

Supplementary Table 1. Factors influencing occurrence of post-RT stenosis or TEF

Characteristics	Patients	Stenosis or TEF		P value	
		No	Yes	Univariate	Multivariate
Age					
≤ 65	30	22 (73%)	8 (27%)	0.352	
> 65	32	21 (66%)	11 (34%)		
T stage					
T1/2	20	20 (100%)	0	< 0.0001	0.998
T3/4	42	23 (55%)	19 (45%)		
Involved circumference					
< 100%	40	36 (90%)	4 (10%)	< 0.0001	0.002
100%	22	7 (32%)	15 (68%)		
Total length					
< 5.0	28	21 (75%)	7 (25%)	0.276	
≥ 5.0	34	22 (65%)	12 (35%)		
Stenosis at diagnosis					
No	45	35 (78%)	10 (22%)	0.023	0.454
Yes	17	8 (47%)	9 (53%)		
Dysphagia at diagnosis					
≤ 1 month	36	15 (58%)	11 (42%)	0.079	

> 1 month	26	28 (78%)	8 (22%)		
RT dose					
≥ 60 Gy	37	24 (65%)	13 (35%)	0.259	
< 60 Gy	25	19 (76%)	6 (24%)		
Endoscopic response					
CR	39	33 (85%)	6 (15%)	0.001	0.035
< CR	23	10 (44%)	13 (56%)		

Abbreviations: TEF = tracheoesophageal fistula; RT = radiotherapy; CR = complete response

Supplementary Table 2. Patients with initial esophageal stenosis (n = 17)

Age/ Sex	T stag e	Involv e circum f	Initial stenosis/ management	RT (Gy)	Res pon se	Toxicity (onset, month)	Outcome (month)
54/ M	T3	100%	Total obst/PEG	63.0	PR		DM(2), DOD(7)
57/ M	T1b	100%	Total&ruptur e/stent	50.4	SD		OutF(7), DOOC(13)
78/ M	T3	100%	Total obst/none	50.4	SD		DOOC(3.4)
71/ M	T3	100%	Total obst/none	50.4	CR		NED, alive(80)
75/ M	T3	90%	Total obst/none	50.4	PR		InF(6), DOD(9)
63/ M	T4b	80%	Total obst/stent	66.0	SD		InF(15), DOD(21)
62/ M	T4b	70%	Total obst/none	59.4	PR		RF(9), DOD(18)
41/ M	T3	70%	Total obst/stent	50.4	SD		InF(3), DOD(7)
70/ M	T3	100%	Total obst/none	59.4	PR	Stenosis (5)	DOOC(12)
75/ M	T3	100%	Total/none	63.0	PR	Stenosis (2)	DOOC(22)

60/F	T4b	100%	Total obst/stent	70.0	CR	Stenosis (4)	NED, alive(23)
73/ M	T4b	75%	Total obst/stent	90.0*	PR	Stenosis (11)	DM(13), DOD(17)
69/ M	T4b	100%	Total obst/stent	50.4	SD	Stenosis ^M (2)	DOOC(5)
68/ M	T3	100%	Total obst/none	63.0	PR	Stenosis ^M (2)	DM(3), DOD(5)
73/ M	T3	100%	Total obst/PEG	63.0	PR	Stenosis ^M (22)	InF(16), DOD(31)
57/ M	T3	100%	Total obst/stent	60.0	CR	Stenosis (1) / TEF ^M (6)	InF(8), DOD(14)
72/ M	T3	100%	Total obst/stent	63.0	PR	TEF ^M (2)	DOOC(5)

Abbreviations: Involve circumf = percent of esophageal circumference involved by the tumor; RT = radiotherapy; obst = obstruction; PEG = percutaneous endoscopic gastrostomy; CR = complete response; PR = partial response; SD = stable disease; InF = infield failure; OutF = outfield failure; RF = regional failure; DM = distant metastasis; DOD = died of disease; DOOC = died of other cause; NED = no evidence of disease

^MMalignant complications

Supplementary table 3. Factors influencing local failure-free survival

Prognostic factors	No of Pts	Univariate analysis				Multivariate analysis		
		2-yr (%)	LC	95%CI	P	RR	95%CI	P
Age								
≤ 65	30	81.0		66-96	0.901			
> 65	32	76.8		60-93				
T stage								
T1/2	20	93.3		81-106	0.050	0.477	0.1-2.5	0.382
T3/4	42	70.5		55-86				
Involved circumf								
< 100%	40	83.7		72-96	0.421			
100%	22	64.6		39-90				
Total length								
< 5.0	28	88.9		77-100	0.297			
≥ 5.0	34	68.7		50-87				
Stenosis at Dx								
No	45	85.1		74-96	0.025	1.665	0.5-5.8	0.425
Yes	17	55.5		25-86				
Dysphagia at Dx								
≤ 1 month	36	79.2		64-94	0.977			

> 1 month	26	78.6	62-95				
RT dose							
≥ 60 Gy	37	83.7	71-97	0.160			
< 60 Gy	25	72.0	53-91				
Stenosis or TEF							
No	43	89.5	80-99	0.001	3.379	0.9-12.4	0.066
Yes	19	44.9	17-73				

Abbreviations: No of Pts = number of patients; LC = local control; RR = Relative risk;
Dx = diagnosis; TEF = tracheoesophageal fistula

≤1 month	36	63.3	47-79	0.573			
> 1 month	26	49.7	30-69				
RT dose							
≥ 60 Gy	37	58.7	43-75	0.584			
< 60 Gy	25	55.3	36-75				
RT							
stenosis/TEF							
No	43	71.4	58-85	<0.0001	2.956	1.2-7.5	0.023
Yes	19	25.3	5-45				

Abbreviations: Pts = patients; OS = overall survival; CI = confidence interval; RR = Relative risk; Involved circumf = percent of esophageal circumference involved by the tumor; Dx = diagnosis; RT = radiotherapy; TEF = tracheoesophageal fistula

Supplementary figure 1. Patterns of failure

