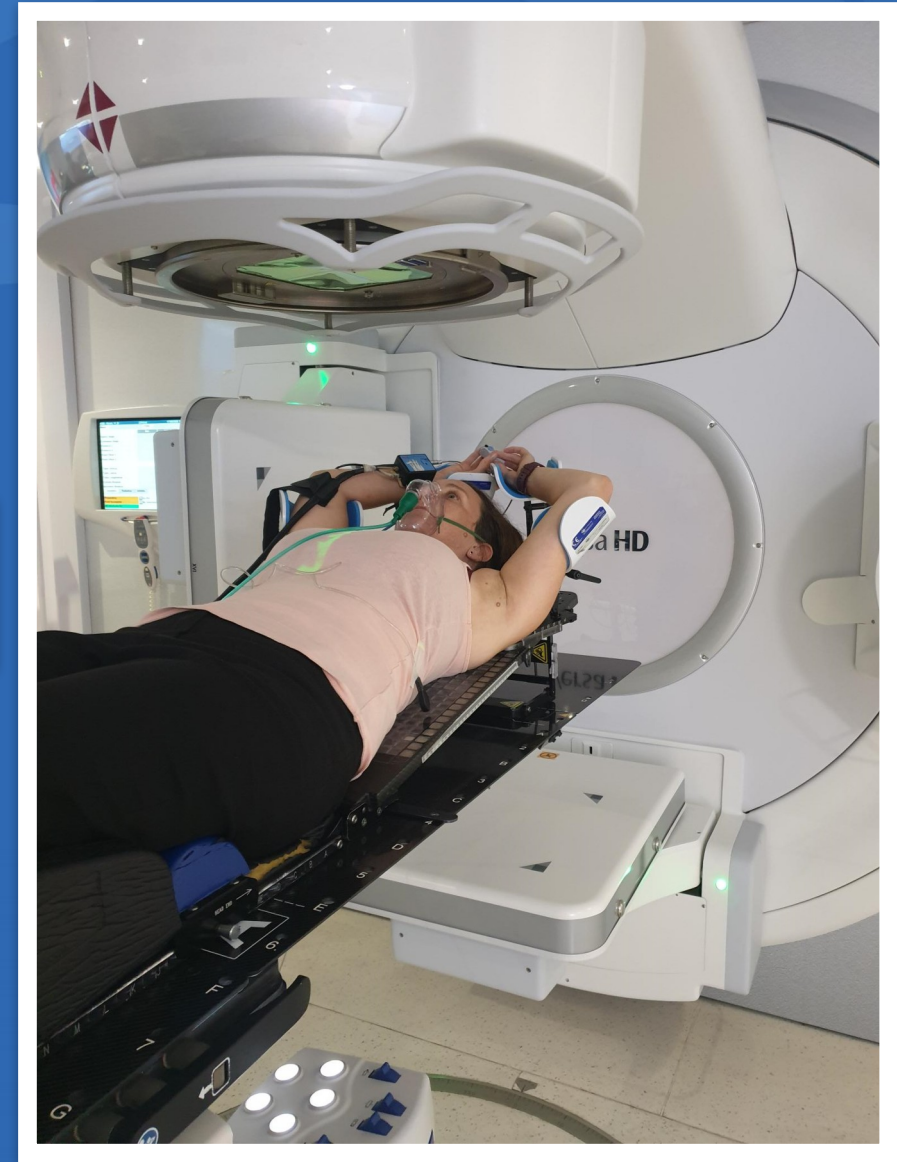
