

Table D8: Study Characteristics Table for KQs 3a and 3b

Author, year	Study design	Study site Study location	Start year of recruitment	Funding source	Oncologic	Renal Functional (Categorical)	Renal Functional (Continuous)	Quality of life	Overall Survival	Harms	Perioperative Outcomes
Open Partial Nephrectomy vs Open Radical Nephrectomy											
Barbalias, 1999 ⁴⁵	Retrospective cohort	Multiple center Europe	1986	NR	X		X			X	X
Ficarra, 2003 ⁴⁶	Retrospective cohort	Single center Europe	1985	NR				X			
Induhara, 1997 ⁴⁷	Retrospective cohort	Single center North America	1989	NR	X				X	X	X
Kim, 2010 ⁴⁸	Retrospective cohort	Single center Asia	1995	NR							
Mariusdottir, 2013 ⁴⁹	Cohort with comparison	Multiple center Europe	2000	NR	X	X	X		X		
Milonas, 2013 ⁵⁰	Retrospective cohort	Single center Europe	1998	NR	X				X		
Roos, 2012 ⁵¹	Retrospective cohort	Multiple center Europe	1988	NR	X	X	X		X	X	X
Shinohara, 2001 ⁵²	Retrospective cohort	Single center Asia	1986	NR	X			X		X	X
Xu, 2014 ⁵³	Retrospective cohort	Single center Asia	2006	NR						X	X
Partial Nephrect											

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omy (Technique Unclear) vs Radical Nephrectomy (Technique Unclear)											
Antonelli, 2011 ⁵⁴	Retrospective cohort	Multiple center Europe	1995	NR	X						
Antoniewicz, 2012 ⁵⁵	Prospective cohort	Single center Europe	NR	NR			X				
Badalato, 2011 ⁵⁶	Retrospective cohort with propensity analysis	Multiple center North America SEER database	1998	NR	X				X		
Bedke, 2008 ⁵⁷	Retrospective cohort	Single center Europe	1990	NR	X						
Crepel, 2010 ⁵⁸	Retrospective cohort	Multiple center North America	1988	NR							
Crepel, 2010 ⁵⁹	Retrospective cohort	Multiple center North America	1988	NR	X						
Dash, 2006 ⁶⁰	Retrospective cohort	Single center North America	1998	NR			X				

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Daugherty, 2014 ⁶¹	Retrospective cohort	Single center North America	1993	NR	X				X		
Houston, 2009 ⁶²	Retrospective cohort	Multiple center North America	1989	NR	X				X		
Huang, 2006 ⁶³	Retrospective cohort	Single center North America	1989	Government		X					
Huang, 2009 ⁶⁴	Retrospective cohort	Multiple center North America	1995	NR	X				X		
Kates, 2011 ⁶⁵	Retrospective cohort	Multiple center North America	1998	NR					X		
Kopp, 2014 ⁶⁶	Retrospective cohort	Single center North America	2002	No funding	X				X	X	X
Kyung, 2014 ⁶⁷	Retrospective cohort	Single center Asia	2000	NR	X	X	X		X	X	
Lane, 2010 ⁶⁸	Retrospective cohort	Single center North America	1983	NR	X	X	X		X	X	
Li, 2007 ⁶⁹	Retrospective cohort	Single center Asia	1982	NR	X		X		X		
Li, 2010 ⁷⁰	Retrospective cohort	Single center Asia	1998	Government							
Lowrance, 2010 ⁷¹	Retrospective cohort	Single center	2000	Multiple-specify govt,						X	

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		North America		nonprofit							
McKiernan, 2002 ⁷²	Retrospective cohort	Single center North America	1989	NR	X	X	X				
Medina-Polo, 2011 ⁷³	Retrospective cohort	Single center Europe	1989	NR	X	X	X		X		
Meskawi, 2013 ⁷⁴	Retrospective cohort with propensity analysis	Multiple center North America SEER database	1988	Non-profit	X				X		
Mitchell, 2006 ⁷⁵	Retrospective cohort	Single center North America	1988	NR	X					X	
Miyamoto, 2012 ⁷⁶	Retrospective cohort	Single center Asia	1999	NR	X	X	X	X	X	X	X
Patard, 2004 ⁷⁷	Retrospective cohort	Multiple center Multiple-specify Europe, N America	1984	NR	X						
Scosyrev, 2014 ⁷⁸	RCT Post hoc analysis	Multiple center Europe	1992	Non-profit		X	X				
Smaldone, 2012 ⁷⁹	Retrospective cohort	Multiple center North America	1995	Government NCI/NIH /DOD					X		
Sun, 2012 ⁸⁰	Retrospective cohort	Multiple center	1998	No funding		X				X	

