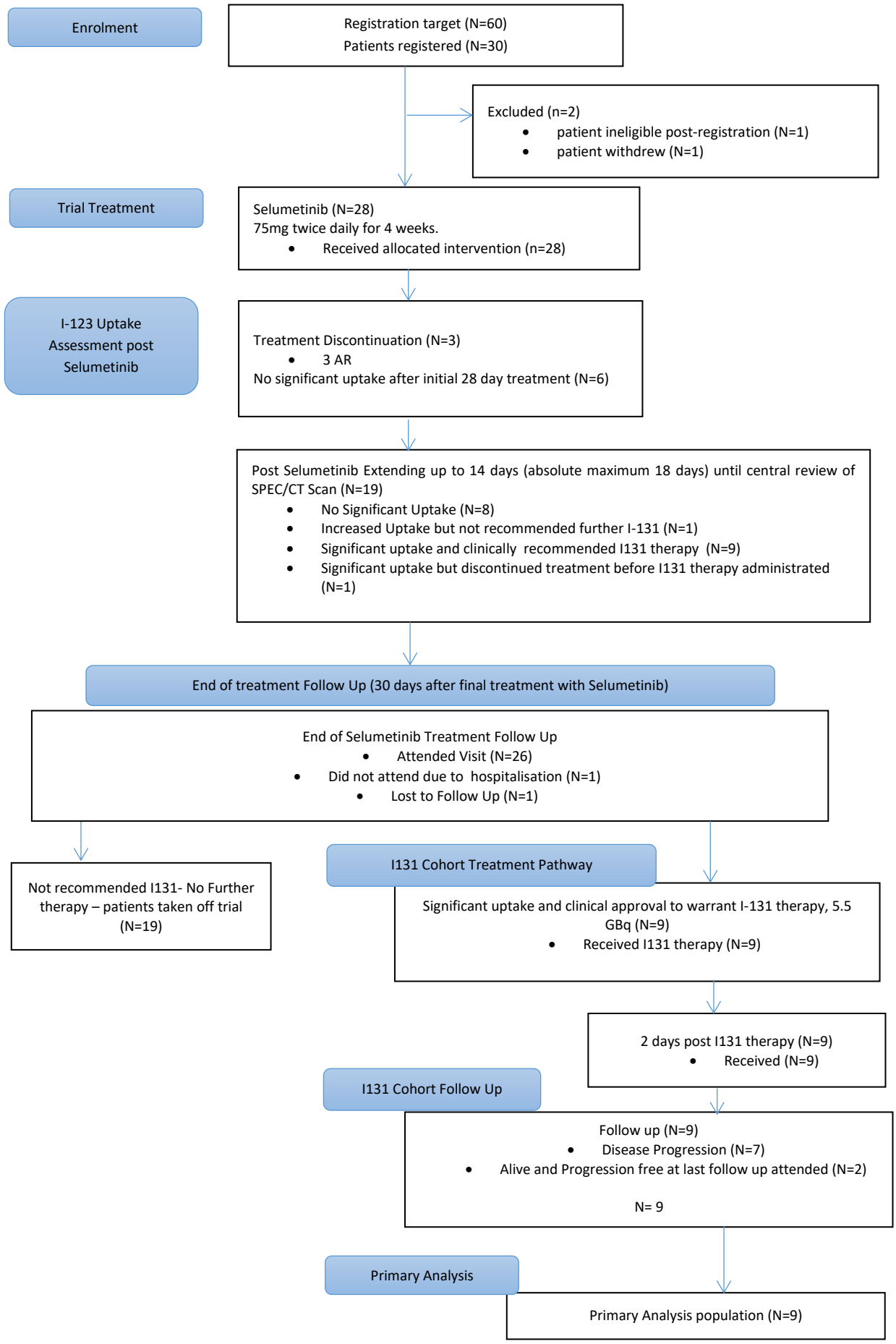
SEL-I-METRY summary of results

Participant flow – CONSORT diagram



Baseline demographics

	Non-Iodine Uptake cohort (N=19)	Iodine Uptake Cohort (N=9)	Total (N=28)
Age (Years)			
Median Age, (range)	68.0 (48.0, 83.0)	58.0 (45.0, 78.0)	66.0 (45.0, 83.0)
Participant sex			
Male	12 (63.2%)	6 (66.7%)	18 (64.3%)
Female	7 (36.8%)	3 (33.3%)	10 (35.7%)
ECOG[1] status			
ECOG status 0	11 (57.9%)	7 (77.8%)	18 (64.3%)
ECOG status 1	8 (42.1%)	2 (22.2%)	10 (35.7%)
Thyroid cancer subtype			
Papillary thyroid cancer	9 (47.4%)	2 (22.2%)	11 (39.3%)
Follicular thyroid cancer	10 (52.6%)	7 (77.8%)	17 (60.7%)
Total	19 (100%)	9 (100%)	28 (100%)
Stage group diagnosis			
I	1 (5.3%)	1 (11.1%)	2 (7.1%)
II	0 (0.0%)	2 (22.2%)	2 (7.1%)
III	5 (26.3%)	2 (22.2%)	7 (25.0%)
IVa	4 (21.1%)	1 (11.1%)	5 (17.9%)
IVb	1 (5.3%)	1 (11.1%)	2 (7.1%)
IVc	4 (21.1%)	1 (11.1%)	5 (17.9%)
Unknown	4 (21.1%)	1 (11.1%)	5 (17.9%)
Total	19 (100%)	9 (100%)	28 (100%)
Time from original diagnosis to registration (Years)			
Mean (s.d.)	7.3 (4.82)	6.8 (7.47)	7.2 (5.66)
Median (range)	6.4 (1.9, 21.4)	4.6 (1.0, 25.9)	5.5 (1.0, 25.9)
IQR	4.2, 9.4	3.4, 6.9	3.8, 7.8
Missing	0	0	0
N	19	9	28
Thyroglobulin(ug/L): Baseline			
Mean (s.d.)	1124.8 (2705.4)	1762.0 (2442.0)	1329.6 (2595.8)
Median (range)	161 (2, 11535)	742 (36, 7530)	240 (2, 11535)
IQR	58, 393	131, 2439	67, 1070
Missing	0	0	0
N	19	9	28
External radiotherapy received			
Yes	10 (52.6%)	2 (22.2%)	12 (42.9%)
No	9 (47.4%)	7 (77.8%)	16 (57.1%)
Total	19 (100%)	9 (100%)	28 (100%)
External Radiotherapy Site	(N=10)	(N=2)	(N=12)
Neck	4 (40%)	0 (0%)	4 (25%)
Other Sites	6 (60%)	2 (100%)	8 (75%)
Other Treatment received			
Yes	9 (47.4%)	6 (66.7%)	15 (53.6%)
No	10 (52.6%)	3 (33.3%)	13 (46.4%)
Total	19 (100%)	9 (100%)	28 (100%)
Median Follow Up Time (Months)			
Median (range)	12.42 (2.5, 31.0)	21.06 (7.8, 27.5)	13.98 (2.5, 31.0)
N	19	9	28

[1] ECOG - Eastern Cooperative Oncology Group

Outcome measures

Outcomes assessed in all participants

Outcome	Statistic type	Non-IU cohort (N=19)	IU cohort (N=9)	Outcome unavailable
Sufficient iodine uptake to warrant further I-131 therapy	N (%*) [95% confidence interval (CI)]**	2ǂ (7.1)	9 (32.1) [15.8, 52.4]	4ǂǂ