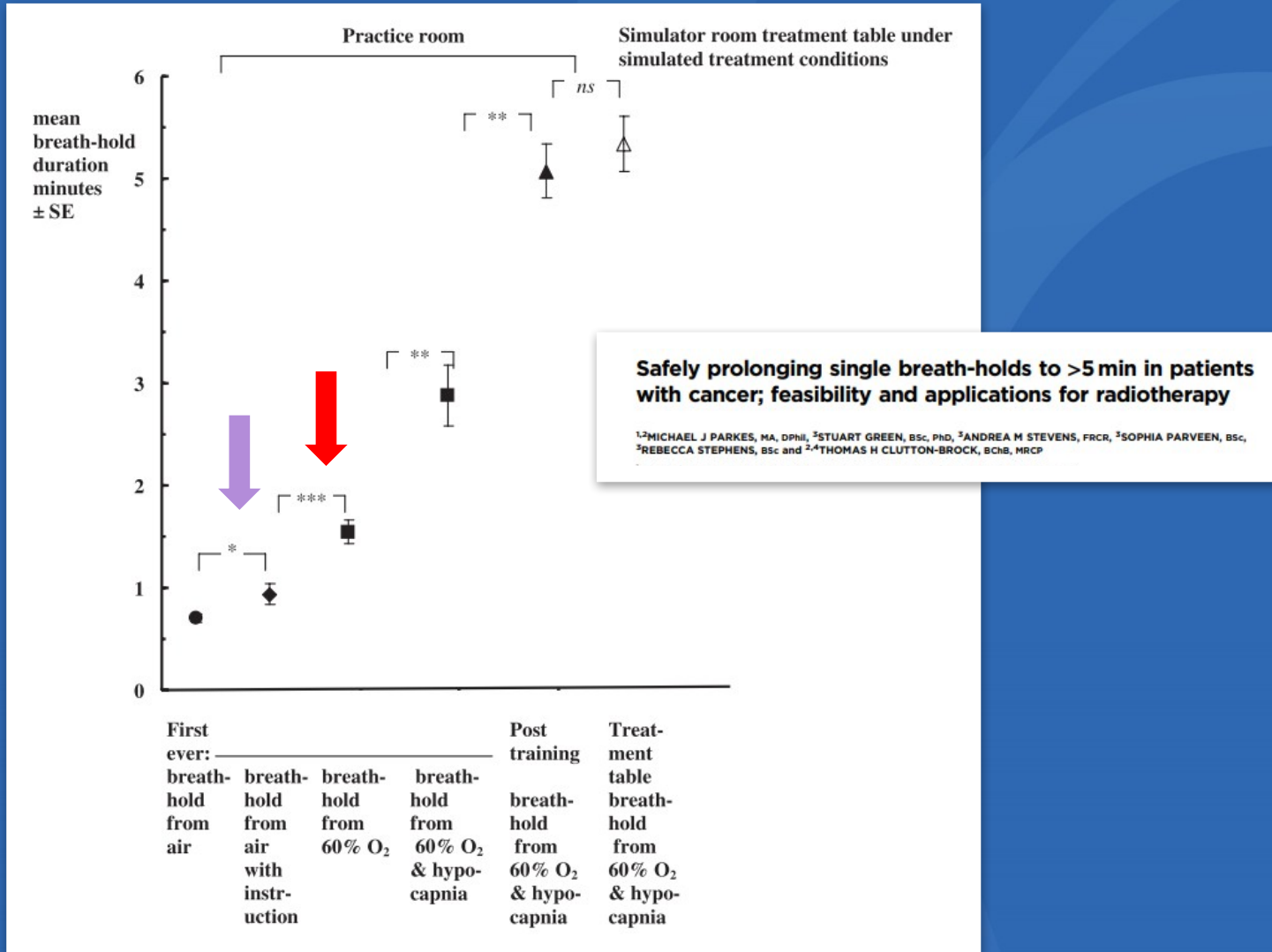


