Supplementary

Table S1 Number of SIRT applications by indication

Indications	ICD-10	N	M	F
Hepatocellular carcinoma	C22.0	77	66	11
Colon cancer	C18	22	10	12
Neuroendocrine tumors	–	18	11	7
Breast cancer	C50	17	0	17
Cholangiocarcinoma	C22.1	16	7	9
Uveal melanoma	C69	13	7	6
Rectal cancer	C20	6	4	2
Stomach cancer	C16	5	4	1
Mixed HCC and CCA	C22/C22.1	3	3	0
Bronchial cancer	C34	3	3	0
Sarcomas	C49	3	0	3
Pancreatic cancer	C25	2	1	1
Melanoma	C43	2	2	0
Cervical cancer	C53	2	0	2
Prostate cancer	C61	2	2	0
Pheochromocytoma	C74	2	0	2
Parotid tumor	C07	1	1	0
Esophageal cancer	C15	1	1	0
Small intestine cancer	C17	1	1	0
Rectosigmoid cancer	C19	1	1	0
Anal cancer	C21	1	0	1
Angiosarcoma of the liver	C22.3	1	1	0
Thymic cancer	C37	1	1	0
Ewing's sarcoma	C41	1	1	0
Endometrial cancer	C54	1	0	1
Testicular cancer	C62	1	1	0
Renal cell carcinoma	C64	1	1	0
Urethra cancer	C68	1	0	1
Thyroid cancer	C73	1	1	0
Second malignant neoplasm of the respiratory/digestive organs	C78	1	1	0
Tongue base/tonsil cancer	C79	1	1	0
Malignant neoplasm without indication of localization	C80	2	1	0

SIRT, selective internal radiation therapy; ICD-10, International Statistical Classification of Diseases and Related Health Problems-version 10; N, number; M, male; F, female; HCC, hepatocellular carcinoma; CCA, cholangiocarcinoma.

https://dx.doi.org/10.21037/jgo-22-122

Table S2 Definitions of the collected parameters

Parameter	Definition and description
Indication	The primary indication for SIRT application
NET	Neuroendocrine tumors: whether the tumor could be histologically assigned to neuroendocrine tumors
Sex	Sex: if the patient underwent sex reassignment, the sex was scored after the reassignment
Primary tumor/ metastasis	Primary tumor/metastasis: defines whether SIRT therapy was performed for a primary liver tumor or liver metastasis
Previous therapies	Pre-therapies: No prior therapy: the SIRT indication was not pretreated before SIRT was performed; Systemic therapy/chemotherapy: one or more chemotherapies and/or other systemic therapies were used for the SIRT indication before SIRT was performed; Surgery: one or more purely surgical therapies were used for the SIRT indication before SIRT was performed; Surgery + syst. therapy/chemotherapy in sequence: one or more surgical therapies and one or more chemotherapies and/or other systemic therapies were used for the SIRT indication before SIRT was performed; Ablative therapies (RFA/TACE): local therapy, ablation therapy such as radiofrequency ablation, or transarterial chemoembolization were used for SIRT indication before SIRT was performed If therapy was not applied to the liver metastasis but its primary tumor, it was counted as pre-therapy. Surgical therapies were scored for both the primary tumor and its liver metastases. Chemotherapies were only evaluated if they were directed against the SIRT indication
Extrahepatic metastases	Whether extrahepatic metastases were present at the time of SIRT: if extrahepatic metastases occurred after SIRT, they were not scored. Extrahepatic metastases were only scored if they originated from the primary tumor responsible for the liver metastases
Liver response	Liver response after SIRT application according to either CT, MRI, or PET-CT findings: imaging should have been taken 3 months, if possible, but at least 6 weeks, after SIRT intervention. If partial recourse and progression were noted in the liver, this was considered as progression. If two SIRT therapies were counted together, the corresponding imaging must have occurred at least 8 weeks after the first SIRT. Response to therapy was assessed only in the liver area treated with SIRT. Therefore, if progression was noted in an area outside the liver area treated with SIRT, this was not counted as progression
Applied SIRT activity in GBq	Radioactive activity applied to the patient during SIRT in GBq: if two SIRT were applied to the same patient within 8 weeks, they were counted as one treatment and the applied doses were added together
Time of diagnosis of the primary tumor	Time of diagnosis of primary tumor: if only the year of initial diagnosis was known, January was chosen as the corresponding month. If the time of initial diagnosis was not known, the time of first treatment for the SIRT indication was chosen. If retrospectively a lesion was present in previous imaging, the previous imaging was chosen as the time of initial diagnosis
Time of diagnosis of liver metastasis	Time of diagnosis of liver metastasis: if a lesion was retrospectively present on previous imaging, the previous imaging was chosen as the time of initial diagnosis
Time of death	Time of death: the patient's date of death was evaluated independently of the cause of death
Time of SIRT application	Time of SIRT application: if a patient received two SIRT and both were within 8 weeks of each other, both applications were scored as a single SIRT, and the date of the first SIRT was documented. If the applications were more than 8 weeks apart, both were scored as a single SIRT
Time of first local progression	Time of first local progression according to either CT, MRI, or PET-CT findings: imaging could not have been taken earlier than 6 weeks, after SIRT intervention. If a patient was progression-free until death but died before 6/30/19, the date of death was documented. If a patient was progression free at first imaging after SIRT and then lost to further follow-up until death, the date of death was considered the date of the first progression. If liver transplantation occurred after SIRT, the date of transplantation was scored. The liver response was assessed only in the liver area treated with SIRT. Therefore, it was not scored as progression if progression was noted in an area outside the liver area treated with SIRT

SIRT, selective internal radiation therapy; NET, neuroendocrine tumors; RFA, radiofrequency ablation; TACE, transcatheter arterial chemoembolization; CT, computed tomography; MRI, magnetic resonance imaging; PET, positron emission tomography; GBq, Gigabecquerel.

https://dx.doi.org/10.21037/jgo-22-122