Overall Survival	Median (95% CI)	28.1 months (12.3, not reached)	Not estimable (no deaths occurred)	N/A
	12 month OS % (95% CI)	88.2 (60.2,96.9)	Not estimable (no deaths occurred)	N/A

* Percentage of participants demonstrating sufficient iodine uptake to warrant further I-131 therapy calculated using the total number of participants included in the full analysis set (28 participants).

**Confidence interval for this endpoint is applicable to the IU cohort only (participants who have sufficient iodine uptake and clinical approval to warrant further I-131 therapy)

^Both patients achieved sufficient uptake but were not clinically indicated for subsequent radioiodine treatment.

^^All in the Non-IU cohort (did not take Selumetinib in the 7 days prior to day 28 scan; three discontinued treatment, one received half dose for 6 days prior)

Outcomes assessed in the iodine-uptake cohort (IU cohort) only

Outcome	Type	Estimate
Progression Free Survival at 12 months post-registration (Primary outcome)	Kaplan-Meier survival estimate (80% CI; 95% CI) Median (80% CI; 95% CI)	64.8% (39.8,81.5; 25.3,87.2) 12.1 months (7.4,19,1; 4.3,19.1)
Best overall radiological response (better than or equivalent to RECIST v1.1 Partial Response)	N (%) [95% CI]	2 (22.22) [2.81-60.01]

Safety and Toxicity

MedDRA System Organ Class of all serious adverse events (SAEs) by cohort reported during the trial, regardless of suspected relationship to trial medications

	Non-IU Cohort N (%)	IU Cohort N (%)	Total N (%)
MedDRA System Organ Class			
Gastrointestinal disorders	1 (16.7)	0 (0.0)	1 (14.3)
Infections and infestations	1 (16.7)	1 (100.0)	2 (28.6)
Investigations	2 (33.3)	0 (0.0)	2 (28.6)
Nervous system disorders	1 (16.7)	0 (0.0)	1 (14.3)
Renal and urinary disorders	1 (16.7)	0 (0.0)	1 (14.3)
Total	**6 (100.0)**	**1 (100.0)**	**7 (100.0)**

MedDRA System Organ Class for all serious adverse events (SAEs) by cohort reported during the trial, suspected to be related to the trial medications (SARs)

	Non-IU Cohort N (%)	IU Cohort N (%)	Total N (%)
MedDRA System Organ Class			
Gastrointestinal disorders	1 (33.3)	0 (0.0)	1 (33.3)
Investigations	2 (66.7)	0 (0.0)	2 (66.7)
Total	**3 (100.0)**	**0 (100.0)**	**3 (100.0)**

