

高雄榮民總醫院

食道癌診療原則

2023年02月21日第一版

食道癌醫療團隊共同擬定

注意事項：這個診療準則主要作為醫師和其他保健專家診療癌症病人參考之用。假如你是一個癌症病人，直接引用這個研究資訊及診療準則並不恰當。只有你的醫師才能決定給你最恰當的治療。

修訂指引

- 本共識依下列參考資料修改版本

Reference: NCCN Clinical Practice Guidelines in Oncology, Esophageal and Esophagogastric Junction cancers, Version 5. 2022

會議討論

上次會議：2022/03/08

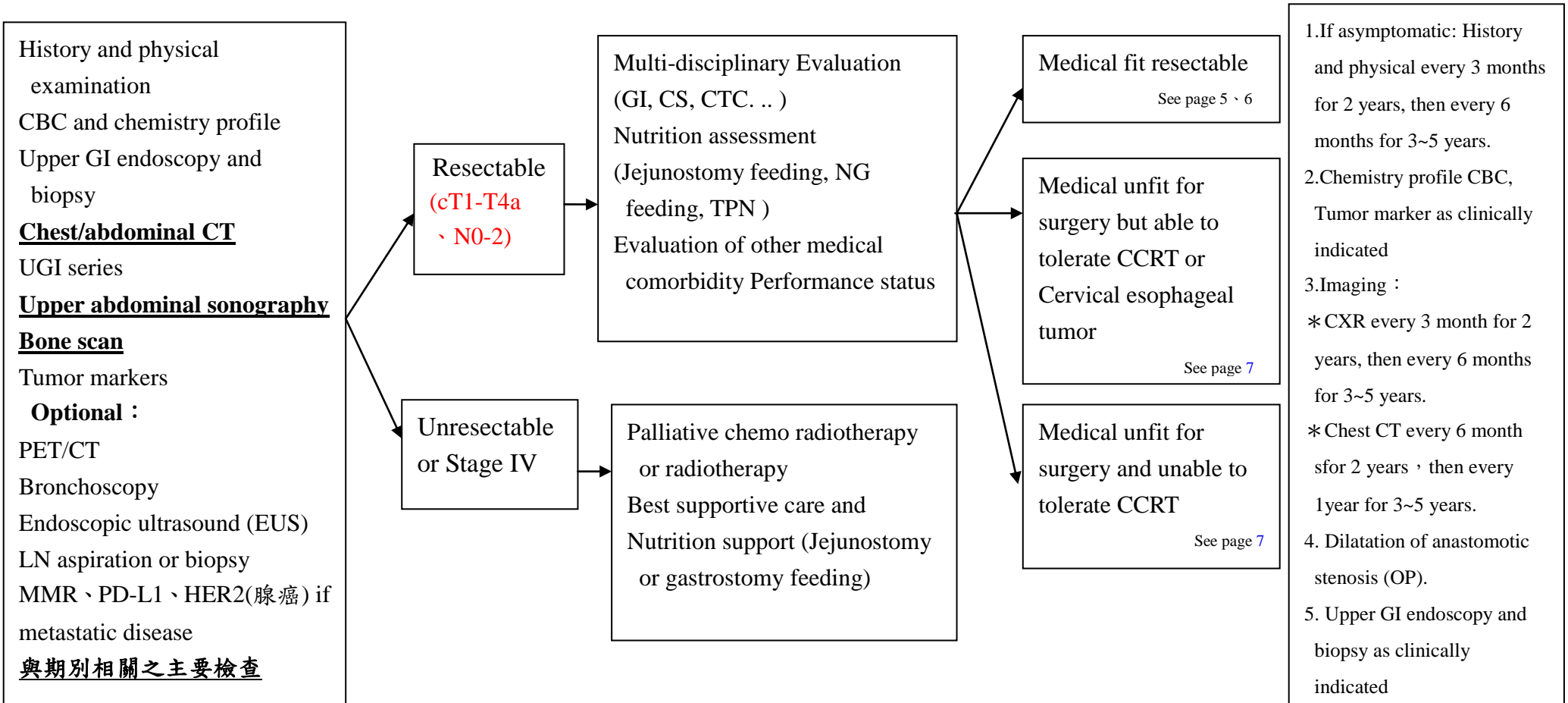
本共識與上一版的差異

上一版	新版
1.無。	1. Resectable 增加附註(cT1-T4a;N0-2) 。 Page4-5
2.無。	2.不適合手術-治療:新增+/-Immunity therapy (optional) 。 Page 7
3.無。	3.復發、轉移-治療:新增+/-Immunity therapy 。 Page 8
