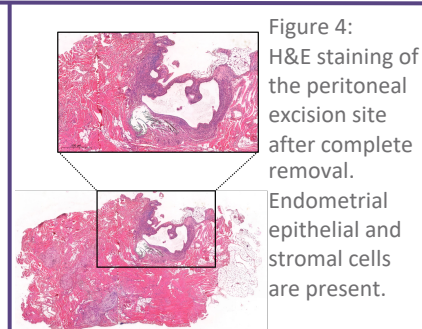
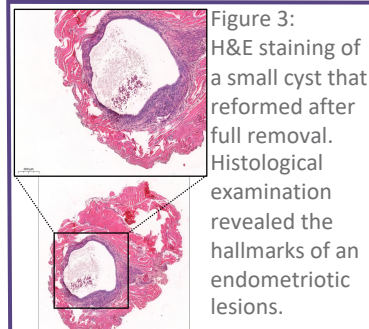
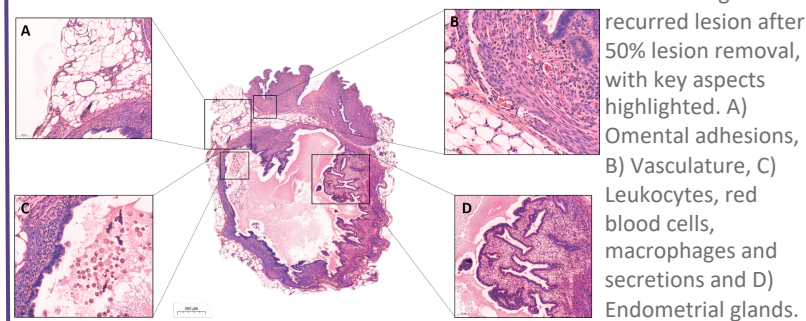


Results

Lesion volume



Histological staining



Discussion

- To the best of our knowledge this is the first *in vivo* model of endometriosis recurrence without the requirement of exogenous oestrogen.
- Similar to clinical observation, lesions reformed at the excision site [1].
- This study suggests that incomplete excision is an important factor of endometriosis recurrence.
- These data suggest there is a 'threshold theory' of endometriosis recurrence – the degree of residual tissue dictates the risk/rate of lesion growth.
- This model can be used to test the efficacy of peri- and post-operative treatment for preventing lesion recurrence.

References

- 1) Nirgianakis *et al.* Recurrence Patterns after Surgery in Patients with Different Endometriosis Subtypes: A Long-Term Hospital-Based Cohort Study. J Clin Med. 2020;9(2):496.