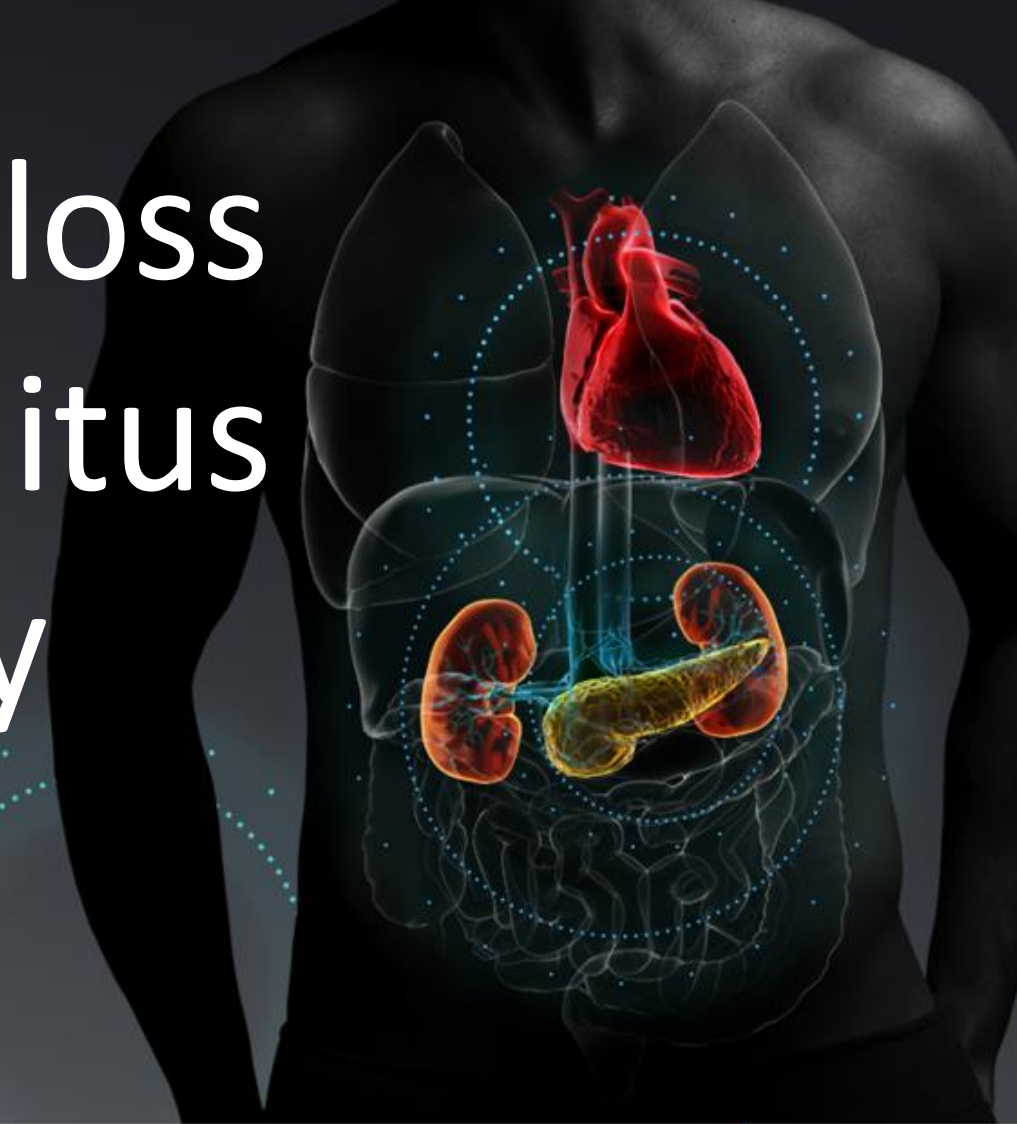


Exploring appetitive, metabolic and ketotic effects and weight-loss potential of Dapagliflozin in patients with Type 2 Diabetes Mellitus and inadequate glycaemic control, with concomitant dietary intervention



