Supplementary Tables

SUPPLEMENTARY TABLE 1. Univariate and Multivariate Analysis for All-Cause Mortality in Surgical Patients

Variable	Univariate	Multivariate	
	P-value	Hazard ratio (95% CI)	*P*-value
Age (continuous)	0.615		
Sex (male vs. female)	0.289		
Race (caucasian vs. others)	0.422		
ECOG performance status (0 vs. 1–2)	0.779		
Histology (squamous cell carcinoma vs. adenocarcinoma)	0.797		
Histologic grade (G3 vs. Gx/G1/G2)	<0.001	2.36 (1.60-3.48)	<0.001
Tumor location (distal/GEJ vs. upper/middle)	0.215		
Primary tumor length (continuous)	0.083		
Clinical T stage (T1b-2 vs. T3-4)	0.372		
Clinical N stage (N0 vs. N+)	0.084		
Induction chemotherapy (yes vs. no)	0.903		
Baseline PET SUVmax (continuous)	0.392		
Total radiation dose (50.4 Gy vs >50.4 Gy)	0.151		
Chemotherapy groups (Platinum/5FU vs. Taxane/5FU)	0.853		
Chemotherapy groups (Carbo/Paclitaxel vs. Taxane/5FU)	0.951		
Chemotherapy groups (Doce/5FU/Platinum vs. Taxane/5FU)	0.326		
Chemotherapy groups (Other/Unk vs. Taxane/5FU)	0.950		

Abbreviations: ECOG, Eastern Cooperative Oncology Group; GEJ, gastroesophageal junction; PET, position emission tomography; SUV, standard uptake value.

Taxane=Docetaxel, Paclitaxel; 5FU=continuous infusion 5FU or Xeloda; Platinum=carboplatin, cisplatin or oxaliplatin; Carbo=Carboplatin; Doce=Docetaxel; Other=Irinotecan-based, cetuximab, experimental agents; Unk=unknown

SUPPLEMENTARY TABLE 2. Univariate and Multivariate Analysis for All-Cause Mortality in Non-Surgical Patients

Variable	Univariate	Multivariate	
	P-value	Hazard ratio (95% CI)	*P*-value
Age (continuous)	0.623		
Sex (male vs. female)	0.041		
Race (caucasian vs. others)	0.542		
ECOG performance status (0 vs. 1–2)	0.557		
Histology (squamous cell carcinoma vs. adenocarcinoma)	0.172		
Histologic grade (G3 vs. Gx/G1/G2)	0.581		
Tumor location (distal/GEJ vs. upper/middle)	0.071	1.43 (1.05-1.96)	0.025
Primary tumor length (continuous)	0.009		
Clinical T stage (T1b-2 vs. T3-4)	0.033		
Clinical N stage (N+ vs. N0)	<0.001	2.09 (1.48-2.94)	<0.001
Induction chemotherapy (yes vs. no)	0.903		
Baseline PET SUVmax (continuous)	<0.001	1.07 (1.03-1.11)	0.001
Total radiation dose (50.4 Gy vs >50.4 Gy)	0.097		
Chemotherapy groups (Platinum/5FU vs. Taxane/5FU)	0.378		
Chemotherapy groups (Carbo/Paclitaxel vs. Taxane/5FU)	0.884		
Chemotherapy groups (Doce/5FU/Platinum vs. Taxane/5FU)	0.131		
Chemotherapy groups (Other/Unk vs. Taxane/5FU)	0.451		

Abbreviations: ECOG, Eastern Cooperative Oncology Group; GEJ, gastroesophageal junction; PET, position emission tomography; SUV, standard uptake value.

