

Histologic subtype	ICD-O-3 SEER Site	Histologic Validation List
Urothelial carcinoma (N=18303)	8050	Papillary carcinoma, NOS
	8120	Transitional cell carcinoma
	8121	Schneiderian carcinoma
	8130	Papillary transitional cell carcinoma
	8020	Carcinoma, undifferentiated, NOS
Micropapillary UC (N=177)	8131	Transitional cell carcinoma, micropapillary
Lymphoepithelioma-like UC (N=38)	8082	Lymphoepithelial carcinoma
Sarcomatoid UC (N=283)	8122	Transitional cell carcinoma, spindle cell
Adenocarcinoma (N=592)	8140	Adenocarcinoma, NOS
	8142	Linitis plastica
	8143	Superficial spreading adenocarcinoma
	8144	Adenocarcinoma, intestinal type
	8210	Adenocarcinoma in adenomatous polyp
	8255	Adenocarcinoma with mixed subtypes
	8260	Papillary adenocarcinoma, NOS
	8261	Adenocarcinoma in villous adenoma
	8262	Villous adenocarcinoma
	8263	Adenocarcinoma in tubulovillous adenoma
	8310	Clear cell adenocarcinoma, NOS
	8323	Mixed cell adenocarcinoma
	8453	Intraductal papillary-mucinous carcinoma
	8480	Mucinous adenocarcinoma
	8481	Mucin-producing adenocarcinoma
	8490	Signet ring cell carcinoma
	8503	Intraductal papillary adenocarcinoma
	8560	Adenosquamous carcinoma
	8570	Adenocarcinoma with squamous metaplasia
	8574	Adenocarcinoma with neuroendocrine differentiation
8575	Metaplastic carcinoma, NOS	
8576	Hepatoid adenocarcinoma	
Giant & Spindle cell carcinoma (N=85)	8030	Giant cell and spindle cell carcinoma
	8031	Giant cell carcinoma
	8032	Spindle cell carcinoma
	8033	Pseudosarcomatous carcinoma
	8034	Polygonal cell carcinoma
	8035	Carcinoma with osteoclast-like giant cells
Squamous cell carcinoma (N=889)	8070	Squamous cell carcinoma, NOS
	8071	Squamous cell carcinoma, keratinizing, NOS
	8072	Squamous cell carcinoma, large cell, non-keratinizing
	8073	Squamous cell carcinoma, small cell, non-keratinizing
	8074	Squamous cell carcinoma, spindle cell
	8075	Squamous cell carcinoma, adenoid
	8076	Squamous cell carcinoma, micro-invasive
	8083	Basaloid squamous cell carcinoma
	8051	Verrucous carcinoma, NOS
	8052	Papillary squamous cell carcinoma
Neuroendocrine carcinoma (N=382)	8013	Large cell neuroendocrine carcinoma
	8041	Small cell carcinoma, NOS
	8042	Oat cell carcinoma
	8044	Small cell carcinoma, intermediate cell
	8045	Combined small cell carcinoma

	8240	Carcinoid tumor, malignant
	8241	Enterochromaffin cell carcinoid
	8244	Composite carcinoid
	8002	Malignant tumor, small cell type
	8246	Neuroendocrine carcinoma
Sarcoma (N=18)	8800	Sarcoma, NOS
	8801	Spindle cell sarcoma
	8802	Giant cell sarcoma
	8804	Epithelioid sarcoma
	8805	Undifferentiated sarcoma

Abbreviations: *ICD-O-3: International Classification of Diseases for Oncology, 3rd revision; NOS: not otherwise specified; SEER: Surveillance, Epidemiology, and End Results; UC: urothelial carcinoma*

Supplementary Table 1. Histologic subtypes of 20767 patients with bladder cancer who underwent pelvic lymph node dissection and were identified within the Surveillance, Epidemiology, and End Results (SEER) database from 2001 to 2016, stratified by the International Classification of Disease for Oncology 3 site (ICD-O-3) codes.