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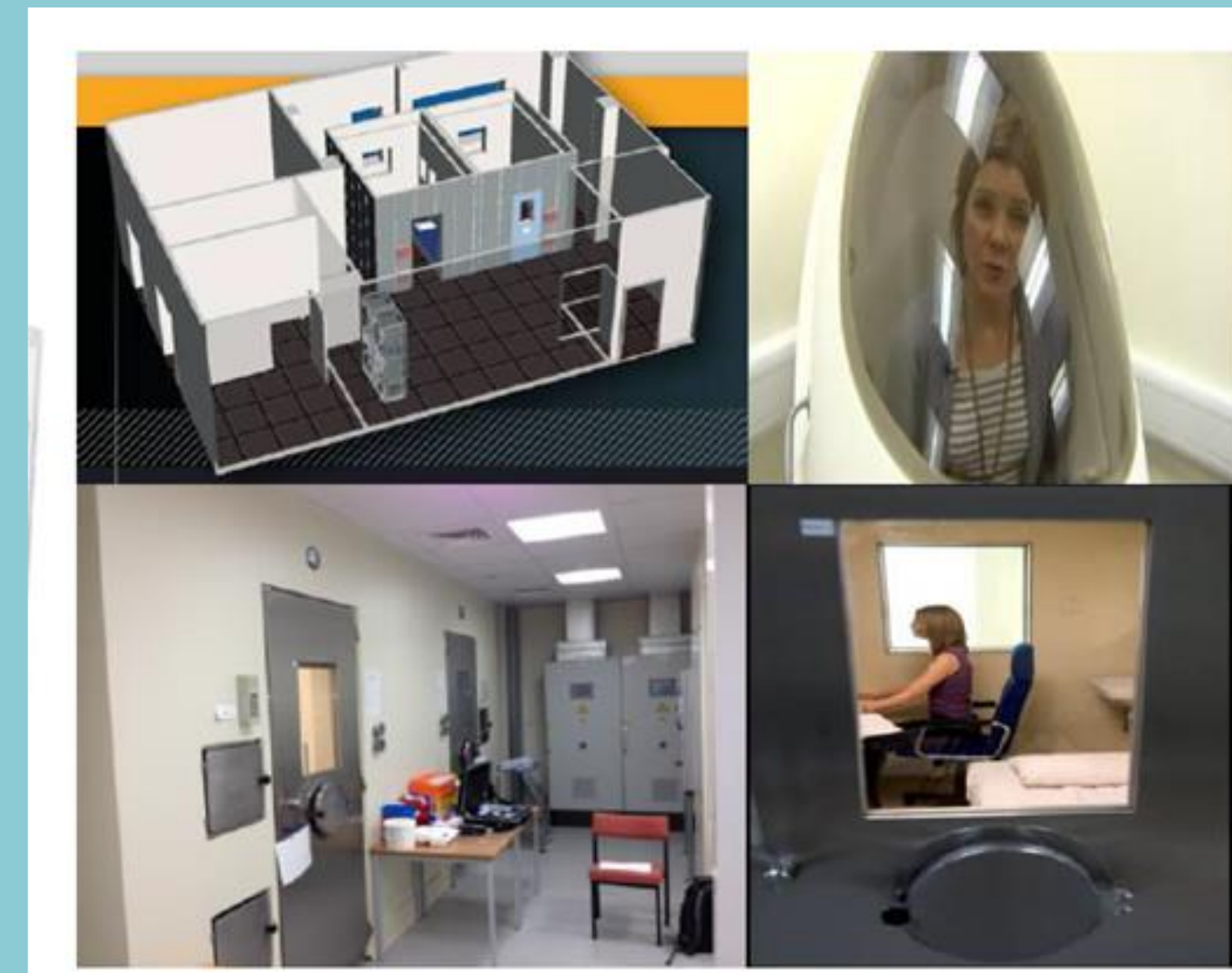


