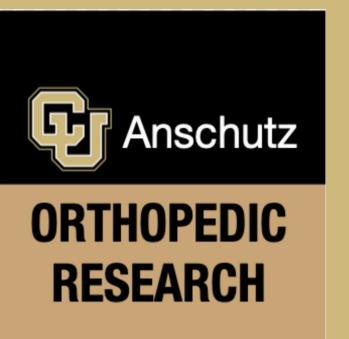
# Impact of Navigated Radiofrequency Ablation (RFA) on Spinal Tumors

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## Background

- 5-10% of patients with cancer develop spinal tumors
- Radiation therapy, the current gold standard, has its limitations, including continued local progression and development of new or worsening vertebral fractures
- Radiofrequency ablation (RFA) is an emerging treatment to decrease spinal tumor burden
- Studies have also demonstrated that local control can be achieved with RFA alone

### Methods

- Single center retrospective study
- Patients aged 18-85 who underwent RFA for spinal tumor treatment between October 2013 – July 2020
- Clinical outcomes included ambulatory status and survival rate
- Patient reported outcomes included numerical pain scores and quality of life scores
- Radiological outcomes included post-operative imaging to assess tumor bulk and response to treatment

#### Results

Patient Demograph	nics
Age, median years (n=203)	61 (18-85)
Male, n (%, n=203)	123 (59.7%)
BMI, median (n=203)	24.3
General condition (KPS) (n=157)	
Poor (KPS 10-49%)	12 (7.6%)
Moderate (KPS 50-69%)	35 (22.3%)
Good (KPS 70-100%)	110 (70.1%)
Tokuhashi score, (median n=150)	8
Mets to internal organs (n=167)	119 (71.3%)
Independent ambulators (n=167)	130 (77.8%)

15 month post-op mortality (n=192)	4C 40/	
15 month post op mortality (n=152)	46.4%	
Readmitted within 30 days (n=170)	51 (30%)	
Average days to readmission (n=51	) 13 days	
Post-op Ambulatory Status (n=159)		
Ambulatory	96 (60.4%)	
Non-ambulatory	23 (14.5%)	
Unknown	40 (25.2%)	

Patient Reported	Pain Interfering with ADLs						
	Mean	Med	StDev		Yes	No	Total
Pre-operatively (n=157)	5.18	5.00	2.91	0-4 months post-op	53 (43%)	69 (57%)	122
0-4 months post-op (n=121)	3.50	4.00	2.41	5-8 months post-op	25 (34%)	48 (66%)	73
5-8 months post-op (n=76)	2.94	2.50	2.41	9-15 months post-op	13 (22%)	45 (78%)	58
9-15 months post-op (n=63)	2.95	2.60	2.51		,	,	

#### Conclusions

- Individuals who underwent RFA for spinal tumors saw improved patient reported pain scores and decreased pain interfering with ADLs
- This preliminary data has helped to better understand the potential benefits of RFA as an alternative treatment for cases of metastatic disease
- Due to the inherent limitations of retrospective chart review studies, this study is limited to data collected at time of intervention and follow-up visits resulting in patients lost to follow-up or with incomplete data

## **Implications**

• Previous studies have been limited to case reports. Further study is required to determine whether RFA alone and/or in combination with other therapies improves local tumor control

#### **Disclosures**

None