

**Supplementary Table 7. Studies reporting harms and adverse events associated with percutaneous renal mass sampling**

Author, year	N	Radiation exposure, n (%)	Hemorrhage, n (%)	Hematoma, n (%)	Pain, n (%)	Pneumothorax, n (%)	Tumor Seeding, n (%)	Hematuria, n (%)	Other
Campbell, 1997 <sup>12</sup>	25	25(100)	0	10(40)	NR	0	0	NR	
Chyhrari, 2010 <sup>13</sup>	25	0	1(4)	NR	1(4)	0	0	NR	
Harisinghani, 2003 <sup>15</sup>	28	28(100)	NR	NR	NR	NR	NR	NR	
Leveridge, 2011 <sup>16</sup>	227*	151 (of 336) (45)	0	22(10)	NR	2(1)	0(0)	3(1)*	1 syncope
Millet, 2012 <sup>19</sup>	187	187(100)	NR	NR	NR	NR	NR	NR	
Neuzillet, 2003 <sup>20</sup>	88	88(100)	0	0	0	NR	0	NR	
Park, 2013 <sup>21</sup>	59	0	0	9(15)	3(5)	0	NR	0	
Prince, 2015 <sup>30</sup>	565	48(9)	3(0.5)**	NR	NR	NR	NR	NR	7 hospital admissions
Reichelt, 2007 <sup>28</sup>	30	0	1(3)	1(3)	1(3)	NR	NR	NR	
Richard, 2015 <sup>5</sup>	492	115 (of 503) (23)	NR	24(5)	3(0.6)	NR	0	5(1)	12 coaxial sheath venous bleeding, 2 dizziness, 2 nausea/vomiting, 1 skin hematoma
Salem, 2012 <sup>22</sup>	145	145(100)	0	2(1)	0	NR	0	NR	1 flank ecchymosis
Schmidbauer, 2008 <sup>29</sup>	78	78(100)	0	4(5)	NR	1(1)	NR	NR	
Shannon, 2008 <sup>23</sup>	221	NR	1(0.4)	1(0.4)	NR	NR	0	NR	
Sofikerim, 2009 <sup>24</sup>	42	42(100)	0	0	0	NR	0	0	
Volpe, 2008 <sup>26</sup>	100	55(55)	0	NR	1(1)	1(1)	0	NR	1 syncope
Wang, 2009 <sup>27</sup>	110	66(60)	NR	2(2)	4(4)	0	NR	NR	1 wound infection, 1 hypotension requiring fluid resuscitation
Summary		1028(44)	6(0.4)	75(5)	13(1.2)	4(0.6)	0(0)	8(1)	

n= sample size; NR=Not Reported

\*67 patients without complication data available; Clavien 1 complications in 10.1% of patients; one Clavien 3a complication (0.3%) noted involving gross hematuria leading to urinary retention due to formation of clots

\*\*One Clavien 3a complication (selective renal artery embolization for bleeding leading to hemodynamic instability)

\*\*\*One Clavien 3b complication (required percutaneous embolization)