Breath-hold with supplemental oxygen: The Birmingham experience



Sofia Parveen
Therapeutic Radiographer

Where our journey began



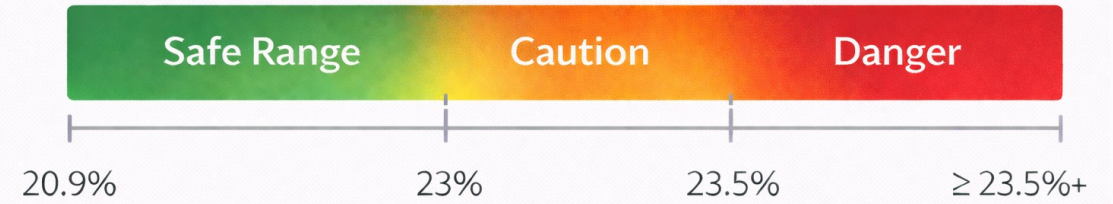
Implementation Safety



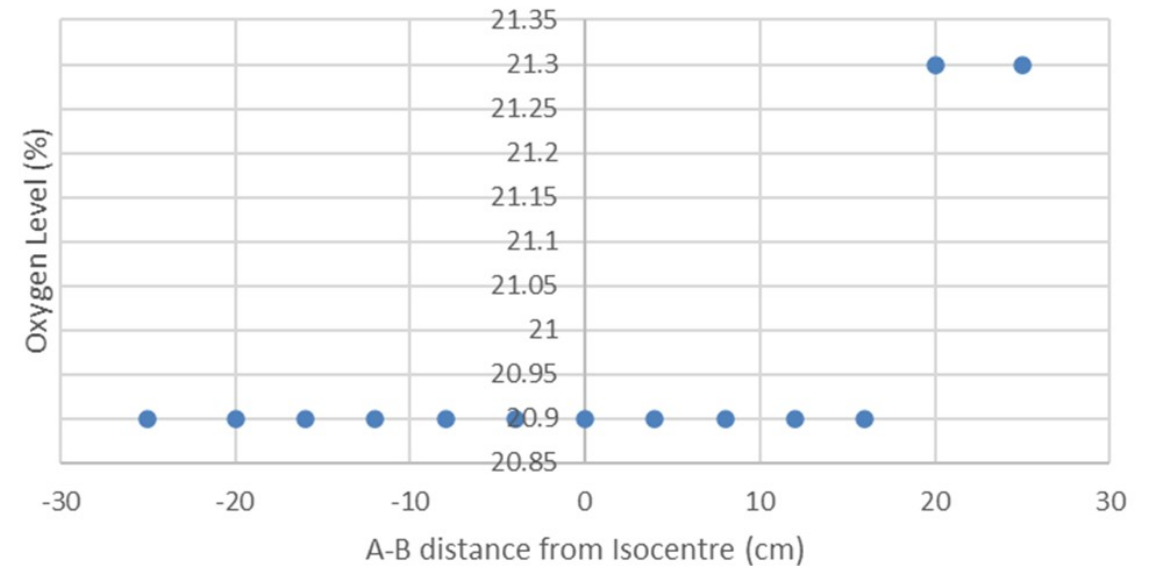
Industrial scientific group

Room Oxygen Levels and Associated Safety Thresholds

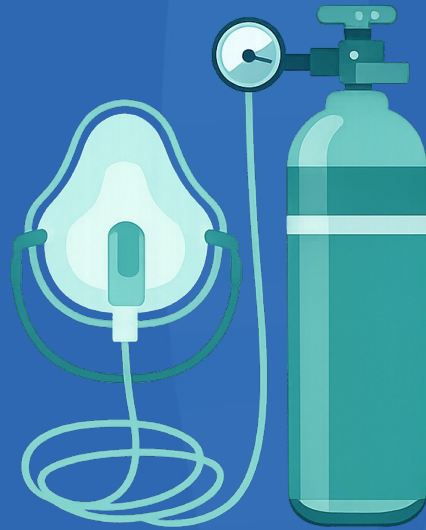
Environmental Oxygen Levels (%)



