

An audit of LLETZ specimen depth and analysis of margin involvement

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Aims

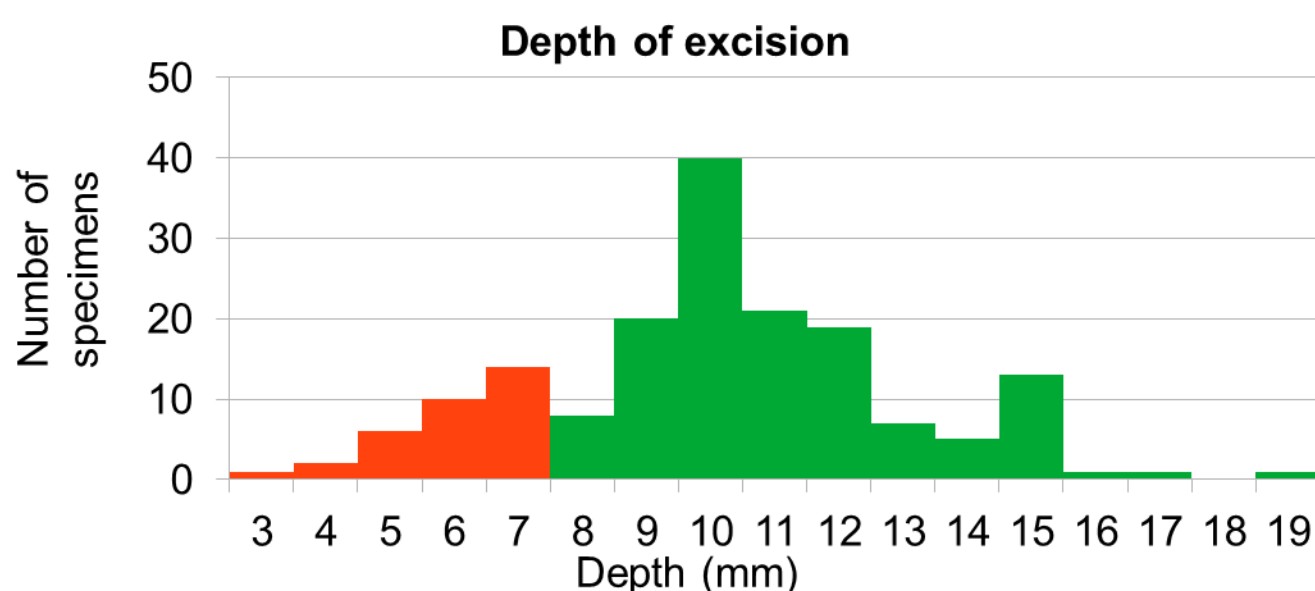
To determine if the minimum standard of LLETZ specimen depth (greater than 7mm¹) was being achieved locally and to analyse margin status with subsequent outcome.

Method

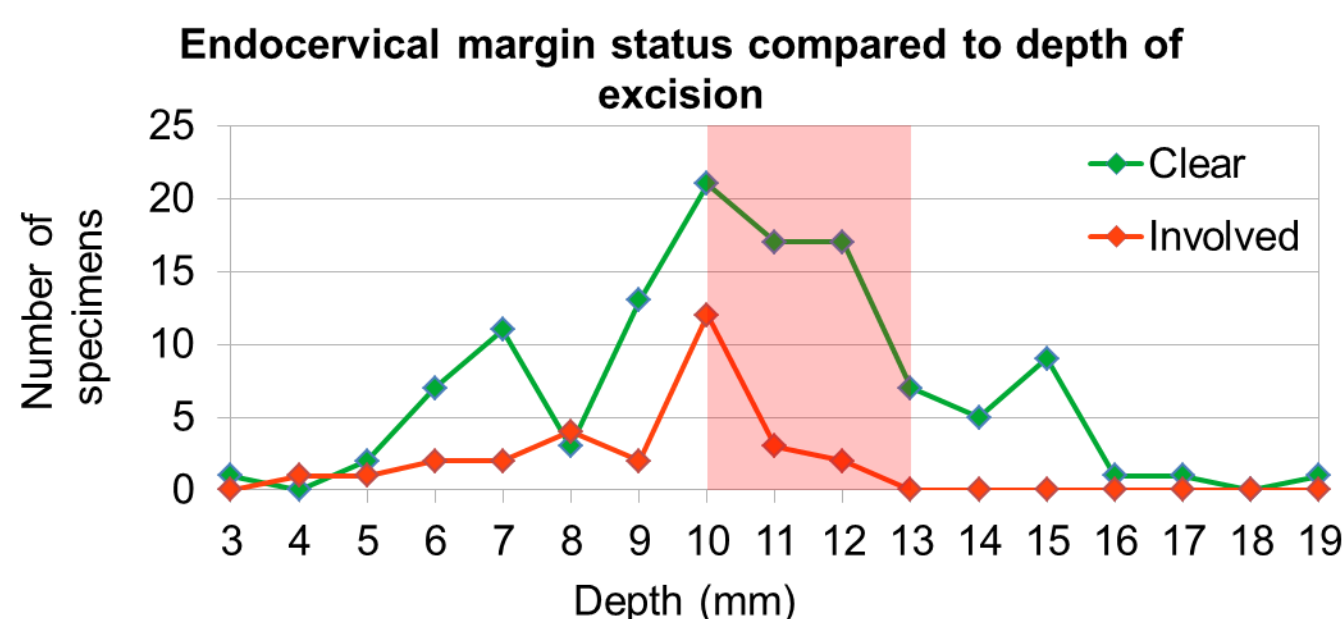
We collected the data from 169 specimens received over a 6 month period. 24 were excluded due to absence of CIN or incomplete data. 145 specimens were grouped according to margin involvement (endocervical, ectocervical or deep). The mean and standard deviation of specimen sizes (anterior-posterior, transverse and depth) were calculated. Where significant it was further analysed with a two proportion Z-test. The follow up test of cure (TOC) or further resection diagnoses were collected. 36 patients with no follow up results were excluded. In the 109 remaining cases, the outcomes were sorted into negative, low grade and high grade categories. Margin status was statistically compared to TOC failure and the proportion of low or high grade outcomes at TOC were analysed.