4.化療處方無區分。	4. 化療處方區分:輔助、新輔助、CCRT、無法切除轉移復發， 新增化療處方 Oxaliplatin+Fluorouracil 。 Page 9-12
5.標靶治療處方:Ramucirumab、Ramucirumab + Paclitaxel、Tarceva、Afatinib。	5.標靶治療處方:Ramucirumab、Ramucirumab + Paclitaxel、Tarceva、Afatinib， 新增 Trastuzumab 。 Page 13
6.放射治療處方: CCRT with weekly cisplatin 40mg/M2,IV,D1。	6.放射治療處方:CCRT with weekly cisplatin 40mg/M2,IV,D1/ 新增 Carboplatin AUC 1.5-2 AUC, IV ,D1 。 Page 14

食道癌 (總表)

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評估	診斷	治療	追蹤
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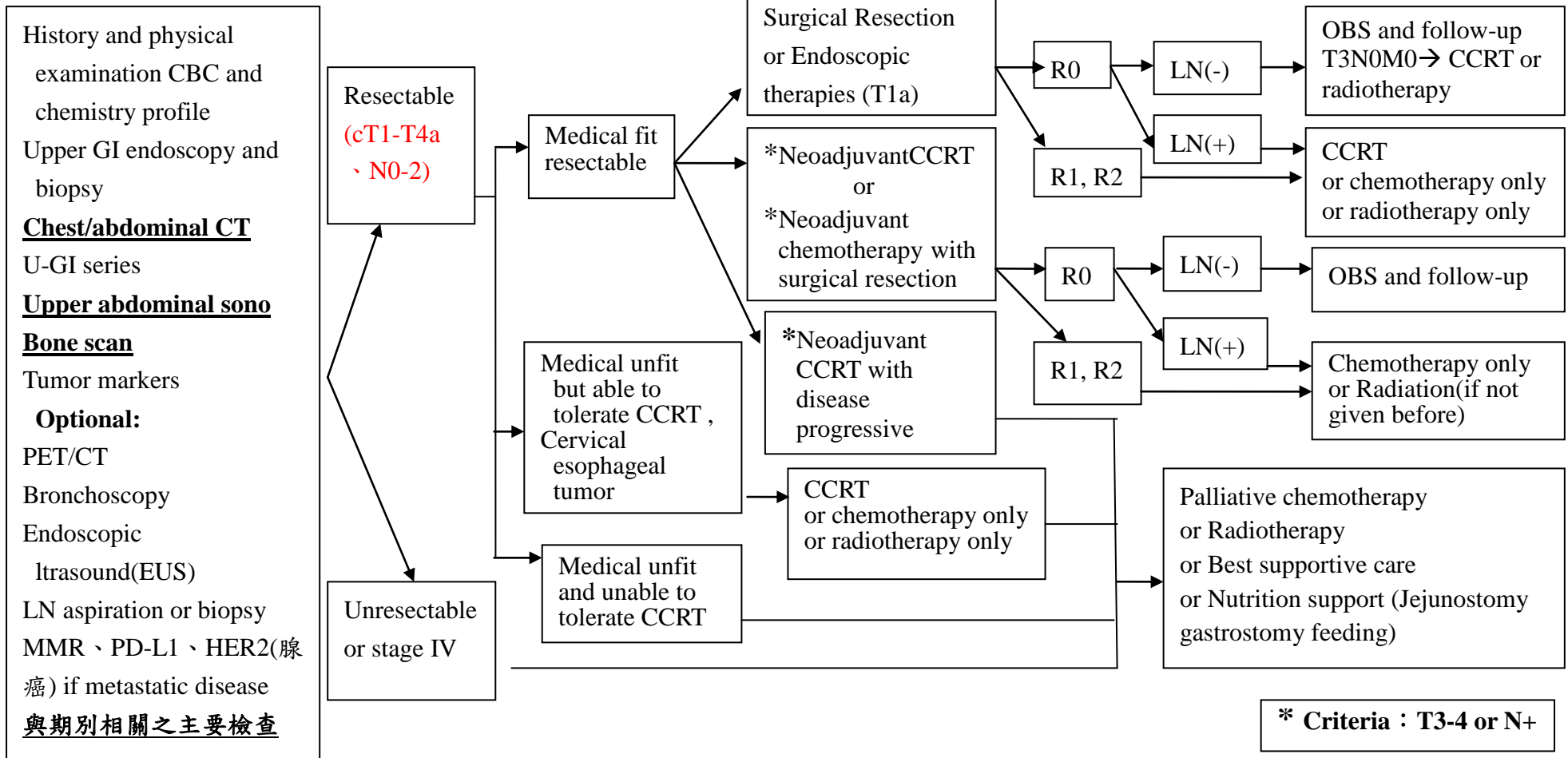