Taxane=Docetaxel, Paclitaxel; 5FU=continuous infusion 5FU or Xeloda; Platinum=carboplatin, cisplatin or oxaliplatin; Carbo=Carboplatin; Doce=Docetaxel; Other=Irinotecan-based, cetuximab, experimental agents; Unk=unknown

SUPPLEMENTARY TABLE 3. Chi-Square analysis of the relationship of chemotherapy type and toxicities

	N	Gr 0-2	Gr 3-4	Chi-square p-value
Dysphagia Toxicity				
Taxane/5FU	303	271	32	0.135
Platinum/5FU	196	186	10	
Carbo/Paclitaxel	14	14	0	
Doce/5FU/Platinum	24	23	1	
Other/Unk	50	47	3	
Esophagitis Toxicity				
Taxane/5FU	303	251	52	0.015
Platinum/5FU	196	179	17	
Carbo/Paclitaxel	14	13	1	
Doce/5FU/Platinum	24	23	1	
Other/Unk	50	47	3	
Pneumonitis Toxicity				
Taxane/5FU	303	296	7	0.367
Platinum/5FU	196	195	1	
Carbo/Paclitaxel	14	14	0	
Doce/5FU/Platinum	24	24	0	
Other/Unk	50	50	0	
Cardiac Toxicity*				
Taxane/5FU	303	299	4	0.413
Platinum/5FU	196	190	6	
Carbo/Paclitaxel	14	14	0	
Doce/5FU/Platinum	24	24	0	
Other/Unk	50	50	0	

Taxane=Docetaxel, Paclitaxel; 5FU=continuous infusion 5FU or Xeloda; Platinum=carboplatin, cisplatin or oxaliplatin; Carbo=Carboplatin; Doce=Docetaxel; Other=Irinotecan-based, cetuximab, experimental agents; Unk=unknown

* such as atrial fibrillation or heart failure

SUPPLEMENTARY TABLE 4. Univariate and Multivariate Analysis for Predictors of Grade 3-4 Esophagitis

Variable	Univariate	Multivariate	
	P-value	Hazard ratio (95% CI)	*P*-value
Age (continuous)	0.811		
Sex (male vs. female)	0.326		
Race (caucasian vs. others)	0.584		
ECOG performance status (0 vs. 1–2)	0.150		
Histology (squamous cell carcinoma vs. adenocarcinoma)	0.009	2.23 (1.26-3.95)	0.006
Histologic grade (G3 vs. Gx/G1/G2)	0.692		
Tumor location (distal/GEJ vs. upper/middle)	0.135		
Primary tumor length (continuous)	0.243		
Clinical T stage (T1b-2 vs. T3-4)	0.774		
Clinical N stage (N0 vs. N+)	0.024	1.85 (1.03-3.32)	0.04
Induction chemotherapy (yes vs. no)	0.132		
Baseline PET SUVmax (continuous)	0.847		
Total radiation dose (50.4 Gy vs >50.4 Gy)	0.379		
Chemotherapy groups (Platinum/5FU vs. Taxane/5FU)	0.008	0.45 (0.25-0.80)	0.007
Chemotherapy groups (Carbo/Paclitaxel vs. Taxane/5FU)	0.345		
Chemotherapy groups (Doce/5FU/Platinum vs. Taxane/5FU)	0.131		
Chemotherapy groups (Other/Unk vs. Taxane/5FU)	0.005		

Abbreviations: ECOG, Eastern Cooperative Oncology Group; GEJ, gastroesophageal junction; PET, position emission tomography; SUV, standard uptake value.

Taxane=Docetaxel, Paclitaxel; 5FU=continuous infusion 5FU or Xeloda; Platinum=carboplatin, cisplatin or oxaliplatin; Carbo=Carboplatin; Doce=Docetaxel; Other=Irinotecan-based, cetuximab, experimental agents; Unk=unknown

SUPPLEMENTARY TABLE 5. Comparison clinical characteristics and pathology results of the present study with CROSS

