

Supplementary Table 1 Clinical and laboratory characteristics of parathyroid carcinoma cohort

Case No.	Sex	Age (y)	Specimen Source	<i>CDC73</i> Mutation	iPTH (pg/mL)	Calcium (mmol/L)	Follow-up (months)	WHO 2017 Diagnostic Criteria	Recurrence	Metastasis
1	M	52	Primary	No	1046	3.15	47	Invasion into adjacent structures	Recurrence	-
2	M	31	Primary	No	430	3.18	69	Invasion into adjacent structures	Recurrence	-
3	M	31	Recurrent×2	Somatic	1994	4.59	68	Invasion into adjacent structures and metastasis	Recurrence	Lung
5	M	51	Primary	No	1140	3.10	46	Invasion into adjacent structures	Recurrence	-
6	F	36	Primary	No	1232	3.44	40	Invasion into adjacent structures	-	-
7	F	48	Recurrent	No	645	3.38	265	Invasion into adjacent structures	Recurrence	-
8	F	63	Primary	No	105	2.51	45	Invasion into adjacent structures	-	-
9	M	58	Recurrent	No	582	3.0	110	Invasion into adjacent structures	Recurrence	-
10	F	64	Primary	No	460	3.4	22	Invasion into adjacent structures	-	-
11	M	51	Primary	No	1229	2.98	26	Invasion into adjacent structures	-	-
12	M	46	Recurrent×2	Somatic	1308	3.96	109	Invasion into adjacent structures and extracapsular blood vessels and metastasis	Recurrence	Lymph node
13	F	24	Primary	Somatic	1186	3.54	9	Invasion into adjacent structures and extracapsular blood vessels and metastasis	-	Lung
14	M	48	Recurrent	No	664	3.0	226	Invasion into adjacent structures	Recurrence	-
15	M	40	Recurrent	Somatic	1402	3.53	55	Invasion into adjacent structures	Recurrence	-

M, male; F, female; iPTH, intact parathyroid hormone.

Normal ranges: calcium: 2.13–2.70 mmol/L; iPTH: 12–67 pg/mL

Parathyroid carcinoma Case No. 4 was not included. Current data was updated from the Table 2 in Reference Hu *et al.* 2018.