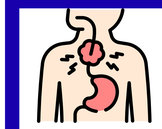
BREATH TEST FOR EARLIER DETECTION OF OESOPHAGEAL CANCER

THE PROBLEM



OESOPHAGEAL CANCER
>0.5 million year

ADENOCARCINOMA

SQUAMOUS CELL CARCINOMA

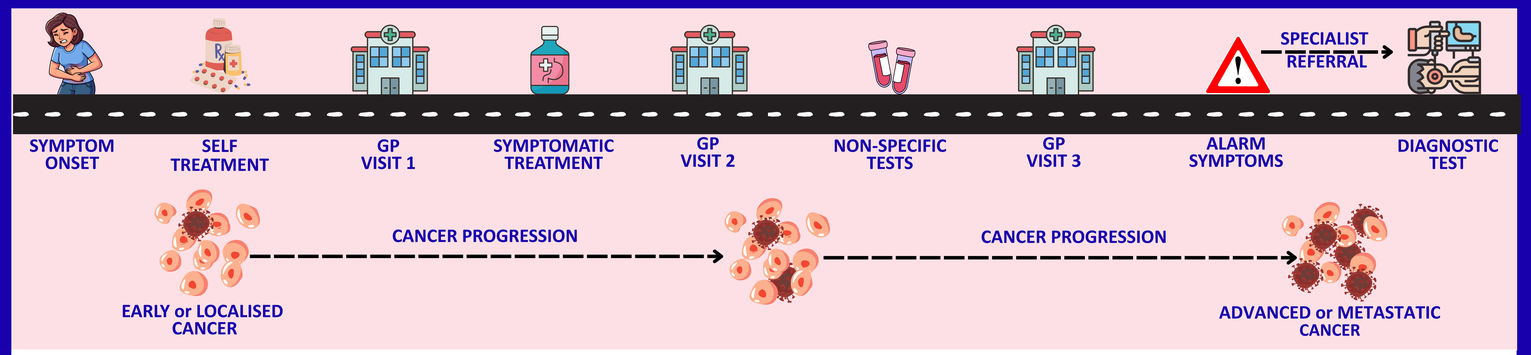
- GLOBAL HEALTH BURDEN
- CLAIMING ONE LIFE EVERY MINUTE

OVERALL SURVIVAL

EARLY DIAGNOSIS >90%



LATE DIAGNOSIS <15%



CURRENT PATHWAY TO DIAGNOSIS

EARLY STAGE 1/3rd

ADVANCED STAGE 2/3rd

TREATMENT OPTIONS

PALLIATIVE INTENT >60%

CURATIVE INTENT <40%

THE PROPOSED SOLUTION

BREATH-BASED TRIAGE TEST

NATIONAL DIGITAL PUBLIC SURVEY (2023-2024)

- MCED Tests
- 2200 RESPONSES

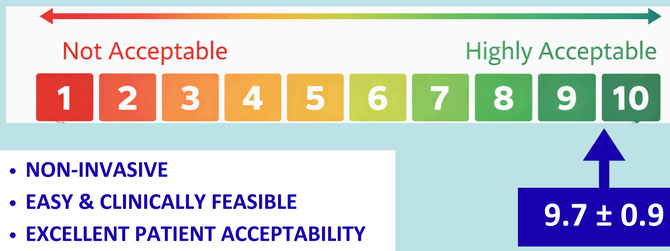
Non-invasive tests preferred
BREATH > SALIVA > URINE



PREFERRED TESTING LOCATION



PATIENT ACCEPTABILITY OF BREATH SAMPLING



- NON-INVASIVE
- EASY & CLINICALLY FEASIBLE
- EXCELLENT PATIENT ACCEPTABILITY

POTENTIAL NHS COST-SAVINGS: £155 Million per year

CLINICAL STUDY: ViSON

Volatile Organic Compounds as Breath Biomarkers in Squamous Oesophageal Neoplasms

THE LARGEST GLOBAL MULTICENTRE STUDY IN OESOPHAGEAL SCC

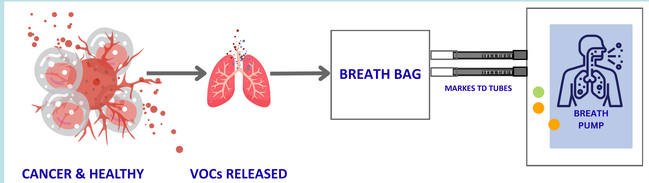
MULTICENTRE UK CASE-CONTROL STUDY

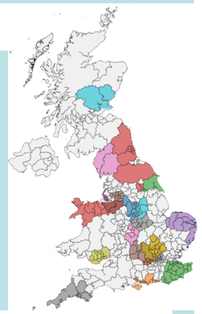
OSCC VS CONTROLS

POWER CALCULATION
SENSITIVITY>90%
SPECIFICITY>80%
Sample Size=518

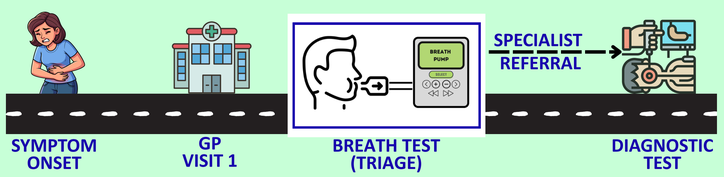
21 NHS TRUSTS

PRINCIPLE BEHIND BREATH TESTING





PROPOSED NEW PATHWAY TO DIAGNOSIS



BEYOND RESEARCH DELIVERY

- Patient & Public Involvement Impact



CANCER SURVIVOR

"As a cancer survivor, volunteering on research developing a breath test for earlier detection was my way of giving back. Taking part in a public involvement course together helped me understand how research works "

PATIENT SUPPORTER

"If a simple breath test had been available when my husband started showing symptoms, it is entirely possible that he would still be with me! Being part of the ViSON PAG has been an enriching experience which I intend to continue."





CANCER SURVIVOR

"The VISION PPI group provides a powerful space to share our lived experience and feel truly heard! Knowing our voices can help shape research aimed at earlier diagnosis makes the experience incredibly meaningful."

PATIENT CARER

"What began as sharing lived experience became a rewarding opportunity to connect with inspiring people. The supportive environment encouraged open discussion and a deeper appreciation of the research process."



- Creating Research Opportunities for Early-Career Clinicians

15 ASSOCIATE PI's SUPPORTED

NIHR Associate PI Scheme provides early-career clinicians with structured, hands-on experience in delivering clinical research.

NIHR Associate Principal Investigator Scheme REGISTERED STUDY

- Raising awareness through social media

- X (TWITTER) WEBPAGE @ViSONStudy
- @HannaGroup BREATH RESEARCH WEBSITE

SPONSORED BY
IMPERIAL
THE HANNA GROUP

FUNDED BY
NIHR | National Institute for Health and Care Research

SUPPORTED BY
Oxfordshire Oesophageal and Stomach Organisation
Registered Charity No: 1152733
OPA Cancer Charity
Oesophageal and Gastric Cancer Support

SAMEERA SHARMA
M.B.B.S; M.R.C.S
E: ssharma@ic.ac.uk
M: 07576583519