Results

80.5% of loops were greater than 7mm deep.

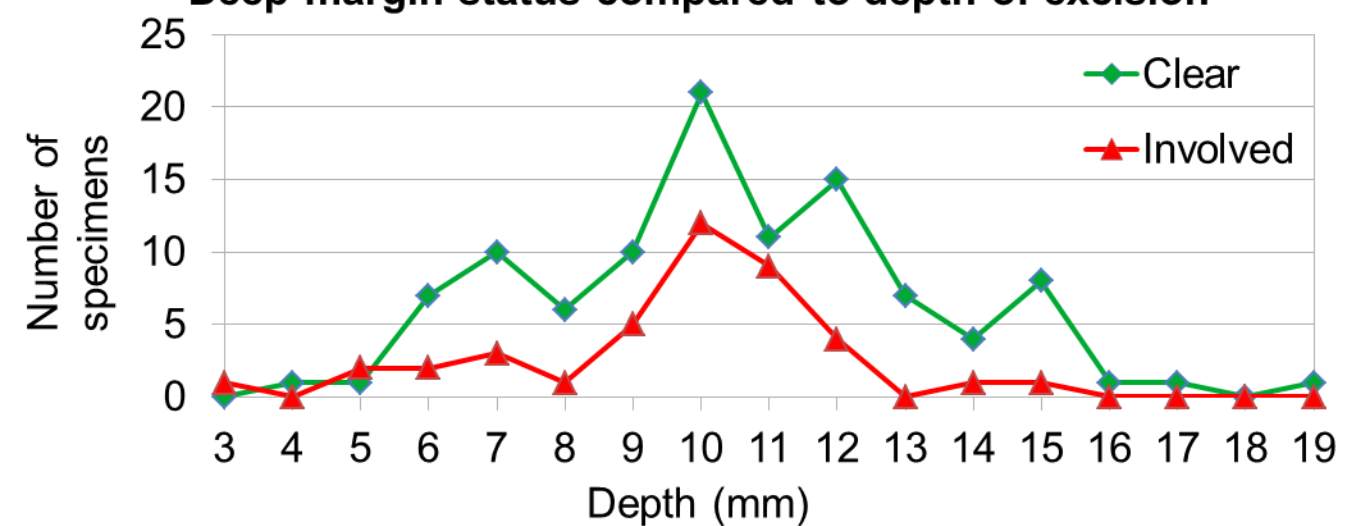


Depth of excision significantly influenced endocervical margin involvement ($p=0.001$). In particular, the specimens with a depth greater than 10mm, up to 13mm, had a lower proportion of involved margins ($p=0.001-0.028$).

