

Oral Abstracts – *Tuesday, June 24*

#1 - Time presenting: 14:30 – Venetian Room (Lobby Level)

A REAL-TIME APPLICATION OF FLUORESCENCE VISUALIZATION (FV) TO IDENTIFY A NOVEL OPTICAL FIELD FOR SUBCLINICAL EXTENSION IN HIGH-RISK ORAL LESIONS. C. Poh, L. Zhang, S. Durham, D. Anderson, A. Kung, M. Rosin. University of BC, BC Cancer Agency & Research Centre, Vancouver. There is no consensus in managing high-grade dysplasia/carcinoma in situ (HGL). Frequent recurrence following excision implies the presence of subclinical change at the margins not-apparent at surgery, resulting in incomplete excision. FV has demonstrated the ability to identify clinically not-apparent oral lesions. The objective of this study is to apply this novel optical technology in the operating room to assess surgical fields for subclinical extension beyond clinical boundaries in high risk oral lesions. Among 35 lesions (22 HGLs and 13 SCCs) examined, FV alteration (FV loss, FVL) was noted in all lesions. For HGL, almost all (21/22; 95%) FVL was going beyond clinical boundaries. This uneven subclinical extension of FVL, ranging from 1 to 25 mm did not differ significantly from those of SCC. Strikingly, 35% (13/37) of biopsies from FVL boundary beyond clinical boundary of HGLs showed histologically high-grade change and 5 of them beyond 10-mm, the conventional margin set-up for cancer. Conclusion: Through identifying subclinical field change associated with high-risk histology, integrating FV in surgery might provide a useful approach to better manage HGL at the point of care and a subgroup of HGLs should be treated aggressively (sponsored by NIDCR R01 DE17013, CIHR MOP-77663 and MSFHR).