



# SMART DENTASSIST

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Interactive System for Dental Support and Patient Management



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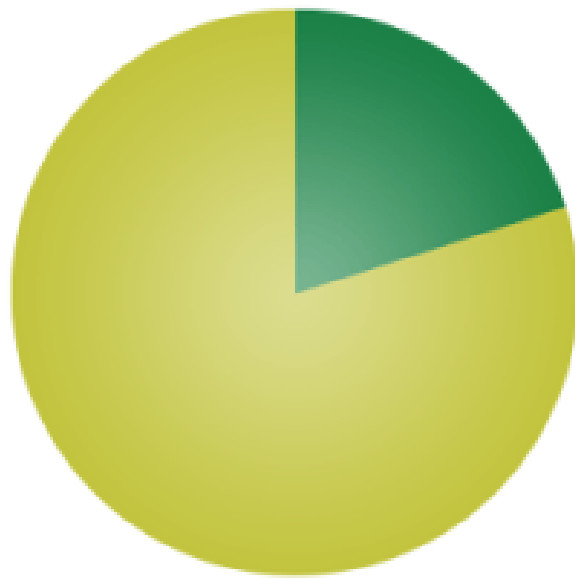
## Research Team

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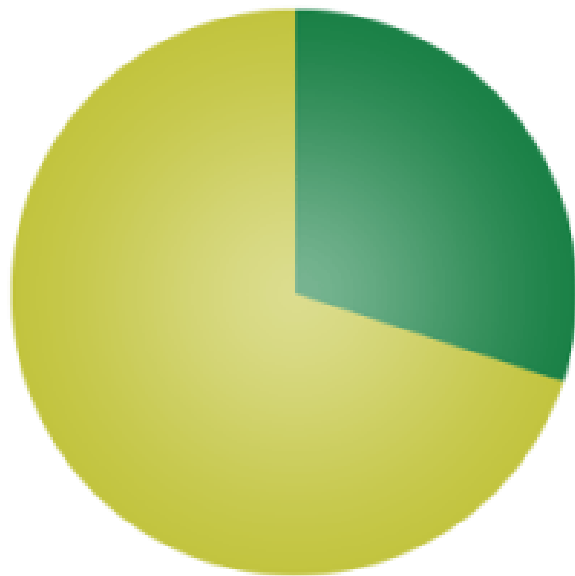
## Supervisor