Definitive CCRT 的 RT 結束後第 3 個月
Follow up Chest CT

食道癌 (治療)

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評估	診斷	治療
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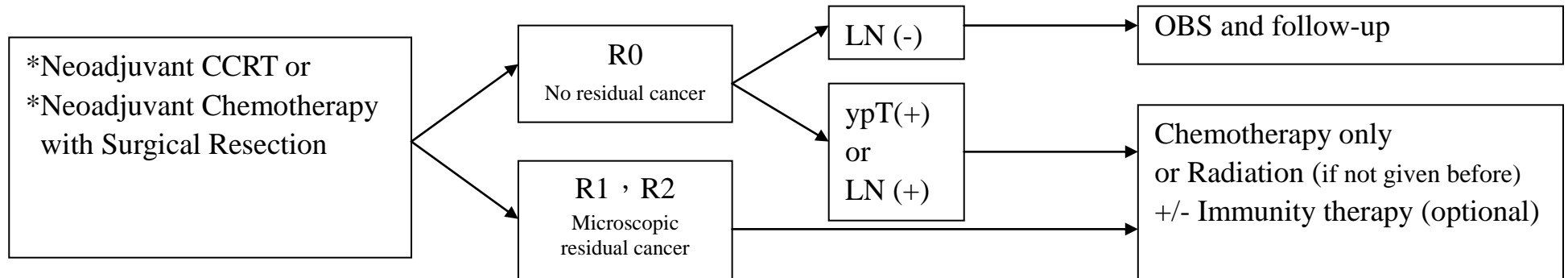
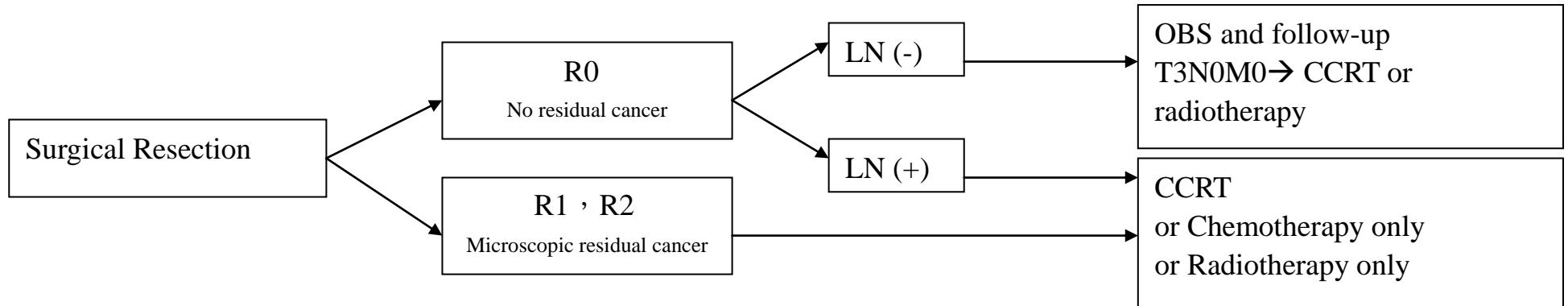


食道癌 (手術)