Oxygen Levels: A-B from isocenter



Oxygen as a Drug: Risks and Mitigation



↑ RISK OF LUNG INJURY



↑ RISK OF LUNG INJURY



↑ RISK OF CO₂ RETENTION & RESPIRATORY COMPLICATIONS

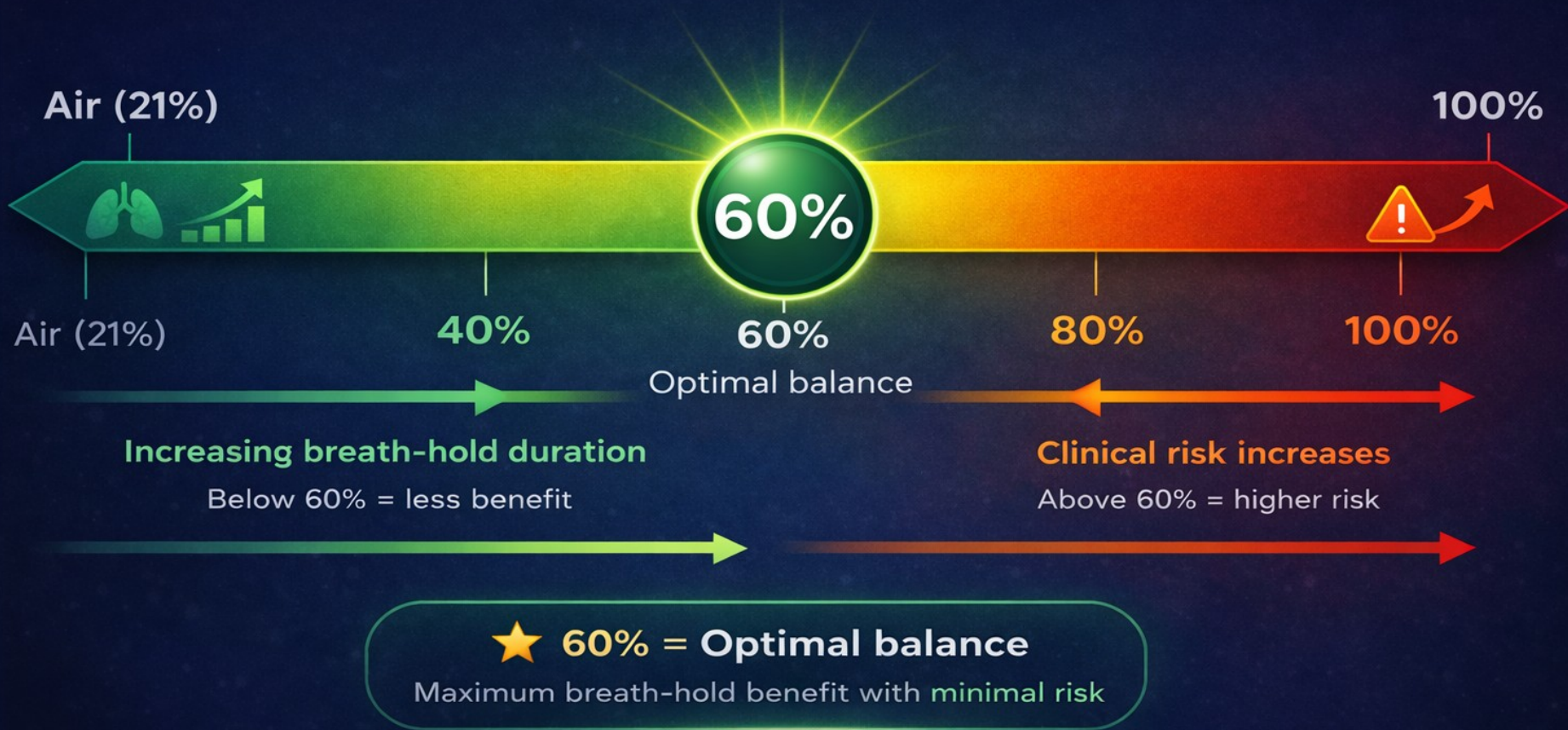
CONTROLLED DOCUMENT

PATIENT GROUP DIRECTION FOR THE ADMINISTRATION OF 60% OXYGEN BY HCPC REGISTERED RADIOGRAPHERS TO PATIENTS UNDERGOING RADIATION TREATMENT THAT WILL BENEFIT FROM OXYGEN ENHANCED BREATH HOLDS IN RADIOTHERAPY DEPARTMENTS AT UNIVERSITY HOSPITALS BIRMINGHAM

CATEGORY:	Procedural document
CLASSIFICATION:	Clinical/Governance
PURPOSE:	Administration of 60% Oxygen to patients without prescription under a PGD
Controlled Document Number:	001/1023
Version Number:	1
Controlled Document Sponsor:	Chief Pharmacist
Controlled Document Lead:	Consultant Clinical Oncologist
Approved By:	Medicines Management Advisory Group
Valid from:	31 October 2023
Review date:	31 October 2025
Expiry date:	31 October 2026
Distribution:	<ul style="list-style-type: none"> Essential Reading for: HCPC registered Therapy Radiographers to administer 60% Oxygen to patients against a PGD. Information for: Pharmacy Staff, Clinical staff involved in the care of patients who would benefit from oxygen enhanced breath holds as part of their radiotherapy treatment.

Why 60% Oxygen?

