Study	Country	Centre	Summary	Study timeframe	n total	n surgery only	Mean age (range)	Sex (% male)	N classification (%) All patients	N classification (%) surgery only	Pathology	Follow-up duration (months)	HPV/P16 + rate	MINORS Score
Cummings 2021	USA	Rochester, New York	National cancer database retrospective review	2004-2015	540	63	57 (22-90)	78.1	N1 = 145 (26.9) N2/2a = 143 (26.5) N2b = 172 (31.9) N2c = 33 (6.1) N3 = 47 (8.7)	Not stated	SCC	Not stated	82.4%	9
Wichmann 2021	Germany	University Hospital Leipzig	Diagnostic and therapeutic differences 1988-2006 vs. 2007-2018	1988-2018	115	19	Not stated	87.0	N1 = 17 (14.8) N2a = 31 (27.0) N2b = 35 (30.4) N2c = 6 (5.2) N3 = 26 (22.6)	Not stated	SCC	37.4 (median)	43.5% P16+ 45.5% HR HPV+	8
Dorobisz 2019	Poland	Wroclaw Medical University	How clinical assessment and treatments affect survival	Not stated	233	18	Not stated	76.0	N1 = 33 (14.2) N2 = 100 (42.9) N3 = 100 (42.9)	Not stated	202/233 (86.7%) SCC	Not stated	Not stated	7
Zhou 2018	USA	University of California, San Francisco	Comparison of treatment strategies and prognostic factors	1993-2015	75	6	58.3 (31-80)	88.0	N1 = 10 (26.3) N2a = 8 (21.1) N2b = 9 (23.7) N2c = 4 (10.5) N3 = 7 (18.4)	N1 = 3 (50.0) N2a = 2 (33.3) N2b = 1 (16.7)	SCC	82.8 (4-265) (median (range))	76.3%	10
Hung 2018	Taiwan	Taiching Veterans General Hospital	Treatment outcomes of HNSCCUP	1995-2013	69	5	55.7 (37-48)	82.6	N1 = 1 (1.4) N2a = 12 (17.4) N2b = 32 (46.4) N2c = 4 (5.8) N3 = 20 (29.0)	Not stated	SCC	55.5 (6-234) (median (range))	Not stated	9
Mizuta 2018	Japan	Kyoto University	Multi-centre retrospective analysis (12 institutions)	2006-2015	80	27	65** (39-83)	77.5	N1 = 15 (18.8) N2a = 16 (20.0) N2b = 34 (42.5) N2c = 5 (6.3) N3 = 10 (12.5)	N1 = 9 (33.3) N2a = 6 (22.2) N2b = 11 (40.7) N2c = 1 (3.7)	SCC	34 (2-132) (median (range))	Not stated	12
Axelsson 2017	Sweden	University of Gothenburg	Prognostic factors for HNSCCUP and impact of HPV	1992-2009	68	7	59 (36-87)	81.0	N1 = 13 (19.1) N2a = 24 (35.3) N2b = 13 (19.1) N2c = 6 (8.8) N3 = 12 (17.6)	N1 = 2 (28.6) N2a = 4 (57.1) N2b = 1 (14.3)	SCC	Not stated	69.5%	10

Table 1. Study Characteristics (Study 1-7)

Abbreviations: HNSCCUP – head and neck squamous cell carcinoma of unknown primary. Notes: AJCC TNM7 is used for nodal staging. **=Median