Supplementary Table. Characteristics of PLND performed in the included studies.

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
No PLND vs. Any PLND									
Karl A 2015, retrospective comparative, 1994-2013	X		PLND	NR	No	0%	NR	NR	
Gandaglia G 2015, retrospective comparative, 2000-2013	X		PLND	NR	No	0.3% (n=5)	NR	NR	
Koo KC 2015, retrospective comparative, South korea, 2005-2009	X		PLND	NR	No	NR	NR	NR	
Ostby-Deglum M 2015, retrospective comparative, 2005-2010		X	PLND	NR	No	NR	NR	NR	
Violette PD 2015, retrospective comparative, 2005-2012		X	PLND	NR	No	NR	NR	NR	
Boehm 2015, retrospective comparative, 1992-2011	X	X	PLND	NR	No	4.6% (n=540)	NR	NR	
Tyritzis SI 2015, prospective comparative, multicentric, 2008-2011		X	limited	Obt.	No	2% (n=5)	ORP: 6.1 (1.0-22.0) RARP: 9.2 (2.0-31.0)	NR	Only obturator nodes
			extended	Obt, VIE, AIE, AII.		16.3% (n=44)	ORP: 18.3 (5.0-48.0) – RARP: 21.5 (2.0-76.0)		nodes overlying the external iliac artery and vein, nodes in the obturator fossa located cranial and caudal to the obturator nerve, and nodes medial and (at some centres) lateral to the internal iliac artery.
Cole A. 2015 Sweden, retrospective comparative, AUA		X	PLND	NR	No	NR	NR	NR	NR
Chen YW 2015, USA, retrospective comparative, GCSO	X		PLND	NR	No	1.9% (n=502)	NR	NR	NR

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
Jeong S, 2015 South Korea Prospective comparative, EAU		X	PLND	NR	No	NR	NR	NR	NR
Gandaglia G, 2014, Italy, retrospective comparative, EAU		X	PLND	NR	No	NR	NR	NR	NR
Abdollah F, 2014, Italy, retrospective comparative, EAU	X		extended	NR	No	NR	14.0 [R: 8-52]	NR	NR
Liss 2013, retrospective comparative, Germany		X	limited	Obt, VIE.	Yes	3.4% (n=9)	18 [IQR 12-25]	0.3% (n=13)	external iliac and obturator lymph nodes. Dissection extended to the bifurcation of the iliac vein proximally and distally to the node of Cloquet. The obturator nodes were grasped and swept from the fossa identifying and preserving the obturator nerve and vessels.
			extended	Obt, VIE, AIE, AII, AIC.	No	24.1% (n=13)	20 [IQR 16-28]	2% (n=24)	Standard PLND and the internal iliac and common iliac nodes to the level of the ureter
Mitsuzuka 2013, retrospective comparative, Japan, 2000-2009	X		standard	Obt, VIE, AIE.	No	0.7% (n=1)	NR	NR	The extent of PLND included the external iliac vein, the pelvic side wall and the obturator nerve.
Masuda H 2013, retrospective comparative, Japan, 2000-2010	X		PLND	NR	No	0%	NR	NR	NR
Van Der Poel H 2013, study type, The Netherlands, 2006-2011		X	super-extended	Obt, VIE, AIE, AII, AIC, PS.	Yes	8.4% (n=37)	14 [11-19]	NR	External iliac artery area (medial from the genitofemoral nerve, distal from the ureteral crossing, proximal to the epigastric vessels); the obturator/internal iliac area (medial and dorsal from the external iliac, on to the internal iliac artery proximal, down to the endopelvic fascia remnants distally, and dorsally up to the perirectal fat).
De Almeida Prado Costa G, 2013, France, retrospective comparative, WCE	X		PLND	NR	No	3% (n=21)	10 [1-24]	NR	NR

