

Suppl Table 1

	Tech.	No. of Patients	No of inserted FM	Median FEV <sub>1</sub> (%)	Previous major lung surgery (%)	Nodule Size, Mean long axis (mm)	Nodule size, median long axis (mm)	Nodule to pleural median distance (mm)	Pulmonary hemorrhage	Hemoptysis	Median time delay between procedure and planning CT-scan (days)	Migration(%) /FM type	FM commercial name	Tracking rate (%)	Pneumothorax No (% of procedures)	TTbx
Yousefi et al, 2007 <sup>16</sup>	TT (19 and 20-G)	48	221	NP	NP	NP	NP	NP	NP	NP	NP	NR/linear	NR	NR	16 (33%) (systematic chest X-ray)	11(23%)
Kothary et al, 2009 <sup>17</sup>	TT (19, 20 and 21-G)	42	NP	NP	NP	26 (10-51)	NP	NP	7(16%)	1(2%)	NR	NP/linear	Gold seed Alpha	91%	20 (45%)	NP
Bhagat et al, 2010 <sup>18</sup>	TT (18 and 19-G)	28	59	NP	NP	NP	NP	NP	NP	NP	NP	19%/linear	Gold seed Alpha	93%	18 (67%) (systematic chest X-ray)	0%
Hong et al, 2011 <sup>19</sup>	TT (19 and 22-G)	54	270	NP	NP	NP	NP	0	NP	NP	NP	15%/linear <1%/coil-spring	Gold seed Alpha (linear), VortX (coil-spring)	100%	22 (38%)	0%
Hong et al, 2013 <sup>20</sup>	TT (19G and 22G)	32	147	NP	NP	NP	NP	0 (0-25)	NP	NP	8 (range NP)	0%/coil-spring 7%/linear	Gold seed Alpha (linear), VortX (coil-spring)	94%	NP	NP
Trumm et al, 2014 <sup>21</sup>	TT (18-G)	105	NP	NP	NP	NP	NP	NP	32 (30%)	3(3%)	NP (0-21)	NP	NP	100%	35 (33%)	NP
Mongeon et al, 2017 <sup>22</sup>	TT (17 and 18 G)	109	114	NP	NP	NP	NP	NP	20(18%)	5(4%)	NP	2%/linear	Gold seed (home-made)	100%	47 (43%)	NP

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Baker et al, 2019 <sup>23</sup>	TT (18-G)	30	80	NP	NP	NP	NP	NP	NP	NP	NP	NP/linear	Gold seed (home-made)	100%	10 (33%)	0%
Baadh et al, 2016 <sup>27</sup>	TT (17G+ gelatin powder)	125	NP	NP	NP	NP	NP	NP	NP	31(25%)	0%	NP	Gold seed Civco	NP	11 (9%)	77 (62%)

**Legend:**

FEV1; forced expiratory volume in the 1 second

FM; fiducial marker

Gold seed Alpha; Gold seed Alpha-Omega Service, Bellflower, CA

Gold seed Civco; Gold seed Civco Medical Solutions, Orange City, Iowa

G; gauge needle

NA; not applicable

NP; not published

TT; transthoracic

TTBx; transthoracic biopsy

Vort-X-18<sup>®</sup>; Vort-X-18, Boston scientific, Cork, Ireland