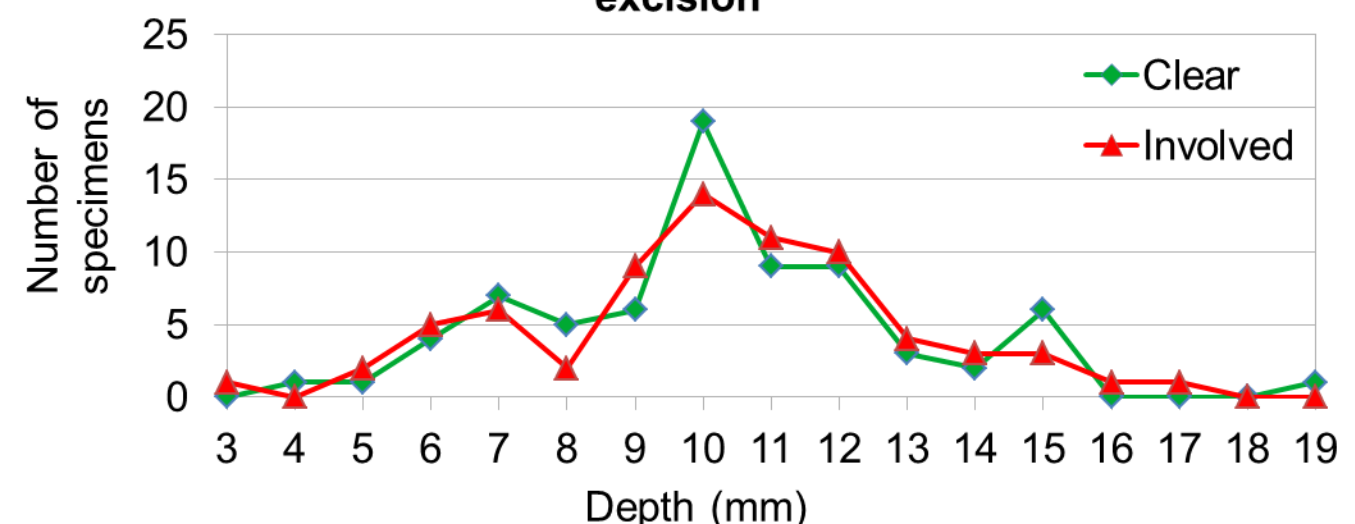


There was no significant reduction in ectocervical or deep margin involvement.

Deep margin status compared to depth of excision



Ectocervical margin status compared to depth of excision

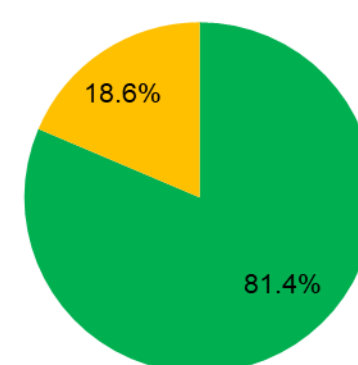


P-value comparing correlation between respective dimension verse margin involvement

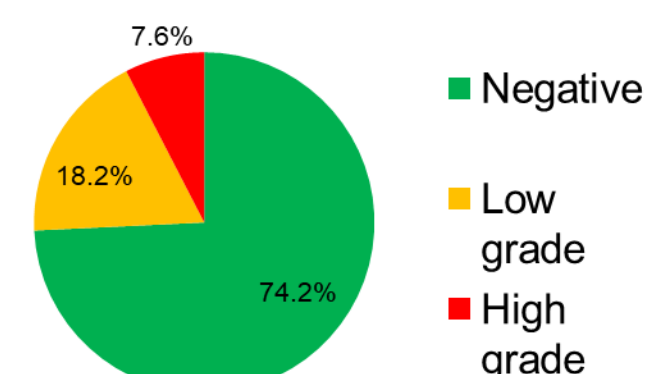
Dimension	Deep margin	Ectocervical margin	Endocervical margin
Anterior - Posterior	P = 0.360	P = 0.067	P = 0.640
Transverse	P = 0.240	P = 0.110	P = 0.250

Margin status, either all clear or any involved, did not influence the proportion of abnormal results subsequently detected on test of cure screening ($p=0.385$), nor did it influence the severity of outcomes in failed treatments ($p=0.140$).

TOC outcome if LLETZ margins are clear



TOC outcome if any LLETZ margin is involved



Key Conclusions

Only depth greater than 10mm gave a significantly reduced rate of endocervical margin involvement, however, the ectocervical and deep margins did not show the same reduction. In our cohort, margin status did not have a significant influence on the TOC outcome, and therefore does not support the current standards for depth of excision. Larger studies are needed to confirm our findings and evaluate the TOC outcome and risk of premature birth².

References

- 1) NHS Cervical Screening Programme Colposcopy and Programme Management. NHSCSP Publication number 20. Third Edition March 2016. Public Health England leads the NHS Screening Programmes
- 2) Obstetric outcomes after conservative treatment for cervical intraepithelial lesions and early invasive disease. Kyrgiou M., et al. Cochrane Database Syst Rev. 2017 Nov 2;11(11):CD012847.