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Surgical outcomes after esophagectomy/ Clinical pathologic findings	Tumor classification	Postoperative treatment
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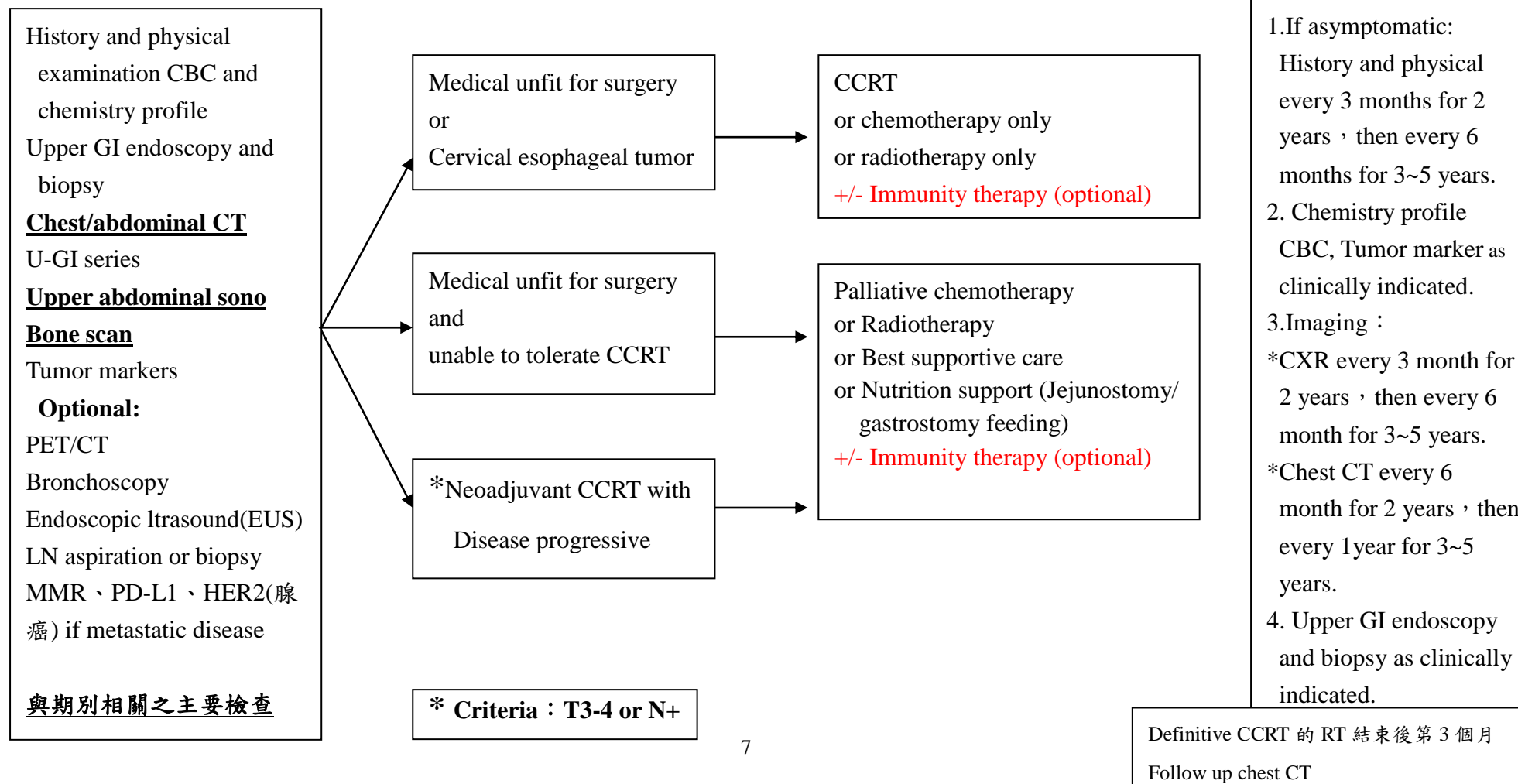
* Criteria : T3-4 or N+

食道癌 (不適合手術)