Characteristic	Present study	%	CROSS	%*	χ^2 (*P-value*)
Age (y)					
Median	60		60		---
Range	21-83		36-79		
Sex					0.000
Male	244	87.8	134	75	
Female	34	12.2	44	25	
Tumor histology					0.000
Adeno	249	89.6	134	75	
Squamous	16	5.8	41	23	
Other	13	4.6	3	2	
Tumor Length(cm)					---
Median	5		4		
Interquartile	3-7		3-6		
Tumor location					0.000
Proximal third	1	0.4	4	2	
Middle third	8	2.9	25	14	
Distal third	155	55.7	104	58	
Esophagogastric junction	114	41.0	39	22	
Missing data	0	0	3	3	
Clinical T stage[†]					0.365
cT1	1	0.4	1	1	
cT2	34	12.2	26	15	
cT3	238	85.6	150	84	
cT4	4	1.4	0	0	
Could not be determined	1	0.4	1	1	
Clinical N stage[†]					0.537
N0	101	36.3	59	33	
N1	176	63.3	116	65	
Could not be determined	1	0.4	3	2	
Karnofsky Performance Status					0.000
100	25	9.0	144	81	
80-90	244	87.8	34	19	
70	9	3.2	0	0	
pT-stage[§]					0.001
pTis	0	0	1	1	
pT0	74	26.6	62	39	
pT1	47	16.9	15	10	
pT2	31	11.2	32	20	
pT3	122	43.9	49	30	
pT4	4	1.4	1	1	
Unknown	0	0	1	1	
pN-stage[§]					0.442
pN0	182	65.4	111	69	

pN1	96	34.6	50	31	
No. of LNs resected-Median (p25-p75)	20(14-26)		15(9-21)		---
No. of positive LNs-Median (p25-p75)	0(0-1)		0(0-1)		
Radicality of resection[#]					0.141
R0 resection	265	95.3	148	92	
R1 resection	13	4.7	13	8	
Tumor regression grade					0.046
Grade 1	73	26.3	47	29	
Grade 2	82	29.5	52	32	
Grade 3	86	30.9	32	20	
Grade 4	32	11.5	29	18	
Missing	5	1.8	1	1	

Abbreviations: [*] Percentages may not total 100 because of rounding; LNs= Lymph Nodes; p25-p75: interquartile range; [§]pT and pN-stage according to the sixth edition of AJCC TNM-classification; [#]R0-resection was defined as no vital tumor cells within 1 mm of all resection margins. Tumor regression grade was defined as: Grade 1: no evidence of vital residual tumor cells in both primary tumor and resected lymph nodes. Grade 2: pT0N1 or >0% but <10% vital residual tumor cells in the primary tumor, Grade 3: 10-50% vital residual tumor cells in the primary tumor, Grade 4: >50% vital residual tumor cells in the primary tumor

SUPPLEMENTARY TABLE 6. Studies comparing IMRT and 3D-CRT for esophageal cancer.

Study	Details	IMRT	3D-CRT	p value
Freilich J (9)	No. of patients	138	94	
	Radiation dose	Varies	Varies	-
	Median survival	32 months	29 months	0.74
	Median relapse free survival	25 months	20 months	0.66
	Grade ≥3 toxicity (%)	24.6	37.2	0.04
	Hospitalization (%)	26.7	31.9	0.17
	Feeding tube (%)	9.5	8.5	0.83
	Mean weight loss SD (%)	9 (7.4)	6.1 (4.3)	0.012
Lin SH (16)	No. of patients	263	413	
	Radiation dose	50.4Gy/28f	50.4Gy/28f	-
	5-yr survival	44%	34%	<0.01
	Median survival	43.2 months	25.2 months	<0.01
	Cancer-specific deaths	N[*]	N[*]	0.86
	Pulmonary deaths	N[*]	N[*]	0.39
	Cardiac related deaths	N[*]	N[*]	0.049
Lin XD (18)	No. of patients	30	30	
	Radiation dose	60Gy/30f	60Gy/30f	-
	3-yr survival	66.7	63.3	>0.05
	Lung V20	21.2±5.1	24.9 ±5.9	<0.05
	Lung V30	15.3 ±3.8	17.5 ±3.9	<0.05
	Grade 3+4 esophagitis	10.0%	6.7%	>0.05
	Grade 3+4 pneumonitis	0.0%	3.3%	>0.05

* The details were not shown in the text.