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
Chang M, 2013, Canada, retrospective comparative, AUA	X		PLND	NR	No	3.3% (n=11)	6 [NR]	NR	NR
Pokala N, 2013, USA, retrospective comparative, AUA	X		PLND	NR	No	NR	NR	NR	NR
Schmitges J 2012, retrospective comparative, Canada/USA/Italy, 1999-2008		X	PLND	NR	No	NR	NR	NR	NR
Schmitges J 2012, retrospective comparative, USA, 1999-2008		X	Limited	Obt, VIE.	No	NR	NR	NR	obturator fossa and the area along the external iliac veins,
			extended	Obt, VIE, AIE, AII.	Yes	NR	NR	NR	obturator fossa (dorsal the external iliac vein, along the obturatorial nerve), along the external and internal iliac artery up to the common iliac artery.
Daimon T 2012, retrospective comparative, Japan, 2002-2006	X		Limited	Obt, VIE.	Yes	0%	NR	NR	the boundaries of dissection included the undersurface of the external iliac vein and obturator nerve, and lymph nodes were removed with all fatty, connective,and lymphatic tissues.
Ost P 2012, Retrospective comparative, Belgium/Italy, 1999-2008	X		Modified extended	NR	No	0%	10 [R: 1-40]	NR	NR
Gandaglia G, 2012, retrospective comparative, Italy, 2008-2010		X	PLND	NR	No	1.7% (n=4)	20 [1–40]	NR	NR
Keskin S, 2012, Turkey, retrospective comparative, ERUS		X	Standard vs. extended	NR	No	12.76% (n=30)	18 (7.55)	NR	NR
Hamdan SE, 2012, USA, retrospective comparative, ASCO		X	PLND	NR	No	7%	NR	NR	NR
Schmitges J 2012, prospective comparative, Germany/Canada/USA/ Austria, 2006-2009		X	PLND	NR	No	5.1% (n=74)	NR	NR	NR
Jacobs R, 2012, The Netherlands, retrospective		X	PLND	NR	No	NR	NR	NR	NR

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
comparative, AUA									
Ku JH 2011, retrospective comparative, Korea, 1997-2009	X		limited	Obt, VIE.	No	2% (n=4)	NR	NR	removal of the lymph nodes along the external vein and the obturator fossa
Touijer K 2011, retrospective comparative, USA, 2003-2007		X	Limited	VIE, AIE.	No	3.4% (n=6)	9 [6-13]	4.5%	external iliac nodes only
			extended	Obt, VIE, AIE, AII.	No	7.1% (n=42)	13 [9-18]	14.3%	including the external iliac, obturator and hypogastric nodes
Yong DZ 2011, retrospective comparative, USA, 2003-2009		X	PLND	NR	No	NR	NR	NR	NR
Eifler JB 2011, retrospective comparative, USA, 2001-2009		X	limited	Obt, VIE.	Yes	0.9% (n=4)	5.7 (R: 0-29)	NR	tissue inferior to the external iliac veins and superolateral to the obturator nerves was removed,
			limited	Obt, VIE.	Yes				Included lymphatic tissue deep to the obturator nerves and a more cranial dissection.
			extended	NR	No				Mentioned but template not prescribed
Khoder WY 2011, retrospective comparative, Germany, 2002-2004		X	standard	Obt, VIE, AIE.	No	NR	NR	NR	excision of all fibro-fatty tissue along the external iliac vein, including the bifurcation of the common iliac artery together with fibro-fatty tissue within the obturator fossa
Lin BM 2011, retrospective comparative, USA, 2001-2008		X	PLND	NR	No	NR	NR	NR	NR
Dicks B, 2011, USA, retrospective comparative, AUA		X	PLND	NR	No	6.7% (n=7)	18.1 (NR)	NR	NR
Logan J, 2011, USA, retrospective comparative, AUA	X		PLND	NR	No	NR	NR	NR	NR
Hruza M 2010, retrospective comparative, Germany/Italy, 1999-2008		X	PLND	NR	No	1.9% (n=41)	NR	NR	NR
Porter CR 2010, retrospective	X		PLND	Obt, VIE.	Yes	NR	NR	NR	PLND limits consisted of the obturator nerve, external iliac vein,

