

**ANALYSIS OF SALIVARY CYTOKINES AND
CHEMOKINES IN EARLY AND ADVANCED STAGES OF
ORAL SQUAMOUS CELL CARCINOMA (OSCC)**

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TRAining in
CAncer mechanisms & Therapeutics

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Marie Skłodowska-Curie
Actions



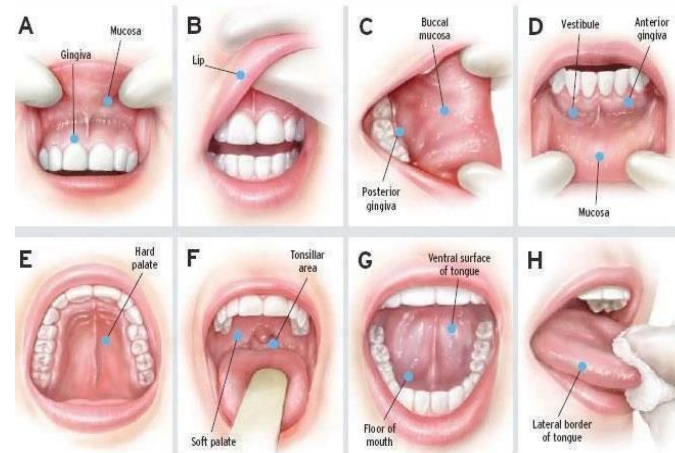
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Head and Neck Cancer (HNC) and Oral Squamous Cell Carcinoma (OSCC)

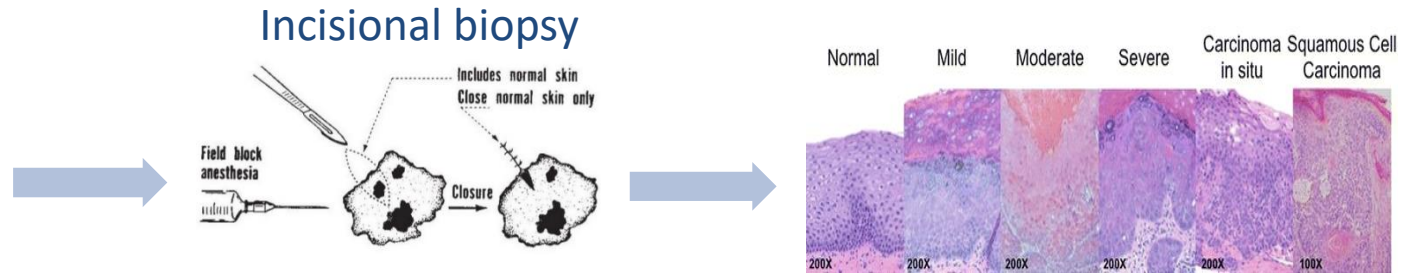
OSCC...

- 80-90% of HNC, the 5-year survival rate about 50%.
- Twice as common among men as among women, diagnosed more often over the age of 50.

The 8-Step Oral Cancer Screening



Detection and Diagnosis of OSCC



Biomarker discovery ???

Prognostic

Is it likely to develop this cancer?

Diagnostic

What type of cancer is it?

Recurrence

Will the cancer return?

Biomarker Identification

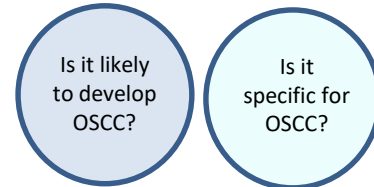
Is it likely
to develop
OSCC?

Is it
specific
for
OSCC?

Aims

- i. To establish an immune-based assay for detection and quantification of salivary cytokines and chemokines.
- ii. To evaluate salivary levels of a biomarker panel (13 target cytokines & chemokines) in patients diagnosed at early and advanced stages of OSCC and healthy individuals.
- iii. To determine whether the levels of the target inflammatory proteins differ between the groups through validation of statistical significance and correlation with clinical parameters.

