

An International Patterns of Practice Survey of SABR Utilization in Primary Renal Cell Carcinoma

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Abstract

Objectives:

There is increasing interest in stereotactic ablative body radiotherapy (SABR) as a non-surgical ablative option for patients with renal cell carcinoma (RCC) that are inoperable or refuse surgery. However, literature on SABR for RCC typically reflects the experiences of select academic centres and general practice patterns remain unclear. Our objective was to conduct an international survey of radiation oncologists treating RCC with SABR to ascertain the general frequency of SABR use, the clinical scenarios in which SABR is utilized, common dose schedules, and other treatment delivery details.

Methods:

We created and disseminated a 51-question international survey containing the following themes: prevalence and clinical scenarios in which primary RCC SABR is used, dose-fractionation schedules, treatment delivery details, follow-up and outcome assessments, and barriers to SABR utilization. The survey was distributed across many avenues, including through local, regional, and international societies such as ESTRO, RANCZR, GUROC, CARO, UK SABR consortium, and RSS. Data collection began January 2023 and the survey closed at the end of April 2023.

Results:

There were a total of 255 respondents, mostly from Europe (31%) and North America (27%), mainly located within academic centres (71%). Of these, 40% (n=102) currently offer SABR for RCC, with 50% (n=51) having begun within the last 3 years. Common barriers to offering SABR for RCC in non-users included lack of referrals by urologists (n=73) and lack of practice guidelines supporting use (n=59). Of respondents who do offer SABR, 77% treat both small (4 cm or less) and large (> 4 cm) renal masses, while 20% offer SABR only for small renal masses. Cumulative dose-fractionation strategies varied from 27-52Gy (in 3-5 fractions) for multifraction regimens, and 15-34Gy for single fractions. Apart from standard treatment for medically inoperable disease, other clinical scenarios in which SABR was more likely to be offered were for recurrence post surgery/thermal ablation and for oligometastatic disease in the contralateral kidney. Uncommon scenarios included RCC with renal vein/inferior vena cava thrombosis, and as cytoreductive therapy in metastatic RCC. Expected local control outcomes were generally above 90% for small renal masses, but varied for large masses.

Conclusion(s):

In this first look at international patterns of practice for primary RCC, SABR is a relatively newer indication for radiation, offered by less than 50% of respondents, with some variations in practice including dose schedules, and expected outcomes. Further research should focus on harmonizing SABR best practices for optimal evaluation in large scale registries or clinical trials.