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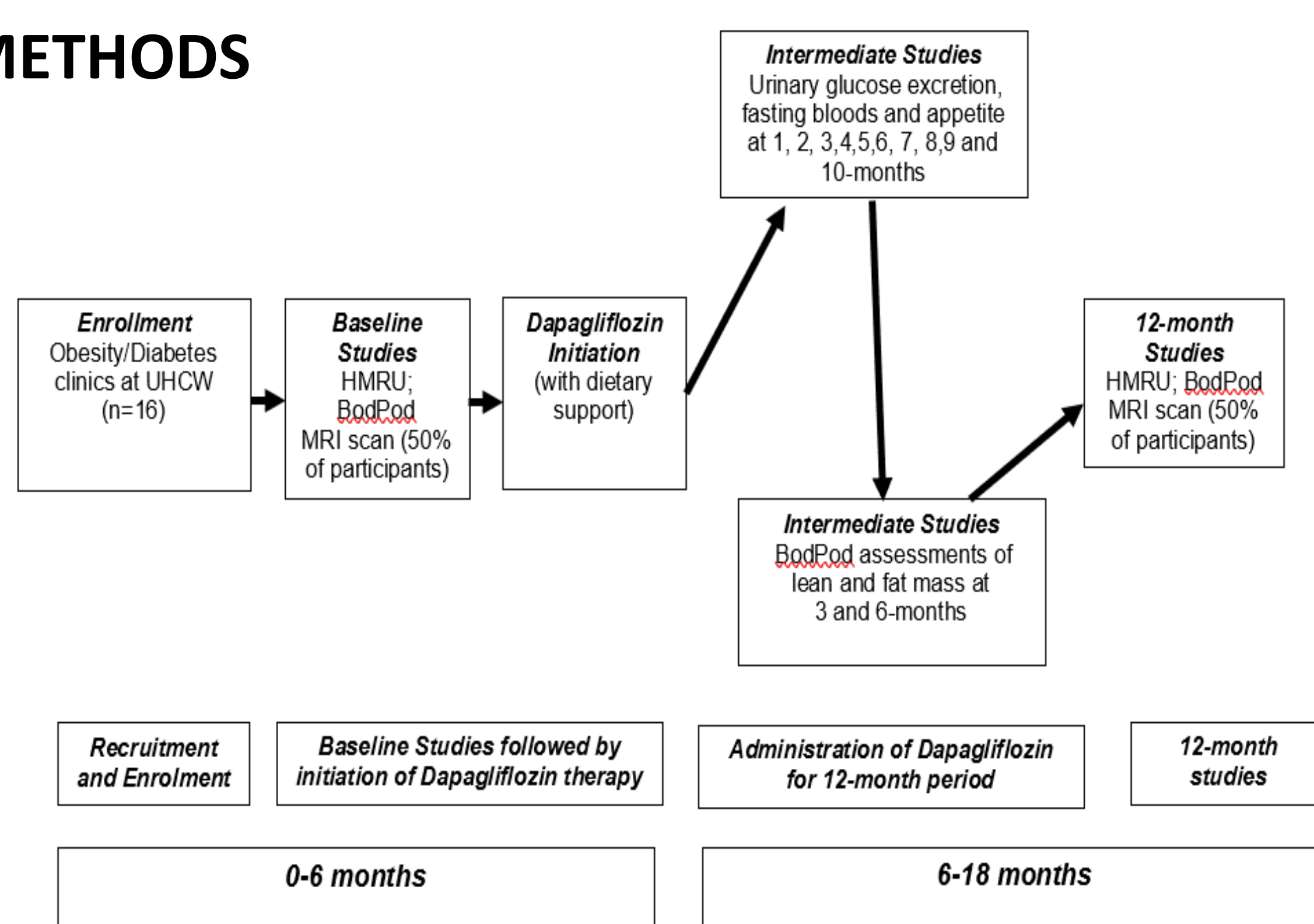
AIMS

1. To execute detailed phenotyping in T2D subjects treated with Dapagliflozin therapy (SGLT-2 inhibitor) and concomitant dietary intervention (less than 100g of carbohydrate), with evaluation of predictors of weight-loss
2. To explore the ketotic potential of Dapagliflozin, to provide insight into euglycaemic ketoacidosis and development of preventive strategies

Images of the Human Metabolic Research Unit (HMRU) showing the two metabolic chambers (indirect calorimetry) and BodPod



METHODS



Patients' progress in the study

- 19 patients recruited to the study (aim was 16)
- 5 patients completed 12 months
- 1 patient dropped out after consent visit
- 1 patient dropped out after first month

