



OralScan

OralScan is a hand-held multispectral imaging camera for noninvasive and real time screening of oral potentially malignant lesion (OPML) and biopsy guidance

Recent Awards:

- ❖ The National Startup India Award 2021
- ❖ The Anjani Mashelkar Inclusive Innovation Award 2021
- ❖ Pharma & Medical Devices Startup India Grand Challenge 2021

Assessment of tissue abnormalities:

Cloud based algorithm provides for intuitive and real time assessment of tissue status at the point of care

Early detection of Oral Cancer:

Novel multimodal imaging technology combining tissue fluorescence, diffuse reflectance and absorption for detection of oral precancers.

Biopsy Guidance:

The device detects potentially malignant lesions of the oral cavity by mapping changes in tissue fluorescence and oxygenated haemoglobin (HbO₂) absorption and locates the most malignant site for tissue biopsy and histopathology

OralScan Features:

- ❖ High resolution (5MPx) monochrome camera
- ❖ Non-invasive, hand-held intraoral device
- ❖ Third generation software
- ❖ Minimal training required for users
- ❖ Quick and pain free screening
- ❖ Portable for use in preventive care programs

Benefits:

- ❖ Clinically validated
- ❖ Fewer false negatives and false positives
- ❖ Avoids unnecessary biopsies and followups
- ❖ Lower per patient screening cost
- ❖ Reduces patient trauma and morbidity
- ❖ Minimises treatment cost

Patents:

- ❖ Indian Patent Awarded #303949
- ❖ US Patent Pending
- ❖ EU Patent Pending



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Functions:

OralScan captures multispectral images of the OPML using a monochrome camera on illumination with violet, green and red LEDs. The LEDs are triggered sequentially to capture multispectral images of tissue fluorescence and diffuse reflectance. The captured images are processed in real time to provide information on the disease status at the point of care with the help of a cloud based machine learning algorithm. The device is controlled using proprietary software installed on a tablet or laptop.



Clinical Validation:

A multicentric clinical study in 336 patients with pathology from 74 patients (89 sites) has shown a sensitivity of 97.5% and specificity of 92.5% with a PPV of 92.9% and NPV of 97.4% to discriminate potentially malignant lesions of the oral cavity from patient normal. An overall sensitivity of 82% and specificity of 97% with PPV of 96.1% and NPV of 84.3% was obtained to discriminate patient normal from abnormal (OPML+SCC).

Social Impact:

Oral cancer screening camp is being conducted at

1. Wayanadu with the support of Amrita Hospital where 40 peoples attended till now
2. Uttarakhand with the support of Ekohum Foundation
3. Maharashtra with the support of India Relief Foundation
4. Arunachal Pradesh with the support of Big Edge Solutions & Technologies Private Limited



Designed & Manufactured by:



Sascan Meditech Private Limited

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