

**Table 1. Summary results by lung metastases**

	No (N = 2586)	Yes (N = 128)	Total (N = 2714)	p-value
<b>Age in year</b>				0.150
Mean (SD)	65.22 (10.83)	63.81 (10.57)	65.16 (10.82)	
Median (Q1, Q3)	65.0 (57.0, 73.0)	63.0 (56.0, 70.0)	64.0 (57.0, 73.0)	
<b>Age group</b>				0.208
20-49	163 (6.3%)	12 (9.4%)	175 (6.4%)	
50-64	1124 (43.5%)	60 (46.9%)	1184 (43.6%)	
65+	1299 (50.2%)	56 (43.8%)	1355 (49.9%)	
<b>Gender</b>				0.037
Male	2092 (80.9%)	113 (88.3%)	2205 (81.2%)	
Female	494 (19.1%)	15 (11.7%)	509 (18.8%)	
<b>Race</b>				0.211
White	1807 (69.9%)	79 (61.7%)	1886 (69.5%)	
Black	396 (15.3%)	22 (17.2%)	418 (15.4%)	
Hispanic	206 (8.0%)	17 (13.3%)	223 (8.2%)	
Asian	146 (5.6%)	8 (6.2%)	154 (5.7%)	
Other	31 (1.2%)	2 (1.6%)	33 (1.2%)	
<b>Primary Site</b>				0.533
Non-pyriform sinus	1321 (51.1%)	69 (53.9%)	1390 (51.2%)	
Pyriform sinus	1265 (48.9%)	59 (46.1%)	1324 (48.8%)	
<b>Grade</b>				<0.001
Grade I	106 (4.1%)	1 (0.8%)	107 (3.9%)	
Grade II	1022 (39.5%)	31 (24.2%)	1053 (38.8%)	
Grade III/IV	828 (32.0%)	56 (43.8%)	884 (32.6%)	
Cell type not determined	630 (24.4%)	40 (31.2%)	670 (24.7%)	
<b>No. of organs with metastases</b>				<0.001
0	2543 (98.3%)	0 (0.0%)	2543 (93.7%)	
1	40 (1.5%)	97 (75.8%)	137 (5.0%)	
2+	3 (0.1%)	31 (24.2%)	34 (1.3%)	

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<b>Death</b>				<0.001
Alive or dead of other causes	1898 (73.4%)	54 (42.2%)	1952 (71.9%)	
or not first tumor				
Dead due to first tumor	688 (26.6%)	74 (57.8%)	762 (28.1%)	
<b>Follow-up time in months</b>				<0.001
Mean (SD)	17.49 (15.13)	8.92 (10.31)	17.09 (15.04)	
Median (Q1, Q3)	13.0 (5.0, 27.0)	6.0 (2.0, 11.5)	12.0 (5.0, 26.0)	
<b>Tumor size</b>				<0.001
Mean (SD)	35.06 (23.16)	49.96 (90.25)	35.69 (29.38)	
Median (Q1, Q3)	30.0 (21.0, 44.0)	35.0 (25.0, 54.0)	30.0 (21.0, 44.0)	
<b>Tumor size group</b>				0.259
< 10 mm	45 (1.7%)	1 (0.8%)	46 (1.7%)	
10-30 mm	816 (31.6%)	32 (25.0%)	848 (31.2%)	
>30 mm	833 (32.2%)	42 (32.8%)	875 (32.2%)	
Unknown	892 (34.5%)	53 (41.4%)	945 (34.8%)	

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**Table 2. Incidence rates of lung metastases**

<b>Group</b>	<b>Incidence rate</b>	<b>95%CI</b>
Age		
20-49	6.86	4.00, 11.6
50-64	5.07	4.00, 6.47
65+	4.13	3.00, 5.33
Tumor size		
< 10 mm	2.17	0.00, 11.34
10-30 mm	3.77	3.00, 5.28
>30 mm	4.80	4.00, 6.42
Gender		
Male	5.12	4.00, 6.13
Female	2.95	2.00, 4.80
Race		
White	4.19	3.00, 5.19
Black	5.26	4.00, 7.84
Hispanic	7.62	5.00, 11.87
Asian	5.19	3.00, 9.92
Other	6.06	2.00, 19.61
Primary Site		
Non-pyriform sinus	4.96	4.00, 6.24
Pyriform Sinus	4.46	3.00, 5.71

**Table 3. Multivariable logistic regression for the incidence rates of lung metastases**

<b>Risk factors</b>	<b>Odds Ratio</b>	<b>p-value</b>	<b>95% CI</b>
<b>Sex</b>		0.033	
Male	ref		
Female	0.397		0.170, 0.928
<b>Age in years</b>	1.001	0.939	0.979, 1.024
<b>Race</b>		0.069	
White	ref		
Black	1.906		1.029, 3.528
Hispanic	2.310		1.153, 4.625
Asian	1.034		0.361, 2.956
Other	2.247		0.506, 9.984
<b>Primary site</b>		0.963	
Non-pyriform sinus	ref		
Pyriform sinus	1.011		0.629, 1.627
<b>Tumor size in mm</b>	1.007	0.010	1.002, 1.012
<b>Grade</b>		0.094	
I	ref		
II	2.201		0.29, 16.699
III/IV	4.357		0.584, 32.49
Unknown	3.881		0.507, 29.68

**Table 4. Multivariable cox regression for all-cause mortality**

<b>Risk factors</b>	<b>Hazard Ratio</b>	<b>p-value</b>	<b>95%CI</b>
<b>Lung metastases</b>		<0.001	
No	ref		
Yes	3.050		2.173, 4.280
<b>Sex</b>		0.735	
Male	ref		
Female	0.958		0.749,1.226
<b>Age in years</b>	1.011	0.020	1.002,1.020
<b>Race</b>		<0.001	
White	ref		
Black	1.889		1.486, 2.401
Hispanic	1.268		0.916, 1.754
Asian	1.254		0.865, 1.819
Other	1.841		0.947,3.580
<b>Primary site</b>		0.050	
Non-pyriform sinus	ref		
Pyriform sinus	0.831		0.691,1.000
<b>Tumor size in mm</b>	1.004	<0.001	1.003,1.005
<b>Grade</b>		0.462	
I	ref		
II	0.794		0.508, 1.241
III/IV	0.820		0.523, 1.284
Unknown	0.945		0.595, 1.499