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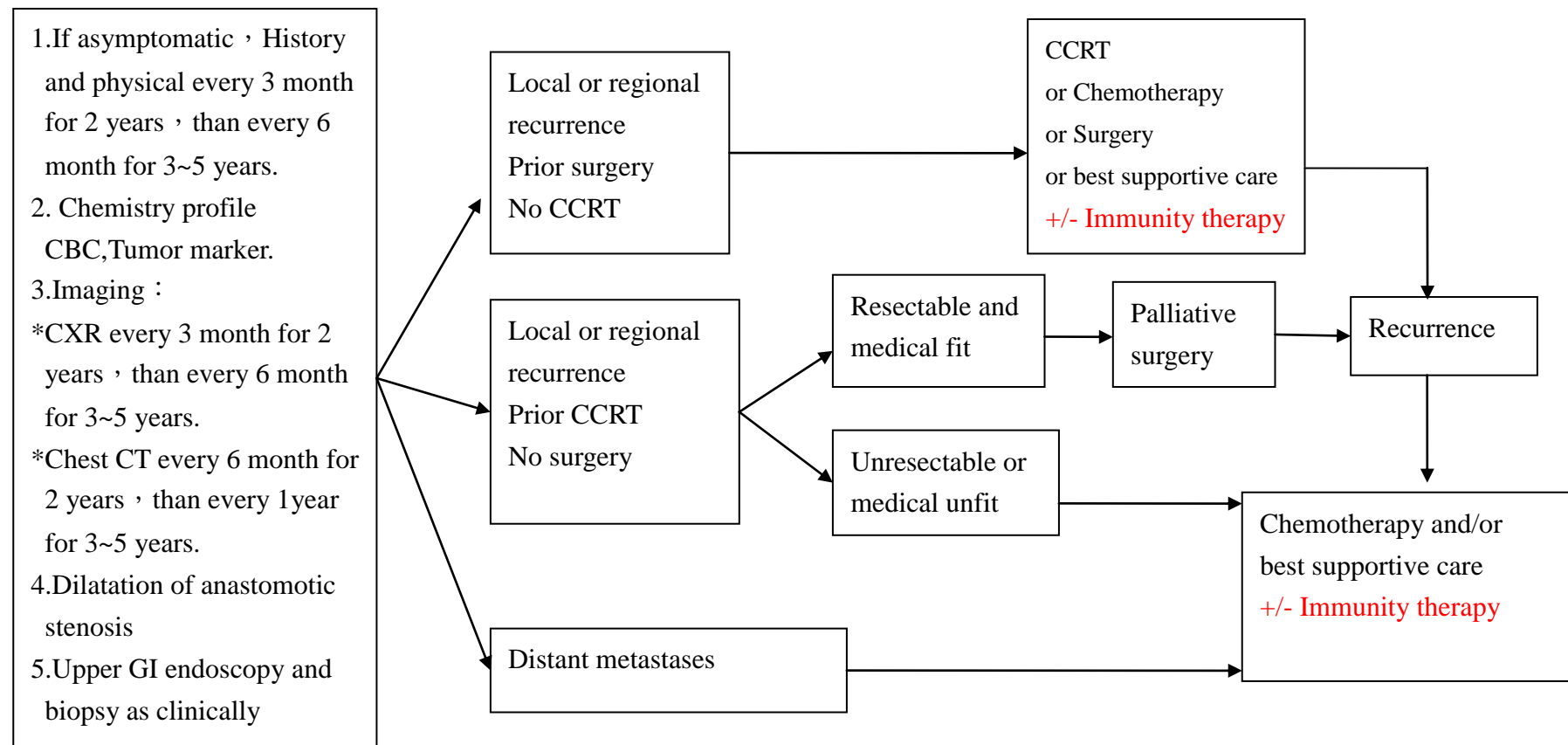
評估	診斷	治療	追蹤
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食道癌 (復發、轉移)

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Follow-up	Recurrence	Palliative therapy
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Definitive CCRT 的 RT 結束後第 3 個月
FOLLOW UP chest CT

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化學治療處方-輔助

Adjuvant Chemotherapy	Schedule	Performance status
Cisplatin 60-75mg/m ² , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Fluorouracil , 600-1000 mg/m ² , IV ,D1-4 (Reference No.22)	Q28 D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Oxaliplatin 85 mg/m ² ,IV,D1 Fluorouracil 400 mg/m ² ,IV,D 1 Fluorouracil 1200 mg/m ² ,IV, D1-2 (Reference No.43)	Q14D	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

化學治療處方-新輔助

Neoadjuvant Chemotherapy	Schedule	Performance status
Cisplatin 60-75mg/m ² , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Fluorouracil , 600-1000 mg/m ² , IV ,D1-4 (Reference No.22)	Q28 D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Taxol 160-200 mg/m ² , IV ,D1 Cisplatin 60-80 mg/m ² , IV ,D1 / Carboplatin AUC 4-6mg, IV ,D (Ccr <60) (Reference No.38)	Q21D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Oxaliplatin 85 mg/m ² ,IV,D1 Fluorouracil 400 mg/m ² ,IV,D 1 Fluorouracil 1200 mg/m ² ,IV, D1-2 (Reference No.43)	Q14D 術前 4 cycles 術後 4 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

