

Supplementary Online Content

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eTable 1. List of Topography Codes for the American Society for Radiation Oncology Group 1 Proton Beam Therapy Indication Cancer Types Based on the *International Classification of Diseases for Oncology (Third Edition, ICD-O-3)*

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. List of topography codes for the American Society for Radiation Oncology Group 1 proton beam therapy indication cancer types based on the *International Classification of Diseases for Oncology (Third Edition, ICD-O-3)*

ASTRO Indication Group	ICD-O-3 topology	ICD-O-3 Histology
Group 1		
Head & Neck		
Oral Cavity and Pharynx	C100-C109, C129, C130-C139, C140, C142, C148	8010, 8020, 8041, 8070-8072, 8082, 8083, 8140, 8147, 8200, 8430, 8500, 8502, 8550, 8562, 8940, 8941, 8982, 9370
Larynx	C320-C329	8070, 8071
Nose, Nasal Cavity and Middle Ear	C300-C301, C310-C319	8010, 8013, 8020, 8032, 8070-8072, 8074, 8083, 8140, 8144, 8200, 8246, 8720, 8746, 8800, 8801, 8890, 9220, 9370, 9500, 9522
CNS		
Brain	C710-C719	8000, 8800, 8963, 9064, 9065, 9070, 9085, 9150, 9231, 9240, 9350, 9351, 9370, 9380-9382, 9390-9393, 9400, 9401, 9411, 9420, 9421, 9424, 9440-9442, 9450, 9451, 9470, 9471, 9473, 9474, 9505, 9506, 9508, 9560
Cranial Nerves, Other Nervous System	C710-C729	8815, 9064, 9150, 9370, 9380, 9394, 9400, 9421, 9530-9532, 9534, 9537-9539, 9560
Other Intracranial, Intraspinal Neoplasm	C751-C753	8272, 9064, 9080, 9085, 9350-9352, 9361, 9362, 9370, 9380
Hepatocellular	C220-C221	8140, 8160, 8170, 8171, 8174, 8180
Skull and Spine	C410-C412, C414	9180, 9181, 9220, 9231, 9240, 9260, 9370-9372,
Ocular	C690-C699	8070, 8071, 8140, 8200, 8720, 8730, 8770-8772, 8774, 8800, 8858, 9510
Rhabdomyosarcoma	Any site	8900, 8902, 8910, 8912, 8920, 8991
Group 2		
Prostate	C619	8040, 8140, 8480, 8500, 8550
Lung	C8340-C8349	8000, 8010, 8012, 8013, 8041, 8045, 8046, 8070-8072, 8083, 8140, 8200, 8230, 8240, 8246, 8250, 8253, 8255, 8260, 8480, 8481, 8550, 8551, 8560, 8574
Breast	C500-C509	8010, 8050, 8140, 8201, 8211, 8230, 8255, 8480, 8490, 8500, 8501, 8503, 8504, 8507, 8510, 8520, 8522, 8523, 8524, 8530, 8541, 8575
Pelvic		
Colorectal	C187, C199, C209	8140, 8083, 8210, 8261, 8263, 8480, 8481, 8490
Anal	C210, C211	8070-8072, 8083, 8124, 8140
Uterus	C541, C559	8140, 8323, 8441, 8460, 8570, 8950, 8980

Cervix	C530-C539	8070-8072, 8140, 8560
Testis	C621, C629	9061
Abdominal		
Pancreas	C250-C259	8000, 8010, 8140, 8480, 8500, 8550, 8560
Stomach	C160, C162, C163, C169	8010, 8070, 8140, 8144, 8490
Kidney	C649	8690
Esophagus	C150-C159	8010, 8070, 8140, 8244, 8246, 8255, 8480, 8490, 8560, 8574
Thoracic		
Non-Hodgkin Lymphoma	C379, C381, C383	9679
Hodgkin Lymphoma	C770, C771, C773, C778, C779	9650, 9652, 9659, 9663, 9664