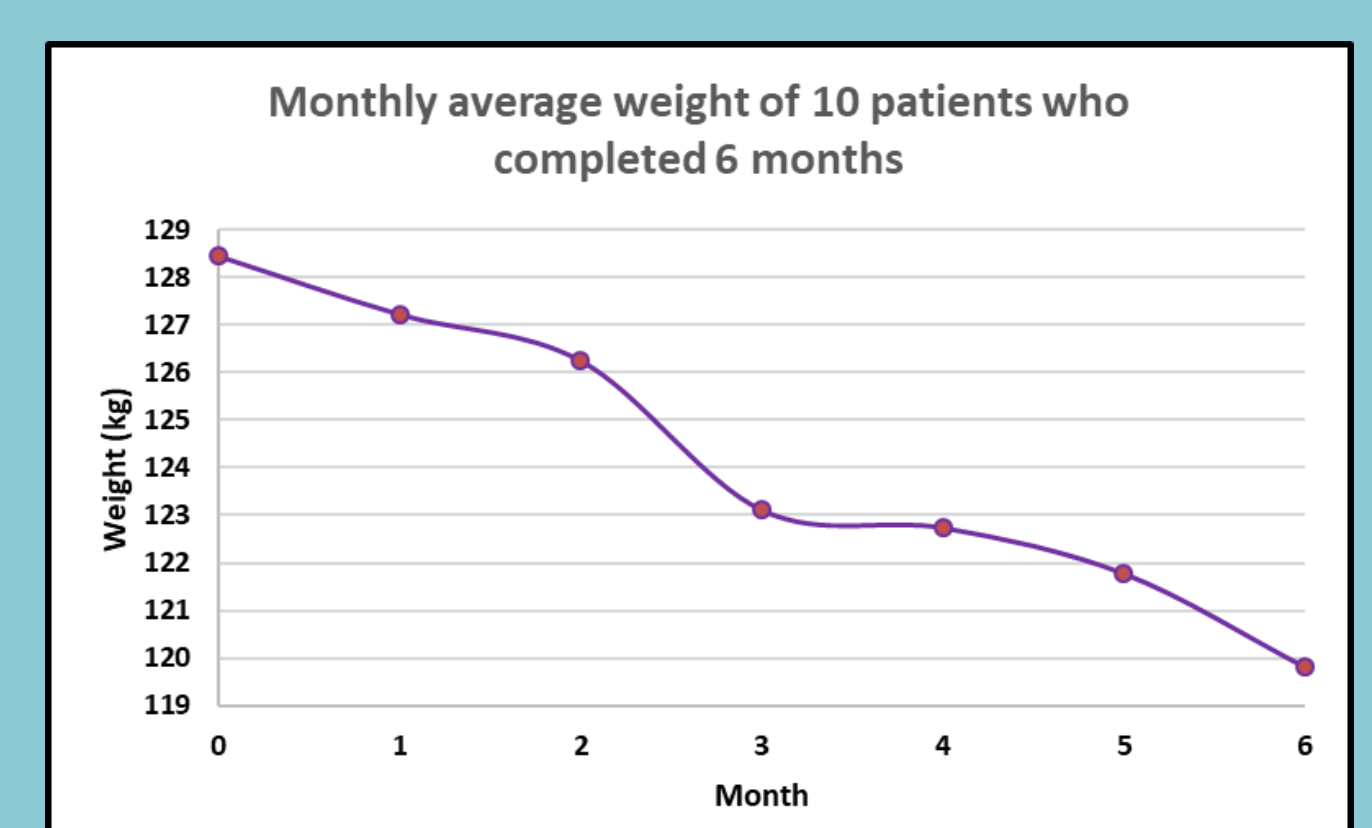
Preliminary results

- Statistically significant weight loss seen up to first 7 months (6 kg at 7 months)
- Significant difference in fat mass observed at month 3 (5.8kg) with no difference in muscle mass
- Dapagliflozin combined with low carbohydrate diet results in enhanced weight loss
- This is beneficial to patients as relatively simple dietary intervention can improve weight loss potential of this medication
- However, adherence to low carbohydrate diet is difficult to measure

Paired sample t test for weights

Month	weight loss (kg)	SD	p value
1	1.3	1.6	0.003
2	1.7	2.2	0.012
3	4.5	3.5	0.001
4	4.6	4.2	0.005
5	6	5.2	0.005
6	8.6	6.7	0.005
7	6	5.7	0.032
8	5.3	5.8	0.077
9	5	6	0.096
10	1.1	5.2	0.816
12	7.1	11.3	0.387