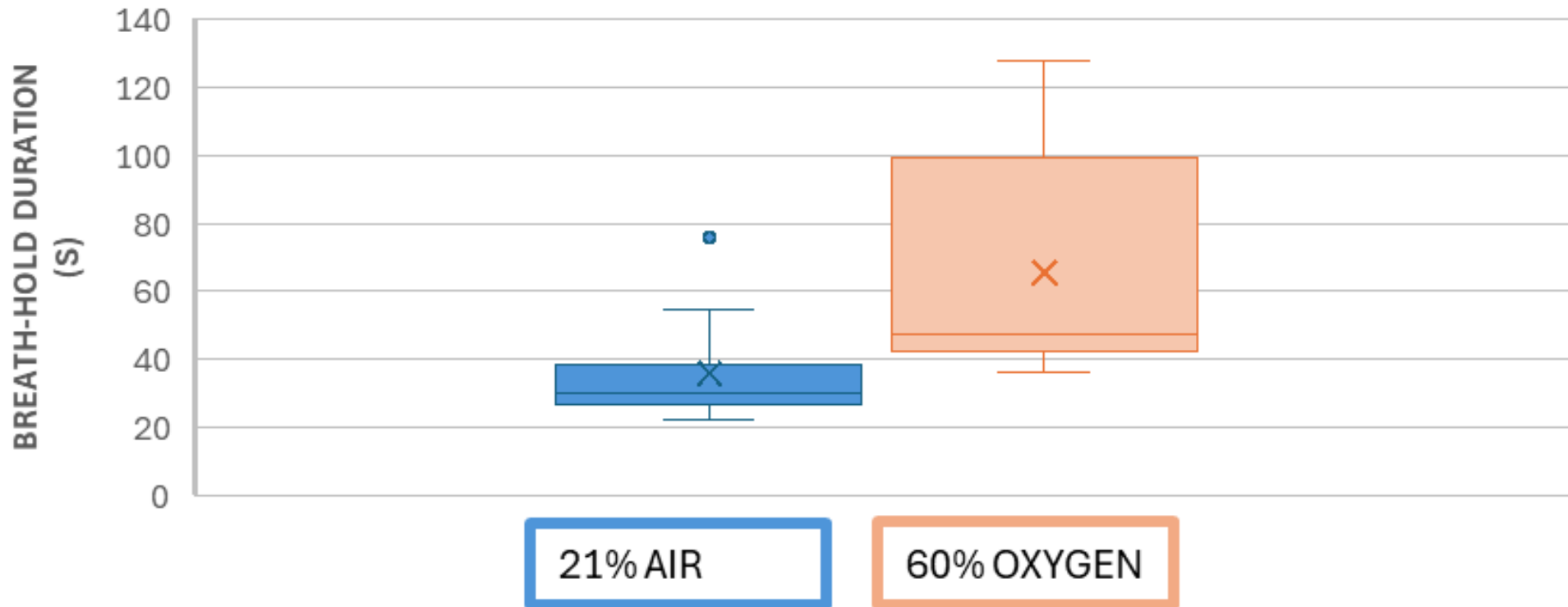
The **sweet spot** for breath-hold benefit vs. risk