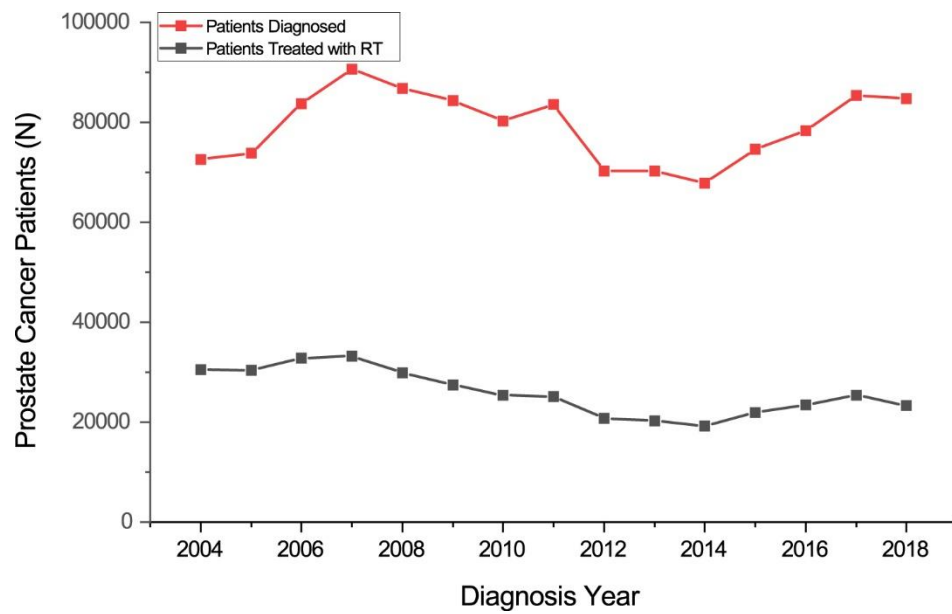
eTable 2. Trends in use of PBT by ASTRO Model Policy Group 1 and Group 2 cancer sites, (NCDB 2004-2018)

	Diagnosis Year									
	004	010	011	012	013	014	015	016	017	018
Cancer Site	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Group 1										
Head & Neck	0 (0.3)	7 (0.1)	3 (0.2)	5 (0.2)	5 (0.5)	02 (0.5)	01 (0.9)	25 (1.4)	38 (1.9)	14 (3.0)
CNS	5 (0.2)	15 (0.3)	52 (0.4)	94 (0.5)	64 (0.7)	05 (0.7)	08 (1.0)	40 (1.2)	49 (1.4)	21 (1.9)
Hepatocellular	SU (0.1)	SU (0.1)	SU (0.1)	SU (0.1)	7 (0.1)	6 (0.2)	8 (0.2)	0 (0.3)	2 (0.3)	3 (0.4)
Skull and Spine	9 (6.3)	1 (8.4)	3 (10.7)	7 (11.7)	7 (11.9)	5 (9.4)	4 (16.4)	9 (14.7)	13 (20.4)	3 (16.1)
Ocular	3 (5.7)	2 (6.0)	01 (6.2)	6 (5.7)	23 (6.8)	18 (6.6)	33 (6.5)	69 (8.3)	38 (6.7)	24 (6.7)
Rhabdomyosarcoma	SU (0.5)	3 (8.2)	6 (10.4)	2 (11.2)	5 (18.7)	1 (21.1)	7 (21.0)	1 (20.7)	4 (25.5)	1 (22.8)
Group 2										
Prostate	83 (0.8)	048 (1.3)	200 (1.4)	05 (1.3)	32 (1.2)	49 (0.8)	06 (0.8)	57 (1.0)	77 (1.0)	097 (1.3)
Lung	1 (0.1)	0 (0.1)	6 (0.1)	9 (0.1)	24 (0.2)	35 (0.2)	12 (0.3)	97 (0.3)	73 (0.3)	38 (0.7)
Breast	94 (0.2)	7 (0.0)	6 (0.0)	7 (0.1)	68 (0.1)	34 (0.2)	42 (0.2)	51 (0.3)	55 (0.4)	458 (0.9)
Pelvic	9 (0.1)	SU (0.0)	SU (0.0)	SU (0.0)	0 (0.1)	3 (0.1)	6 (0.1)	6 (0.2)	3 (0.2)	99 (0.8)
Abdominal	SU (0.1)	7 (0.1)	9 (0.1)	3 (0.2)	7 (0.4)	0 (0.3)	7 (0.4)	3 (0.4)	3 (0.4)	01 (0.6)
Esophagus	SU (0.1)	SU (0.1)	SU (0.1)	9 (0.3)	6 (0.5)	5 (0.4)	0 (1.0)	4 (1.3)	26 (1.7)	89 (2.3)
Thoracic	SU (0.4)	SU (0.2)	SU (0.5)	7 (0.5)	2 (1.0)	8 (1.1)	7 (1.3)	3 (1.8)	3 (2.0)	8 (2.2)

Notes: DSU: Data suppressed due to confidentiality, APC: Annual Percent Change
Counts and percent from 2005-2009 (no significant APC) suppressed for clarity.

^a Between 2010 and 2018, ^b between 2011 and 2014, ^c between 2014 and 2018

eFigure 1. Number of patients with prostate cancer diagnosed with prostate cancer and treated with radiation therapy targeted to the prostate, NCDB (2004-2018).



eFigure 2. Patients treated with PBT (percent and count) by ASTRO Model Policy Groups and median zip code income level quintiles, NCDB (2004-2018)