Dr. Rohan Samarasigha

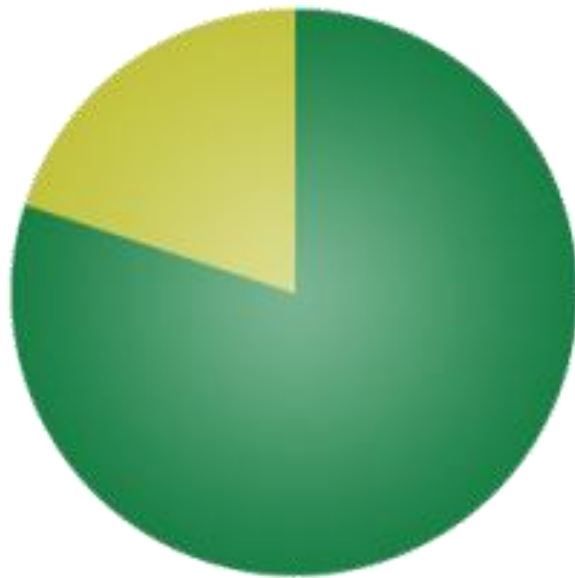
# Global statistics



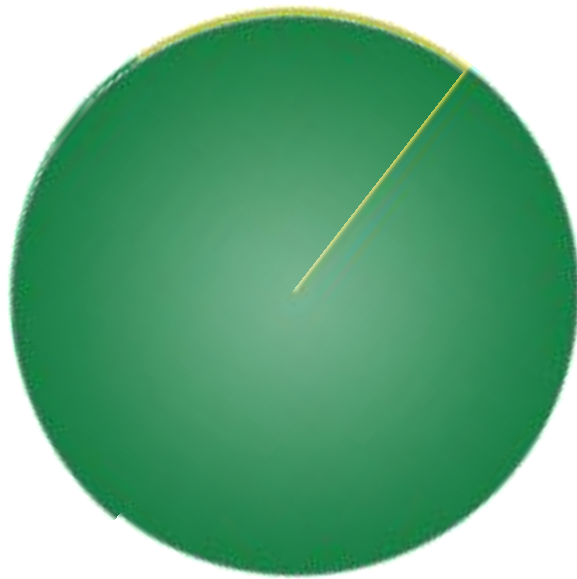
■ Adults with  
**severe gum diseases**



■ Adults with  
**no natural teeth**



■ School children with  
**dental caries**



■ Adults with  
**dental caries**

THESE DISEASES LEAD TO





**Edentulousness** (loss of teeth) within the elderly population results in impaired ability to chew and can lead to malnutrition.

**Gum disease** can be the starting point for noma.

**Dental infections** have been associated with higher increased risk for pneumonia.

**Oral bacteria** are associated with infective endocarditis (inflammation of the heart's inner lining).

**The mouth** may be a reservoir for bacteria associated with stomach ulcers.

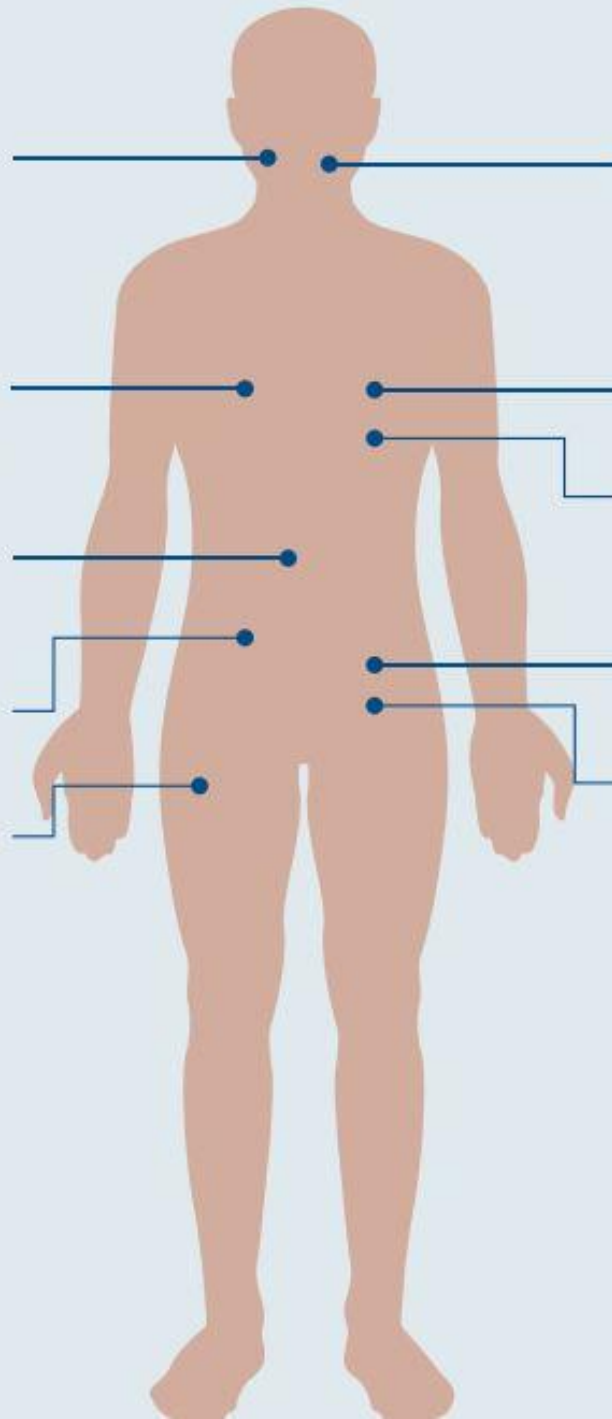
**Gum disease** has been associated with higher risk of cardiovascular disease.