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
comparative, USA, 1954-1994									hypogastric vein and the inguinal ligament.
Zorn C 2009, retrospective comparative, USA, 2003-2007		X	extended	Obt, VIE, AIE, AII, AIC.	Yes	7.8% (n=23)	12.5 (IQR: 7-16)	NR	The external iliac artery was rolled laterally, and the lymphatic tissue overlying the external iliac vein was bluntly removed from the bifurcation of the common iliac vessels superiorly to the node of Cloquet inferiorly. The lymphatic tissue below the external iliac vein was then released from the pelvic sidewall, exposing the obturator fossa. All the tissue surrounding the obturator nerve was removed with judicious use of bipolar cautery to achieve hemostasis. This dissection was performed distally to the pubic bone and proximally to the crossing of the ureter. Lymphatic tissue posterior to the obturator nerve and vessels was also routinely removed.
Weight CJ 2008, retrospective comparative, USA, 1995-1999	X		extended	Obt, VIE, AIE, AII.	Yes	0.7% (n=1)	9 [IQR: 5-13]	NR	the boundaries of dissection included the undersurface of the external iliac vein, pelvic sidewall, obturator nerve, bifurcation of the common iliac artery, and inguinal ligaments
Berglund 2007, retrospective comparative, USA, 1995-2005	X		Limited	NR	No	2.12% (n=84)	5.8 (R: 0-71)	NR	NR
Stolzenburg 2005, retrospective comparative, Germany, 2001-2004		X	PLND	NR	No	5.3% (n=14)	NR	NR	NR
Bhatta-Dhar 2004, retrospective comparative, USA, 1995-1999	X		limited	Obt, VIE.	Yes	0.7% (n=1)	NR	NR	boundaries included the undersurface of the external iliac vein, pelvic sidewall, obturator nerve, bifurcation
Fergany A 2000, retrospective comparative, USA, 1986-1999	X		PLND	NR	No	1.6% (n=6)	NR	NR	NR

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
Limited / standard PLND vs. (super)-extended PLND									
Hatzichristodoulou G 2015, retrospective comparative, 2007-2012	X	X	limited	Obt.	No	NR	6 [IQR: 0; 10]	NR	obturator region
			extended	Obt, VIE, AIE, AII, AIC.	No	NR	18 [IQR: 10; 65]	NR	obturator region, external iliac artery area, internal iliac artery area, common iliac artery area up to the ureteric crossing
Hoshi S 2015, retrospective comparative, 1988-2013		X	limited	Obt.	No	High risk: 7.1% Int risk: 0.6% Low risk: 0%	6 [0, 24]	NR	limited to obturator LNs,
			extended	Obt, VIE, AIE, AII.	No	High risk: 20% Int risk: 3.3% Low risk: 0%	9 [0, 34]	NR	limited to the internal and external iliac and obturator fossa
Yuh B 2015, USA, retrospective comparative, AUA	X		limited	NR	No	3%	6	NR	
			extended			15%	20	NR	
Lestingi J 2015 Brazil, RCT, AUA	X	X	Limited	Obt.	No	4.4%	3.5	NR	obturator chain
			extended	Obt, VIE, AIE, AII, AIC, PS.	No	10.7%	18.8	NR	obturator, external-, internal- and common-iliac and pre-sacral chains
Nyushko K.M. 2014, Russian Federation, Retrospective comparative, EMUC	X		PLND	NR	No	NR	23 (9) [2-53]	NR	
Schwerfeld-Bohr J, 2014, Germany, RCT, EAU		X	limited	Obt.	No	NR	NR	NR	Fossa obturatoria
			extended	Obt, VIE, AIE, AII, AIC.	No	NR			A. iliaca externa, Fossa obturatoria, A. iliaca interna and A. iliaca communis up to the crossing ureter