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化學治療處方-CCRT

Chemoradiation	Schedule	Performance status
Cisplatin 60-75mg/m ² , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Fluorouracil , 600-1000 mg/m ² , IV ,D1-4 (Reference No.22)	Q28 D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Taxol 160-200 mg/m ² , IV ,D1 Cisplatin 60-80 mg/m ² , IV ,D1 / Carboplatin AUC 4-6mg, IV ,D (Ccr <60) (Reference No.38)	Q21D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Docetaxel 60-85mg/m ² , IV ,D1 Cisplatin 60-85mg/m ² , IV ,D1 / Carboplatin AUC4-6 mg, IV ,D1 (Ccr <60) (Reference No.31)	Q21D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Oxaliplatin 85 mg/m ² ,IV,D1 Fluorouracil 400 mg/m ² ,IV,D 1 Fluorouracil 800 mg/m ² ,IV, D1-2 (Reference No.43)	Q14D 3 cycles with radiation	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

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化學治療處方-無法切除、轉移、復發

Unresectable Locally Advanced、Recurrent、Metastatic Disease	Schedule	Performance status
Cisplatin 60-75mg/m ² , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Fluorouracil , 600-1000 mg/m ² , IV ,D1-4 (Reference No.22)	Q28 D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Cisplatin 60-75 mg/m ² , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Etoposide 60-100 mg/m ² , IV ,D1-3 (Reference No.23)	Q21 D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Taxol 140-175 mg/m ² , IV ,D1 Cisplatin 20 mg/m ² , IV ,D1-5 / Carboplatin AUC 1mg, IV ,D1-5 (Ccr <60) Fluorouracil ,600-750 mg/m ² , IV ,D1-5 (Reference No.24)	Q28D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Taxol 160-200 mg/m ² , IV ,D1 Cisplatin 60-80 mg/m ² , IV ,D1 / Carboplatin AUC 4-6mg, IV ,D (Ccr <60) (Reference No.38)	Q21D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Docetaxel 60-85mg/m ² , IV ,D1 Cisplatin 60-85mg/m ² , IV ,D1 / Carboplatin AUC4-6 mg, IV ,D1 (Ccr <60) (Reference No.31)	Q21D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

Unresectable Locally Advanced 、 Recurrent 、 Metastatic Disease	Schedule	Performance status
Docetaxel 60-75mg/m ² , IV ,D1 Cisplatin 60-75mg/m ² , IV ,D1 / Carboplatin AUC4-6 mg, IV ,D1 (Ccr <60) Fluorouracil ,600-750 mg/m ² , IV ,D1-5 / Fluorouracil,800-1200 mg/m ² , IV ,D1-3 (Reference No.26,33)	Q21D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Gemzar 1000mg/m ² , IV ,D1.8 (Reference No.32)	Q21~28D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Gemzar 800-1000mg/m ² , IV ,D1.8 Cisplatin 60-80mg/m ² , IV ,D1 / Carboplatin AUC4-6 mg, IV ,D1 (Ccr <60) (Reference No.32)	Q21~28D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Cisplatin 60 mg/m ² , IV ,D1/ Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Xeloda 2.5TAB/ m ² , PO,D1-14 (Reference No.27)	Q21 D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Ufur 3CAP/m ² , PO,D1-14 (Reference No.39)	QD x1year	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
TS-1 (BSA >1.5) 120mg/day, PO BID, D1-28 (吃四週休二週或吃二週休一週) TS-1 (BSA 1.25-1.5) 100mg/day, PO BID, D1-28 (Reference No.37)	Q42D x 1year	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Oxaliplatin 85 mg/m ² ,IV,D1 Fluorouracil 400 mg/m ² ,IV,D 1 Fluorouracil 1200 mg/m ² ,IV, D1-2 (Reference No.43)	Q14D until disease progression	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

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標靶治療處方

Ramucirumab 8 mg/kg, IV, D1 (Reference No.34)	Q14D	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Ramucirumab (8 mg/kg, IV, D1, D15) Paclitaxel (50~80 mg/m ² , IV, D1, D8, D15) (Reference No.35)	Q28D	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Tarceva 150mg 1TAB, PO, QD (Reference No.29)	QD until disease progression	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Afatinib 40mg/day, PO, QD (Reference No.36)	QD until disease progression	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Trastuzumab 6-8mg/kg , IV, D1 使用條件：Her-2/neu 免疫染色 3+, 或 2+且 FISH positive 。 (Reference No.42)	8 mg/kg loading dose, 6 mg/kg every 3 weeks Until progression	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