Materials and Methods



Control
(n = 16)

Early OSCC
(n = 15)

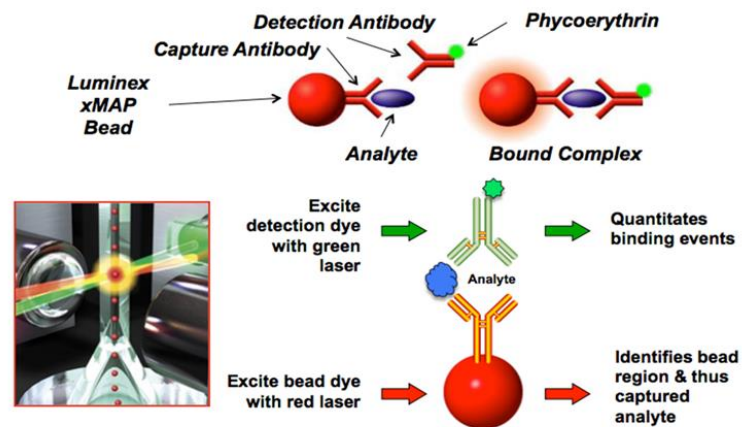
Advanced OSCC
(n = 16)



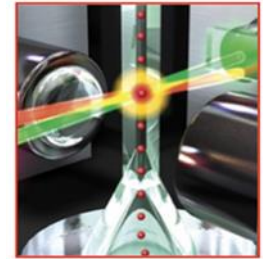
Whole saliva sample



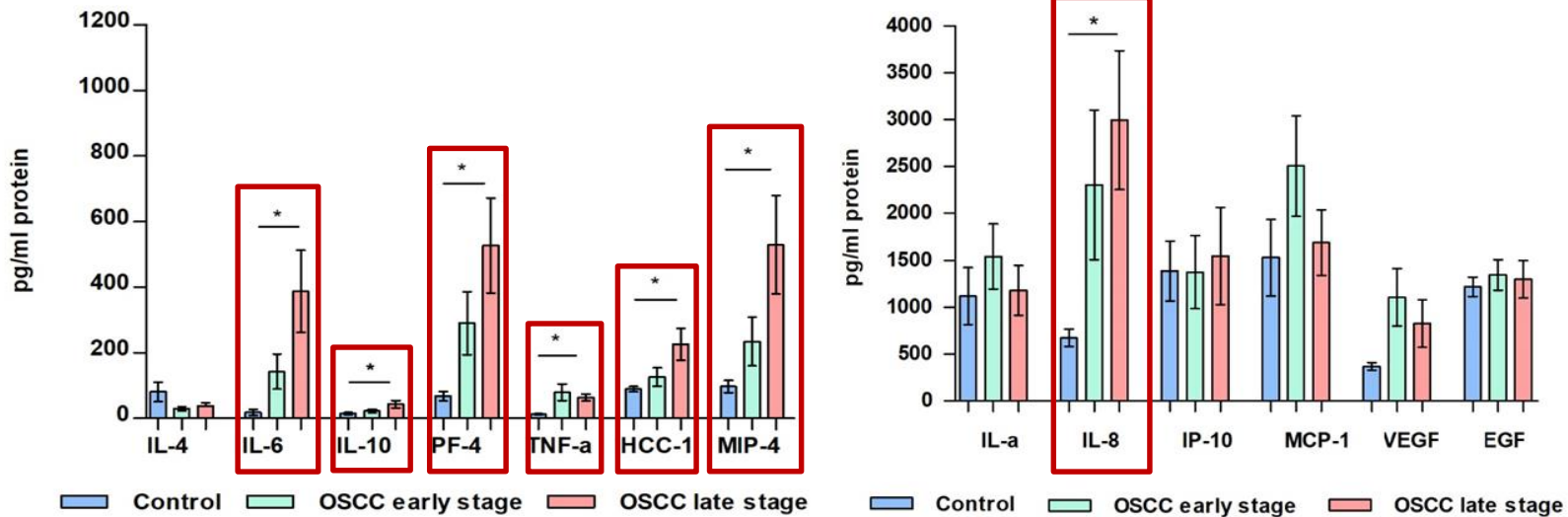
Multi Analyte Profiling technology (Luminex xMAP)



IL-1 α , IL-4, IL-6, IL-8, IL-10, MIP-4, PF-4,
HCC1, IP-10, MCP-1, TNF- α , VEGF and
EGF



Luminex xMAP immunoassay Results: Salivary cytokine and chemokine levels



Controls n = 16
Early OSCC n = 15
Late OSCC n = 16
To validate statistical significance (P<0.05) Kruskal-Wallis non-parametric test was performed.

Conclusion

A trend towards a growth according to the cancer progression. Larger scale of samples and correlation with the patients clinical parameters are required to confirm validation.

Acknowledgments

To the patients

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The investigation group at the Molecular Oncology research lab ⁵

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Thank you for your attention!