**Gum disease** can complicate diabetes.

**Gum disease** has been associated with higher risk of pre-term babies.

**Oral bacteria** are associated with infective arthritis.

**Gum disease** has been associated with higher risk of low-birthweight babies.

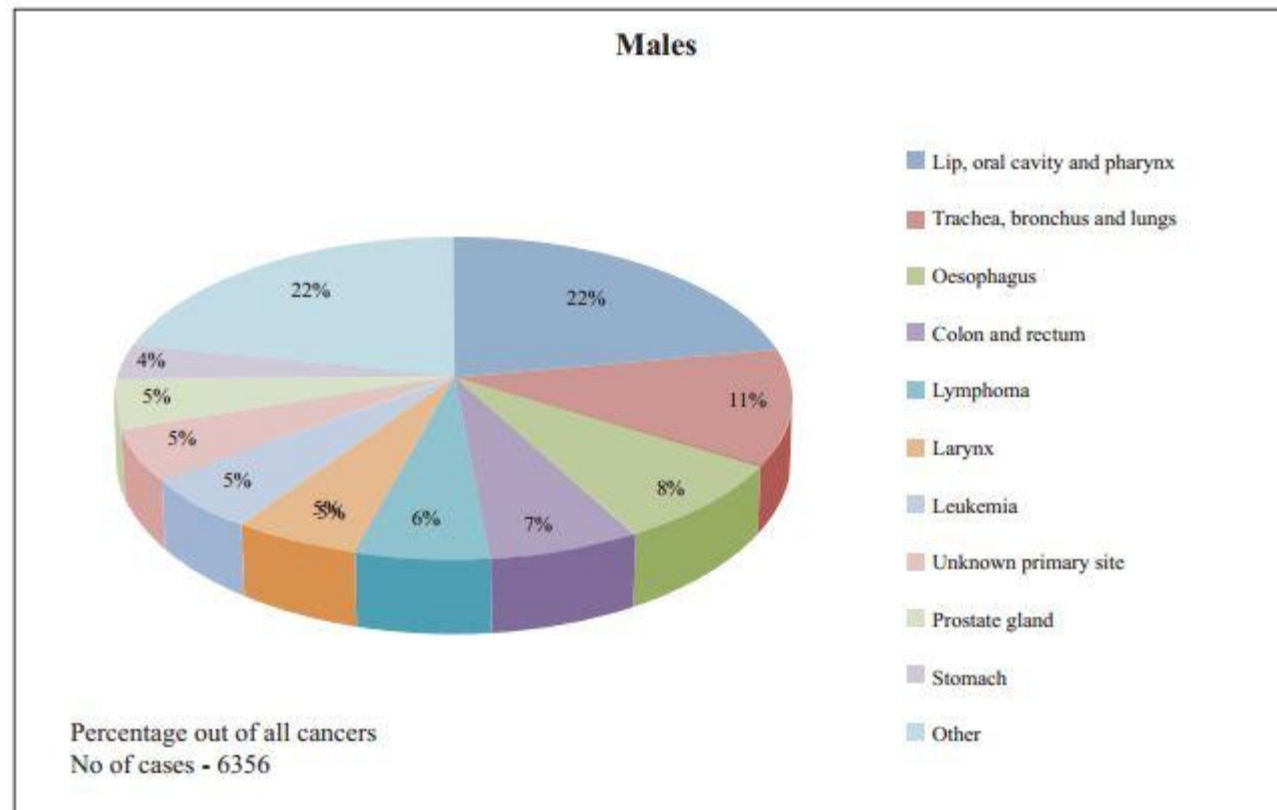


**Table 12: Lip, oral cavity and pharynx  
Incidence data 2007**

Group	Number	Percentage	ASR	Cum. Rate
Male	1415	22.3	16.0	1.91
Female	398	5.5	4.0	0.49
Total	1813	13.3	9.6	1.17