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免疫治療處方

Keytruda 2mg/kg ,IV, D1 (Reference No.39)	Q21D until disease progression	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
Nivolumab 3mg/kg , IV , D1 (Reference No.41)	Q14D until disease progression	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

放射治療處方

CCRT with weekly cisplatin 30mg/M2,IV,D1 (old age, Cr >1.5) (Reference No.40)	QW 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
CCRT with weekly cisplatin 40mg/M2,IV,D1/ Carboplatin AUC 1.5-2 AUC, IV ,D1 (Reference No.40)	QW 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

備註：【1】依據影像學檢查發現疾病 progression disease 或【2】依據達到 Grade 3：Severe or advance Side effect，即先停藥，再視病患情況決定繼續治療或改變處方。

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Radiotherapy (Reference No.15-21)

Dose prescription

Combination with operation (Pre-operative or post operative RT)	1.8-2 Gy, total 40-54 Gy
Concurrent CCRT without operation	1.8-2 Gy, total 50-66 Gy
RT alone	1.8-2 Gy, total 54-66 Gy

When the radiation dosage reach 45 Gy , the stomach area should be blocked.

Field design

Preoperative RT or CCRT :

GTV = primary and involved regional nodes; CTV for primary = GTV + 3-4 cm proximal/distal and 1 cm radial, CTV for involved nodes includes 0.5-1.5 cm margin, CTV for elective nodes depends on location of primary; PTV = CTV + 0.5-1 cm.

Postoperative RT : depended by operative findings and pathological report.

Dose limitation :

Spinal cord : $D_{max} \leq 46$ Gy at 1.8-2 Gy/fraction

Lung : $V_{20} \leq 25\%$, $V_5 \leq 50\%$ 。

Heart : $V_{40} \leq 33-50\%$, Mean $\leq 32\%$ 。

附件一：

**American Joint Committee on Cancer (AJCC)
TNM Staging Classification for Carcinoma of the Esophagus and Esophagogastric Junction (8th ed., 2017)
Squamous Cell Carcinoma and Adenocarcinoma**

Table 1. Definitions for T, N, M

T	Primary Tumor	M	Distant Metastasis
TX	Primary tumor cannot be assessed	M0	No distant metastasis
T0	No evidence of primary tumor	M1	Distant metastasis
Tis	High-grade dysplasia, defined as malignant cells confined to the epithelium by the basement membrane	G	Histologic Grade
T1	Tumor invades the lamina propria, muscularis mucosae, or submucosa	GX	Grade cannot be assessed
T1a	Tumor invades the lamina propria or muscularis mucosae	G1	Well differentiated
T1b	Tumor invades the submucosa	G2	Moderately differentiated
T2	Tumor invades the muscularis propria	G3	Poorly differentiated, undifferentiated
T3	Tumor invades adventitia		
T4	Tumor invades adjacent structures	<u>Squamous Cell Carcinoma</u>	
T4a	Tumor invades the pleura, pericardium, azygos vein, diaphragm, or peritoneum	Location	Location Criteria
T4b	Tumor invades other adjacent structures, such as the aorta, vertebral body, or airway	X	Location unknown
N	Regional Lymph Nodes	Upper	Cervical esophagus to lower border of azygos vein
NX	Regional lymph nodes cannot be assessed	Middle	Lower border of azygos vein to lower border of inferior pulmonary vein
N0	No regional lymph node metastasis	Lower	Lower border of inferior pulmonary vein to stomach, including gastroesophageal junction
N1	Metastasis in one or two regional lymph nodes		
N2	Metastasis in three to six regional lymph nodes		
N3	Metastasis in seven or more regional lymph nodes		

Note: Location is defined by the position of the epicenter of the tumor in the esophagus.