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		North America									
takagi, 2011 ⁸¹	Retrospective cohort	Single center Asia	NR	NR		X			X		
Tan, 2012 ⁸²	Retrospective cohort	Multiple center North America	1992	Government	X				X		
Thompson, 2008 ⁸³	Retrospective cohort	Single center North America	1989	NR					X		
Tomaszewski, 2014 ⁸⁴	Retrospective cohort	Single center North America	2005	NR						X	X
Uchida, 2004 ⁸⁵	Retrospective cohort	Single center Asia	1992	NR	X					X	X
Uzzo, 1999 ⁸⁶	Retrospective cohort	Single center North America	1991	NR	X					X	X
Van Poppel, 2011 ⁸⁷	RCT	Multiple center Europe	1992	Government	X		X		X	X	X
Weight, 2010 ⁸⁸	Retrospective cohort	Single center North America	1999	NR							
Weight, 2010 ⁸⁹	Retrospective cohort	Single center North America	1999	NR	X				X		
Weight, 2010 ⁹⁰	Retrospective cohort	Single center North America	1999	Industry	X				X		

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Woldu, 2014 ⁹¹	Retrospective cohort	Single center North America	1992	NR		X	X				
Yasuda, 2012 ⁹²	Retrospective cohort	Single center Asia	2005	NR			X			X	X
Zini, 2009 ⁹³	Retrospective cohort	Multiple center North America	1988	NR					X		
Chung, 2014, ⁹⁴	Retrospective cohort	Multiple center Asia	1999	Non profit	X		X	X	X		
Chang, 2014, ⁹⁵	Retrospective cohort	Single center Asia	2003	Industry		X	X	X	X	X	
Van Poppel, 2006 ⁹⁶	RCT	Multiple center Europe	1992	Government							
O'Malley, 2014, ⁹⁷	Retrospective cohort	Multiple center North America	1988	Not Reported	X			X	X		
Minimally Invasive Partial Nephrectomy vs Minimally Invasive Radical Nephrectomy											
Brewer, 2012 ⁹⁸	Retrospective cohort	Single center North America	2004	NR		X	X			X	X
Deklaj, 2010 ⁹⁹	Retrospective cohort	Single center	2002	NR	X	X	X		X	X	X

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		North America									
Janetschek, 2000 ¹⁰⁰	Prospective cohort	Single center Europe	1994	NR	X					X	X
Kim, 2003 ¹⁰¹	Retrospective cohort	Single center North America	1998	NR	X		X			X	X
Snow, 2008 ¹⁰²	Retrospective cohort	Single center North America	NR	Industry			X				
Zorn, 2007 ¹⁰³	Retrospective cohort	Single center North America	2002	NR		X	X				X
Minimally Invasive Radical Nephrectomy vs Partial Nephrectomy (unclear technique)											
Becker, 2014 ¹⁰⁴	Retrospective cohort	Multiple center North America	1992	NR						X	
Minimally Invasive Radical Nephrectomy vs Open Partial											

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Nephrectomy											
Matin, 2002 ¹⁰⁵	Retrospective cohort	Single center North America	1996	NR			X			X	X
Roos, 2010 ¹⁰⁶	Retrospective cohort	Single center Europe	1981	NR	X	X	X		X	X	X
Open Partial Nephrectomy vs Radical Nephrectomy(unclear technique)											
Iizuka, 2012 ¹⁰⁷	Retrospective cohort	Single center Asia	1979	NR	X		X		X		X
Minervini, 2012 ¹⁰⁸	Retrospective cohort	Single center Europe	1995	NR	X				X		
Open Radical Nephrectomy vs Partial Nephrectomy(unclear technique)											
Jeon, 2009 ¹⁰⁹	Retrospective cohort	Single center Asia	1998	NR		X					
Minimally Invasive											

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Partial Nephrectomy vs Open/Minimally Invasive Radical Nephrectomy											
Gratzke, 2009 ¹¹⁰	Prospective cohort	Single center Europe	2001	NR	X		X		X	X	X
Minimally Invasive Partial Nephrectomy vs Minimally Invasive Thermal Ablation											
Bensalah, 2007 ¹¹¹	Retrospective cohort	Single center North America	2000	NR	X				X	X	X
Desai, 2005 ¹¹²	Retrospective cohort	Single center North America	1997	NR	X		X		X	X	X
Emara, 2014 ¹¹³	Prospective cohort	Single center Europe	2008	NR	X	X	X		X	X	X
Guillotreau, 2012 ¹¹⁴	Retrospective cohort	Single center North America	1998	NR	X	X	X			X	X
Haramis, 2012 ¹¹⁵	Retrospective cohort	Single center North America	2005	NR	X		X		X	X	X

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Kiriluk, 2011 ¹¹⁶	Retrospective cohort	Single center North America	2002	NR			X			X	X
Pascal, 2011 ¹¹⁷	Retrospective cohort	Single center North America	1998	NR	X	X	X		X	X	X
Partial Nephrectomy(Technique Unclear) vs Thermal Ablation (Technique Unclear)											
Chang, 2014 ¹¹⁸	Retrospective cohort	Single center Asia	2006	NR	X				X	X	
Faddegon, 2013 ¹¹⁹	Retrospective cohort	Single center North America	1999	NR			X				
Mues, 2012 ¹²⁰	Retrospective cohort	Multiple center North America and The Netherlands	1998	NR	X	X	X		X	X	X
Stern, 2007 ¹²¹	Retrospective cohort	Single center North America	1996	NR	X					X	
Thompson, 2014 ¹²²	Retrospective cohort	Single center	2000	No funding	X				X		