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
Kim KH 2013, retrospective comparative, Korea	X	X	standard	Obt, VIE, AIE.	No	3.4% (n=10)	12 [R: 9-16]	NR	external iliac and obturator fossa area
			extended	Obt, VIE, AIE, AII, AIC.	No	13.5% (n=23)	21 [R: 16-25]	NR	boundaries of eLND included the intrapelvic area (internal iliac, obturator, external iliac) and common iliac area up to the ureteric crossing.
Yuh BE 2013, retrospective comparative, Italy, 2008-2012		X	limited	Obt, VIE.	No	3.9% (n=8)	7 [IQR 5-9]	NR	the obturator fossa and the area overlying the external iliac vein.
			standard	Obt, VIE, AIE.	Yes	11.9% (n=24)	21.5 [IQR 17-27]	NR	boundaries the common iliac bifurcation proximally, the lateral border of the external iliac artery laterally, the node of Cloquet distally, as well as the obturator fossa.
Nyushko K.M., 2013, Russian Federation, retrospective comparative, EMUC	X		Standard vs. extended	NR	No	NR	13 (6)	NR	
						NR	26 (9)		
Jung JH 2012, retrospective comparative, South Korea, 2005-2010	X	X	standard	Obt, VIE, AIE.	No	5.2% (n=8)	15 [IQR: 11-19]		obturator and external iliac nodal packets
			extended	Obt, VIE, AIE, AII, AIC.	No	22.2% (n=10)	24 [IQR: 18-28]		sPLDN and additional tissue on the medial and lateral aspect of the internal iliac vessels as well as along common iliac vessels up to the ureteric crossing.
Hoshi S, 2012, Japan, retrospective comparative, AUA		X	standard	NR	No	NR	NR	NR	NR
			extended	Obt, VIE, AIE, AII, AIC.	No	NR			the external iliac, internal iliac, obturator and common iliac lymph
Dundee P, 2011, Australia, retrospective comparative, AUA		X	Standard	NR	No	GS 6: 0.8% GS 7: 1.1% GS 8: 3.8% GS >8: 0%	12.3 (4-42)	NR	
			extended			GS 6: 0% GS 7: 12% GS 8: 0% GS >8: 0%	4.6 (1-8)		

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
Sonnleithner M, 2010, Austria, prospective comparative, EAU		X	limited	Obt.	No	NR	NR	NR	Fossa obturatoria
			extended	Obt, VIE, AIE, AII.	No	NR			fossa obturatoria, illiaca externa and interna
Eden 2010, retrospective comparative, UK, 2000-2008		X	limited	Obt, VIE.	No		6.1 [2-8]	NR	all nodal tissue anteromedial to the external iliac vein and around the obturator vessels and nerve
			extended	Obt, VIE, AIE, AII, AIC.	No		17.5 [2-23]		excision of all nodal tissue limited proximally by the ureter, distally by the pubic bone, laterally by the lateral border of the external iliac artery and medially by the bladder
Naselli 2010, retrospective comparative, Italy, 2004-2010		X	limited	Obt.	No	1% (n=2)	6 [R:2-14]	NR	obturator fossa
			extended	Obt, VIE, AIE, AII, AIC, PS.	No	11,7% (n=29)	16 [R:10-67]	NR	obturator fossa, external iliac region, internal iliac region and common iliac region.
Lavery H, 2010, USA, retrospective comparative, AUA		X	standard	Obt, VIE, AIE.	No	1.1% (n=2)	8.6	NR	external iliac and obturator lymph nodes
			extended	Obt, VIE, AIE, AII, AIC.	Yes	19.5% (n=15)	16.4	NR	all nodes medial to the genitofemoral nerve including the hypogastric nodes and common iliac nodes up to the crossing of the ureter
Lindberg 2009, retrospective comparative, Sweden, 2002-2007		X	limited	Obt, VIE.	Yes	6% (n=4)	7 [R: 3-18]	NR	The anatomical extent of lPLND included the tissue in the obturator fossae, limited by the external iliac vein ventrally, the obturator nerve medially, the entrance of the external iliac vein to the pelvis in front of Cooper's ligament caudally, and the confluence of the internal and external iliac veins cranially.
			extended	Obt, VIE, AIE, AII, AIC.	Yes	20% (n=22)	17 [R: 5-40]	NR	In addition to the obturator fossae, ePLND included the tissues covering the external iliac vessels limited by the lateral border of the external iliac artery, and the tissue on the visible aspects of the internal iliac vessels limited medially by the bladder. The