附件二:

American Joint Committee on Cancer (AJCC)
TNM Staging Classification for Carcinoma of the Esophagus and Esophagogastric Junction (8th ed., 2017)

Table 2. AJCC Prognostic Stage Groups (Squamous Cell Carcinoma)

Clinical Staging (cTNM)				Pathological (pTNM)						Postneoadjuvant Therapy (ypTNM)			
	cT	cN	M		pT	pN	M	G	Location		ypT	ypN	M
Stage 0	Tis	N0	M0	Stage 0	Tis	N0	M0	N/A	Any	Stage I	T0-2	N0	M0
Stage I	T1	N0-1	M0	Stage IA	T1a	N0	M0	G1	Any	Stage II	T3	N0	M0
Stage II	T2	N0-1	M0		T1a	N0	M0	GX	Any	Stage IIIA	T0-2	N1	M0
	T3	N0	M0	Stage IB	T1a	N0	M0	G2-3	Any	Stage IIIB	T3	N1	M0
Stage III	T3	N1	M0		T1b	N0	M0	G1-3	Any		T0-3	N2	M0
	T1-3	N2	M0		T1b	N0	M0	GX	Any		T4a	N0	M0
Stage IVA	T4	N0-2	M0		T2	N0	M0	G1	Any	Stage IVA	T4a	N1-2	M0
	Any T	N3	M0	Stage IIA	T2	N0	M0	G2-3	Any		T4a	NX	M0
Stage IVB	Any T	Any N	M1		T2	N0	M0	GX	Any		T4b	N0-2	M0
					T3	N0	M0	G1-3	Lower		Any T	N3	M0
					T3	N0	M0	G1	Upper/middle	Stage IVB	Any T	Any N	M1
				Stage IIB	T3	N0	M0	G2-3	Upper/middle				
					T3	N0	M0	GX	Lower/upper/middle				
					T3	N0	M0	Any	Location X				
					T1	N1	M0	Any	Any				
				Stage IIIA	T1	N2	M0	Any	Any				
					T2	N1	M0	Any	Any				
				Stage IIIB	T2	N2	M0	Any	Any				
					T3	N1-2	M0	Any	Any				
					T4a	N0-1	M0	Any	Any				
				Stage IVA	T4a	N2	M0	Any	Any				
					T4b	N0-2	M0	Any	Any				
					Any T	N3	M0	Any	Any				
				Stage IVB	Any T	Any N	M1	Any	Any				

[Continued](#)

附件三：

American Joint Committee on Cancer (AJCC)
 TNM Staging Classification for Carcinoma of the Esophagus and Esophagogastric Junction (8th ed., 2017)

Table 3. AJCC Prognostic Stage Groups (Adenocarcinoma)

Clinical Staging (cTNM)				Pathological (pTNM)				Postneoadjuvant Therapy (ypTNM)				
	cT	cN	M		pT	pN	M	G		ypT	ypN	M
Stage 0	Tis	N0	M0	Stage 0	Tis	N0	M0	N/A	Stage I	T0-2	N0	M0
Stage I	T1	N0	M0	Stage IA	T1a	N0	M0	G1	Stage II	T3	N0	M0
Stage IIA	T1	N1	M0		T1a	N0	M0	GX	Stage IIIA	T0-2	N1	M0
Stage IIB	T2	N0	M0	Stage IB	T1a	N0	M0	G2	Stage IIIB	T3	N1	M0
Stage III	T2	N1	M0		T1b	N0	M0	G1-2		T0-3	N2	M0
	T3	N0-1	M0		T1b	N0	M0	GX		T4a	N0	M0
	T4a	N0-1	M0	Stage IC	T1	N0	M0	G3	Stage IVA	T4a	N1-2	M0
Stage IVA	T1-4a	N2	M0		T2	N0	M0	G1-2		T4a	NX	M0
	T4b	N0-2	M0	Stage IIA	T2	N0	M0	G3		T4b	N0-2	M0
	Any T	N3	M0		T2	N0	M0	GX		Any T	N3	M0
Stage IVB	Any T	Any N	M1	Stage IIB	T1	N1	M0	Any	Stage IVB	Any T	Any N	M1
					T3	N0	M0	Any				
				Stage IIIA	T1	N2	M0	Any				
					T2	N1	M0	Any				
				Stage IIIB	T2	N2	M0	Any				
					T3	N1-2	M0	Any				
					T4a	N0-1	M0	Any				
				Stage IVA	T4a	N2	M0	Any				
					T4b	N0-2	M0	Any				
					Any T	N3	M0	Any				
				Stage IVB	Any T	Any N	M1	Any				

Reference :

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