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		North America									
Turna, 2009 ¹²³	Prospective cohort	Single center North America	1997	NR	X	X	X		X	X	X
Whitson, 2012 ¹²⁴	Retrospective cohort	Multiple center North America	1998	NR	X				X		
Minimally Invasive Partial Nephrectomy vs Thermal Ablation (Technique Unclear)											
Olweny, 2012 ¹²⁵	Retrospective cohort	Single center North America	1998	No funding	X				X		
Tanagho, 2013 ¹²⁶	Retrospective cohort	Single center North America	2000	Non-profit	X		X		X	X	X
Chang, 2015, ¹²⁷	Retrospective cohort	Single center Asia	2005	Not Reported	X		X	X	X	X	X
Open Partial Nephrectomy vs Thermal Ablation (Technique Unclear)											

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Klatte, 2011 ¹²⁸	Retrospective cohort	Single center North America	2004	NR	X	X	X			X	X
Mitchell, 2011 ¹²⁹	Retrospective cohort	Single center North America	2003	NR		X	X				
Youn, 2013 ¹³⁰	Prospective cohort	Single center Asia	2007	NR	X		X			X	X
Active Surveillance vs Partial Nephrectomy (Technique Unclear) vs Radical Nephrectomy (Technique Unclear)											
Patel, 2014 ¹³¹	Retrospective cohort	Multiple center North America	1995	Government	X				X		
Patel, 2014 ¹³²	Retrospective cohort	Multiple center North America	1995	Government Non-Profit	X				X		
Sun, 2013 ¹³³	Retrospective cohort	Multiple center North America	1988	No funding	X						

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Active Surveillance vs Partial Nephrectomy (Technique Unclear) vs Radical Nephrectomy (Technique Unclear) vs Thermal Ablation											
Danzig, 2015, ¹³⁴	Retrospective cohort	Multiple center North America	2009	Government			X				
Radical Nephrectomy(Technique Unclear) vs Thermal Ablation (Technique Unclear)											
Takaki, 2014 ¹³⁵	Retrospective cohort	Single center Asia	2002	No funding	X		X		X	X	
Active Surveillance vs											

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Radical Nephrectomy (Technique Unclear)											
Lane, 2010 ¹³⁶	Retrospective cohort	Single center North America	2000	NR	X	X	X		X		
Thermal ablation vs Partial Nephrectomy (Technique Unclear) vs Radical Nephrectomy (Technique Unclear)											
Choueiri, 2011 ¹³⁷	Retrospective cohort	Multiple center North America	2004	NR	X				X		
Lucas, 2007 ¹³⁸	Retrospective cohort	Single center North America	1995	NR	X	X	X				
Permpongkosol, 2007 ¹³⁹	Retrospective cohort	Single center North America	1993	NR						X	X
Takaki, 2010 ¹⁴⁰	Retrospective cohort	Single center Asia	2002	NR							

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Cooper, 2015, ¹⁴¹	Retrospective cohort	Single center North America	2008	Not Reported	X		X			X	
Minimally Invasive Thermal ablation vs Minimally Invasive Partial Nephrectomy vs Minimally Invasive Radical Nephrectomy											
Dekljaj, 2010 ¹⁴²	Retrospective cohort	Single center North America	2002	NR		X	X			X	X
Foyil, 2008 ¹⁴³	Retrospective cohort	Single center North America	2000	NR			X				
Thermal ablation vs Open/Minimally Invasive Partial Nephrectomy vs Open/Minimally Invasive Radical Nephrectomy											

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Kaowalczyk, 2013 ¹⁴⁴	Retrospective cohort	Multiple center North America	2005	Government		X				X	X
ACTIVE SURVEILLANCE (UNCONTROLLED STUDIES)											
Abouassaly, 2008 ¹⁴⁵	Retrospective cohort	Single center North America	2000	NR	X	X					
Crispen, 2008 ¹⁴⁶	Retrospective cohort	Single center North America	2000	NR	X						
Crispen, 2009 ¹⁴⁷	Retrospective cohort	Single center North America	2000	Government Industry	X						
Jewett, 2011 ¹⁴⁸	Retrospective cohort	Multiple center North America	2004	No funding	X	X					
Kunkle, 2007 ¹⁴⁹	Other - please specify Retrospective and Prospective cohort	Single center North America	NR	NR	X						
Leonard, 2013 ⁴²	Retrospective cohort	Single center Europe	2007	NR	X						
Rosales, 2010 ¹⁵⁰	Retrospective cohort	Single center North America	1993	NR	X	X					

NR: Not reported; RCT: Randomized Control Trial