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
									cranial limit was the crossing of the ureter over the common iliac artery.
Musch 2008, retrospective comparative, Germany, 1993-2006		X	Limited	Obt, VIE.	No	10.7% (n=148)	NR	NR	the lymph node containing fibrofatty tissue in the obturator fossa and along the external iliac vein was removed.
			extended	Obt, VIE, AIE, AII.	No				lymph nodes were also removed along the external iliac artery and along the hypogastric vessels.
Klevecka 2007, retrospective comparative, Germany, 1993-2004		X	limited	Obt, VIE.	No	10.9% (n=109)	NR	NR	Lymph nodes in the obturator fossa and around the external iliac vein
			extended	Obt, VIE, AIE, AII.	No				Additional nodes around the external iliac artery and internal iliac artery and vein
Allaf ME 2004, retrospective comparative, USA, 1992-2003	X		Limited	Obt.	No	1.2% (n=22)	12.4	1.4	Limited dissection differed in that the posterior extent of the dissection terminated with the fibrofatty tissue along the obturator nerve.
			extended	Obt, VIE, AIE, AII.	Yes	3.3% (n=71)	14.7	1.7	Dissection consisted of excising the fibrofatty and lymphatic tissues in an area bordered superiorly by the bifurcation of the common iliac artery. The inferior margin was the femoral canal while the dissection was carried laterally to the pelvic sidewall. The posterior extent of the dissection included removal of all fibrofatty tissue surrounding the obturator nerve, obturator vessels and internal iliac vein.
Clark T 2003, RCT, USA		X	limited	Obt, VIE.	Yes	2.4% (n=3)	NR	NR	limited superiorly by the bifurcation of the common iliac artery, inferiorly by the node of Cloquet, laterally by the external iliac vein and posteriorly by the obturator nerve.
			extended	Obt, VIE, AIE, AII, AIC.	Yes	3.3% (n=4)			removal of all fibrous,fatty and lymphatic tissue in an area bordered superiorly by a point 2 cm. above the bifurcation of the common iliac artery. The inferior margin was the

Study ID; design; country; recruitment period	Oncological	Non oncological	Type of reported PLND	Template	Border mentioned	pN1 rate	N lymph nodes dissected	N positive lymph nodes	Comments
									node of Cloquet while dissection was carried laterally to the genitofemoral nerve and medially to the bladder wall. Dissection included removal of all lymphatic tissue surrounding the obturator nerve and anterior to the obturator vessels. Nodes along the internal iliac artery and in the presacral area were removed.
Heidenreich 2002, retrospective comparative, Germany, 1999-2000		X	standard	Obt, VIE, AIE.	No	12% (n=12)	11 (R: 6-19)	NR	Obturator fossa and external iliac lymph nodes were dissected
			extended	Obt, VIE, AIE, AII.	Yes	26.2% (n=27)	28 (R: 21-42)	NR	the aortic bifurcation cranially, the circumflex iliac vein and Cooper's ligament caudally, the external ailiac vein laterally and the ureter medially.

List of abbreviations in alphabetical order:

NR = Not reported

Obt = Obturator fossa

VIE = Vena Iliaca Externa

AIE = Arteria Iliaca Externa

AII = Arteria Iliaca Interna (including hypogastric nodes)

AIC = Arteria Iliaca Communis

PS = Presacral