CTCAE term for all adverse reactions (related to Selumetinib) by cohort reported during initial 28 days of Selumetinib

	Non-Iodine Uptake cohort	Iodine Uptake Cohort	Total
CTCAE definition			
To confirm[2]	12 (14.1%)	15 (23.4%)	27 (18.1%)
Diarrhea	11 (12.9%)	1 (1.6%)	12 (8.1%)
Rash acneiform	10 (11.8%)	2 (3.1%)	12 (8.1%)
Aspartate aminotransferase increased	4 (4.7%)	5 (7.8%)	9 (6.0%)
Hypertension	4 (4.7%)	4 (6.3%)	8 (5.4%)
Alanine aminotransferase increased	3 (3.5%)	3 (4.7%)	6 (4.0%)
Mucositis oral	4 (4.7%)	2 (3.1%)	6 (4.0%)
Fatigue	2 (2.4%)	3 (4.7%)	5 (3.4%)
Alkaline phosphatase increased	2 (2.4%)	2 (3.1%)	4 (2.7%)
CPK[3] increased	1 (1.2%)	3 (4.7%)	4 (2.7%)
Hypoalbuminemia	2 (2.4%)	2 (3.1%)	4 (2.7%)
Investigations - Other, specify	3 (3.5%)	1 (1.6%)	4 (2.7%)
Platelet count decreased	1 (1.2%)	3 (4.7%)	4 (2.7%)
Edema limbs	0 (0.0%)	3 (4.7%)	3 (2.0%)

[2] From the "To confirm" ARs, 6 had a "MedDRA Term Other" assigned to them. 2 ARs in the Non-IU cohort were assigned as "Skin and Subcutaneous tissue disorders, Other". 4 were in the IU cohort; 2 of which were assigned "Metabolism and nutrition disorders, Other" and 2 were assigned "Skin and Subcutaneous tissue disorders, Other"

[3] Creatine phosphokinase

	Non-Iodine Uptake cohort	Iodine Uptake Cohort	Total
Myalgia	1 (1.2%)	2 (3.1%)	3 (2.0%)
Nausea	2 (2.4%)	1 (1.6%)	3 (2.0%)
Anemia	2 (2.4%)	0 (0.0%)	2 (1.3%)
Epistaxis	1 (1.2%)	1 (1.6%)	2 (1.3%)
GGT[4] increased	2 (2.4%)	0 (0.0%)	2 (1.3%)
Hypocalcemia	1 (1.2%)	1 (1.6%)	2 (1.3%)
Palmar-plantar erythrodysesthesia syndrome	0 (0.0%)	2 (3.1%)	2 (1.3%)
Paronychia	0 (0.0%)	2 (3.1%)	2 (1.3%)
Dry mouth	1 (1.2%)	0 (0.0%)	1 (0.7%)
Dysphagia	1 (1.2%)	0 (0.0%)	1 (0.7%)
Dyspnea	1 (1.2%)	0 (0.0%)	1 (0.7%)
Ejection fraction decreased	0 (0.0%)	1 (1.6%)	1 (0.7%)
Eye pain	1 (1.2%)	0 (0.0%)	1 (0.7%)
Hypomagnesemia	1 (1.2%)	0 (0.0%)	1 (0.7%)
Hypophosphatemia	0 (0.0%)	1 (1.6%)	1 (0.7%)
INR increased	1 (1.2%)	0 (0.0%)	1 (0.7%)
Left ventricular systolic dysfunction	0 (0.0%)	1 (1.6%)	1 (0.7%)
Lung infection	0 (0.0%)	1 (1.6%)	1 (0.7%)
Lymphocyte count decreased	1 (1.2%)	0 (0.0%)	1 (0.7%)
Malaise	1 (1.2%)	0 (0.0%)	1 (0.7%)
Non-cardiac chest pain	1 (1.2%)	0 (0.0%)	1 (0.7%)
Oral pain	1 (1.2%)	0 (0.0%)	1 (0.7%)
Pain in extremity	1 (1.2%)	0 (0.0%)	1 (0.7%)
Pharyngeal mucositis	1 (1.2%)	0 (0.0%)	1 (0.7%)
Pruritus	0 (0.0%)	1 (1.6%)	1 (0.7%)
Retinal detachment	1 (1.2%)	0 (0.0%)	1 (0.7%)
Retinopathy	1 (1.2%)	0 (0.0%)	1 (0.7%)
Sore throat	0 (0.0%)	1 (1.6%)	1 (0.7%)
Stomach pain	1 (1.2%)	0 (0.0%)	1 (0.7%)
Vomiting	1 (1.2%)	0 (0.0%)	1 (0.7%)
White blood cell decreased	1 (1.2%)	0 (0.0%)	1 (0.7%)
Total	**85 (100%)**	**64 (100%)**	**149 (100%)**

[4] Gamma-glutamyl-transferase