Weight loss trend



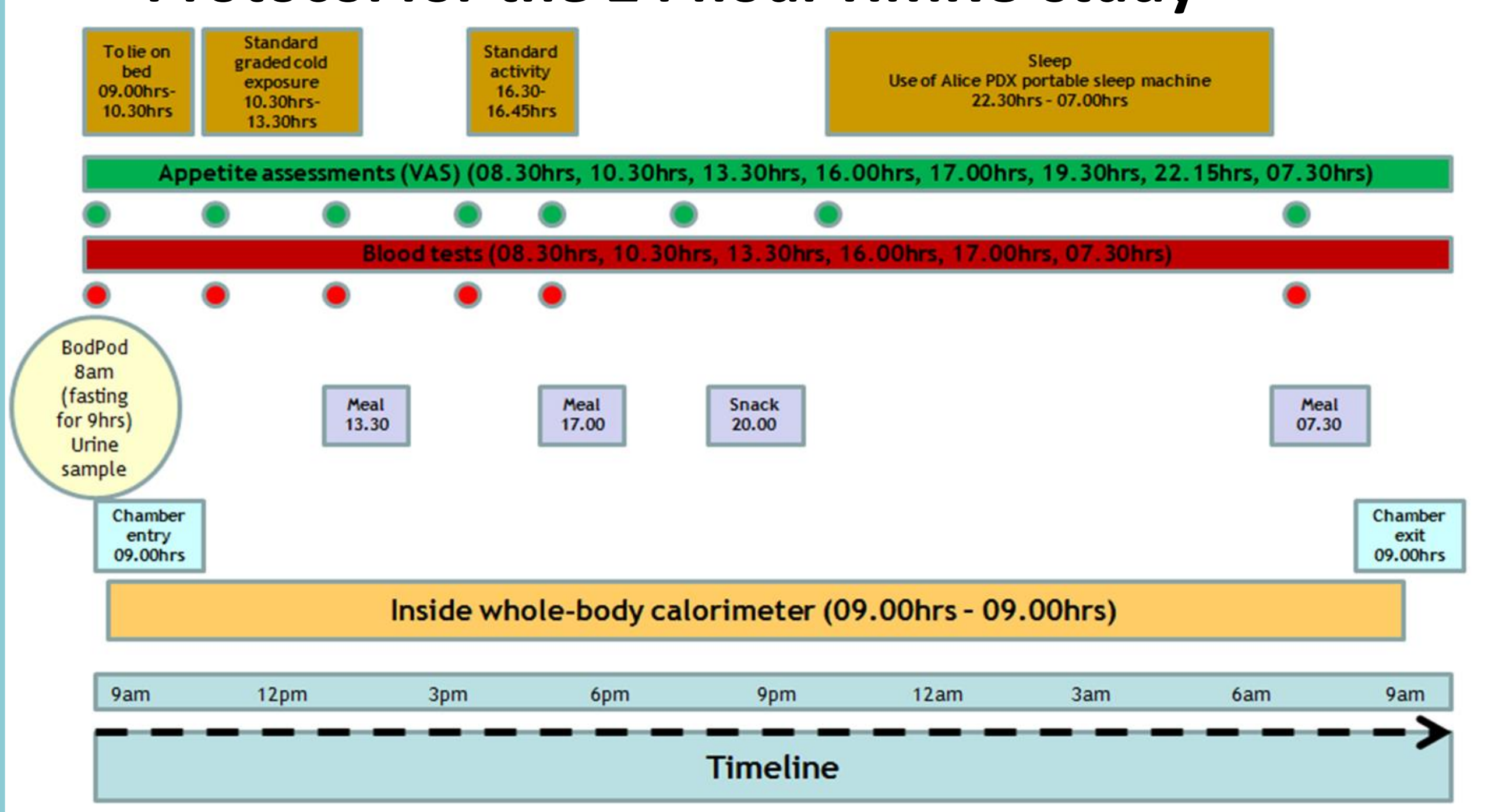
BodPod Fat mass

Month	N of patients	Min (kg)	Max (kg)	Mean (kg)	SD
0	17	35.7	131.7	69.2	24.3
3	12	27.3	116.8	62.8	23
6	9	19.4	98.6	58.5	24.5

Paired sample t-test for lean and fat mass

Difference	Mean (kg)	SD	p value
M0 lean - M3 lean	-1	4.2	0.416
M0 lean - M6 lean	3.1	9	0.331
M0 fat - M3 fat	5.8	4.1	0
M0 fat - M6 fat	5.5	10.9	0.17

Protocol for the 24 hour HMRU study



Protocol for the monthly follow up