ASR: Age standardized rate per 100,000 world population

Cum. Rate- Cumulative Rate (0-74 years) per 100 population

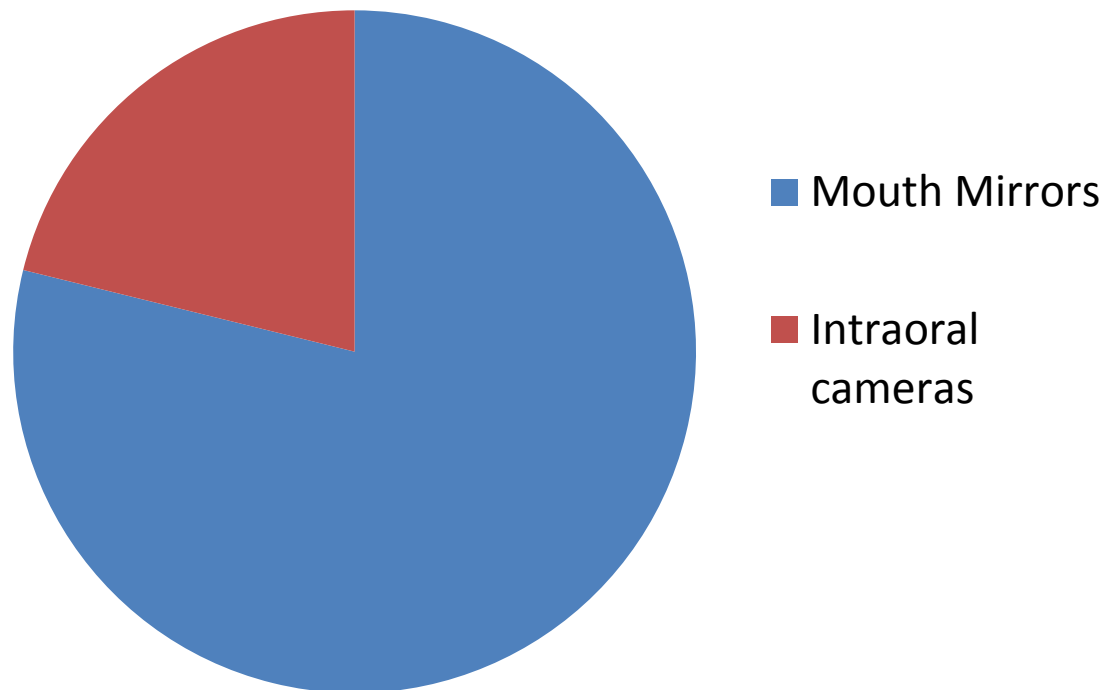


# However ...

**Oral health** is known to be the most **neglected**  
health aspect among adults ...

# Current situation in Sri Lanka ...

- A significant majority of dentists still use mouth mirrors
- Use of intra oral cameras is not yet popular



## Disadvantages of mouth mirrors

- The number of teeth which may be viewed using a conventional round mirror is extremely limited.
- The quality of the reflective surface is not that of a standard mirror
- Once it is used, it cannot fulfill its purpose



# Advantages of intraoral cameras

today's  
dentistry

HOME

ABOUT

SERVICES

FAMILY

to see with the naked eye

## Advantages of IntraOral Cameras

- **Instant:** you can instantly see what we see as we investigate your teeth, and also what we do when we work on them
- **Accurate:** we can take a picture of the inside of your mouth for a bigger and better look, and it really helps to track any changes over time
- **Easy referrals or second opinions:** if we need to get another opinion from a specialist, we can easily take a photo and email it to them
- **Memory jogger:** we store these images on your dental record to compare back to later – a great way to really track erosion, staining
- **Better planning:** together we can discuss the best treatment plan for you as we go – you then decide how to proceed
- **Learn more:** it is a great educational tool to show you exactly what is going on in your mouth... rather than our dentists merely trying to describe it to you in words!



## A picture is worth a thousand words

*Our patients love our Intra oral cameras – you get to see first hand and up close the state of your teeth, including any problems such as cracked teeth, decay, worn-out or defective fillings, bleeding gums and plaque.*

Our solution ...





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**PATIENT  
MANAGEMENT  
SYSTEM**



**DIAGNOSIS,  
TREATMENT  
&  
SIMULATION**



**DENTAL  
INFORMATION  
KNOWLEDGE  
BASE**



**TELE-  
CONFERENCING  
SYSTEM**



# SMART DENTASSIST

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## Technologies Used

✓ Php

✓ Java

✓ JavaScript

✓ jQuery

✓ Blender

✓ RTMP Protocol

✓ X3dom

✓ WebGL

Demonstration ...