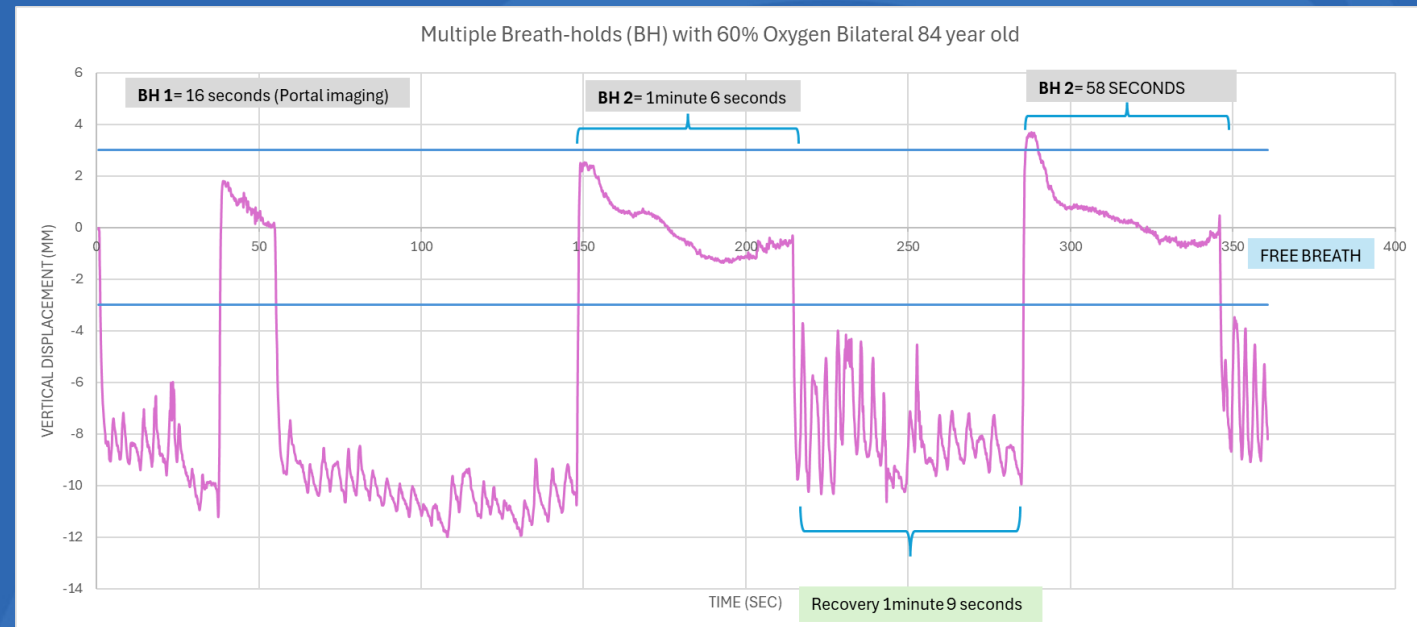
Results Breath-Hold Air vs 60% Oxygen

Breath-hold duration: Air vs 60% Oxygen

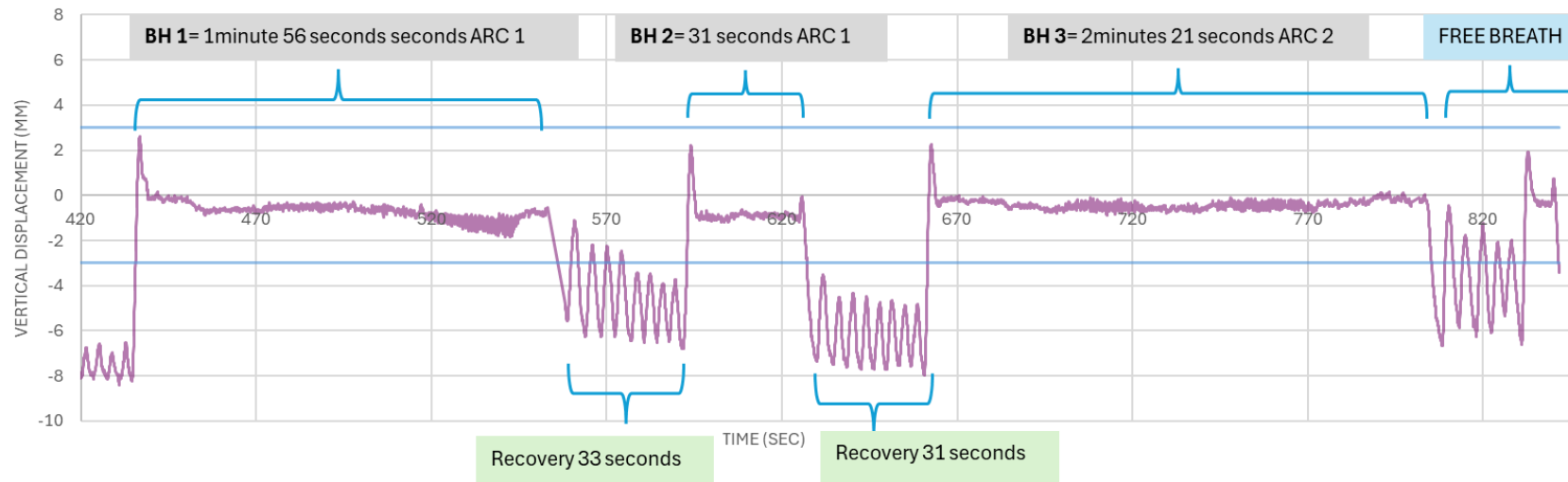
n=10



Results: Breath-Hold Times



Multiple Breath-holds (BH) with 60% Oxygen



Results: Patient and Staff Feedback

“60% o2 will be a **beneficial** addition to our BH method, it will prevent BH exhaustion and improve overall compliance”
Consultant Radiographer

“60% oxygen breath holds is **beneficial** in enabling the patient to complete a full rotation cone beam CT”
Team Lead Radiographer



“**easier** to hold my breath”
Patient

“Oxygen makes things so much **easier**”
Patient

“The experience was **easier** than I thought it would be”
Patient

What next?

- Routine clinical practice
- Staff and patient resources
- High concentration oxygen recommendations

