Renal Mass Ablation in the Octogenarian and Nonagenarian Population

Callum Hamilton
*Thomas Jefferson University*, callum.hamilton@jefferson.edu

Amanda Smolock, MD
*Thomas Jefferson University*, amanda.smolock@jefferson.edu

Colette Shaw, MD
*Thomas Jefferson University*, Colette.Shaw@jefferson.edu

Conor McKee, MD
*Thomas Jefferson University*, conor.mckee@jefferson.edu

Follow this and additional works at: [https://jdc.jefferson.edu/si_ctr_2022_phase1](https://jdc.jefferson.edu/si_ctr_2022_phase1)

Part of the Geriatrics Commons, and the Translational Medical Research Commons

Let us know how access to this document benefits you

**Recommended Citation**

Hamilton, Callum; Smolock, MD, Amanda; Shaw, MD, Colette; and McKee, MD, Conor, "Renal Mass Ablation in the Octogenarian and Nonagenarian Population" (2020). *Phase 1*. Paper 58. [https://jdc.jefferson.edu/si_ctr_2022_phase1/58](https://jdc.jefferson.edu/si_ctr_2022_phase1/58)

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning (CTL)](https://www.jefferson.edu/ctl). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Phase 1 by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.
Renal Mass Ablation in the Octogenarian and Nonagenarian Population

Callum Hamilton, Amanda Smolock*, MD, Collette Shaw, MD, Conor McKee, MD

Introduction: The gold standard for the management of T1a and T1b renal tumors is partial nephrectomy. This study aims to analyze the outcomes of renal mass thermal ablations as an alternative therapy in the octogenarian and nonagenarian patient population, specifically.

Methods: Departmental database of all percutaneous renal ablations performed between February 2008 and August 2019 was reviewed. 34 tumors were ablated in 19 males and 15 females with a mean age of 84.1 ± 3.1 years (range 80-92 years). Patient demographics, procedural and postprocedural data were evaluated.

Results: Ten microwave and 24 cryoablations were performed, all ablations were performed under CT guidance for 27 T1a and 7 T1b renal tumors (1.4-5.9cm). The mean Charlson comorbidity index was 6.7. Thirty-one ablations were performed as the primary management, 3 were performed for tumor recurrence following partial nephrectomy (2) or prior ablation (1). The average number of probes used in cryoablation was 3.3 compared to 2.7 probes used in microwave ablation. Overall complication rate in cases in which there was sufficient follow up was 23% and major complication rate was 13%, including two episodes of bleeding requiring red blood cell transfusion. Additionally there was one incidentally detected pseudoaneurysm in the ablation cavity of an asymptomatic patient which was subsequently embolized more than one year following the ablation. The mean preprocedure creatinine was 1.20 and mean creatinine at least 3 months post procedure
was 1.23. Of the 25 patients with at least 3 months of CT or MR follow up, there was no local recurrence and median follow-up was 23.7 months (range 1.1-94.9 months).

Concurrent biopsies were performed in 31 of the 34 cases. The pathology showed a majority of clear cell renal cell carcinoma (15), followed by oncocytic neoplasm (7), nondiagnostic specimen (4) and papillary renal cell carcinoma (3).

**Discussion:** Thermal ablation of renal masses in the elderly population is an effective treatment option with a low recurrence rate. Complications are higher than previously reported in the literature which may be related the advanced age and comorbidities of these patients.