

# 高雄榮民總醫院

## 食道癌診療原則

2021年02月09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 5.2020

# 會議討論

上次會議：2020/02/25

本共識與上一版的差異

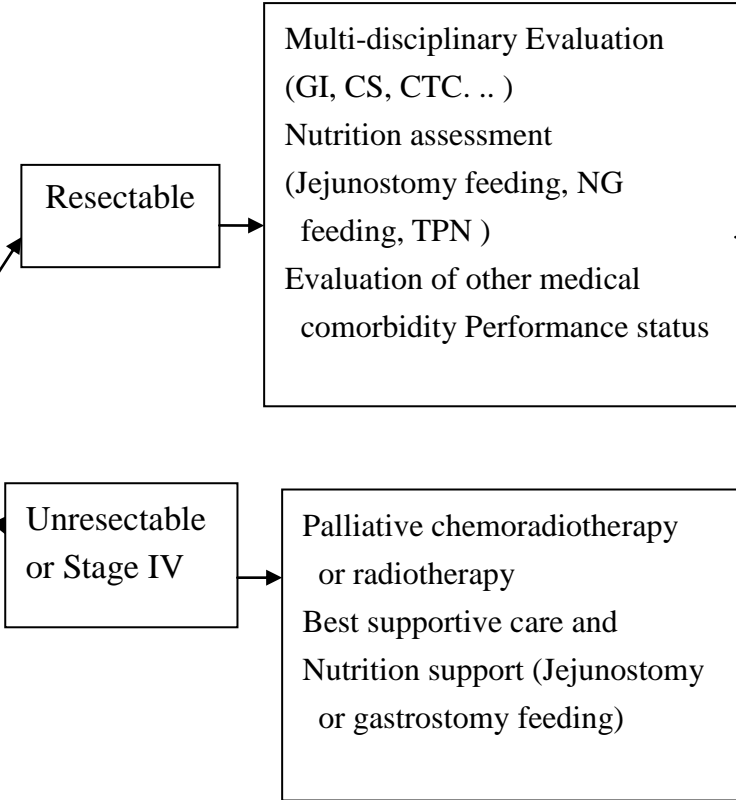
上一版	新版
1. 原評估無免疫染色項目。  2. 原內視鏡治療未註明適應症。  3. 不適合手術和無法承受 CCRT 群，治療選項僅 Best supportive care。  4. 原 Neoadjuvant CCRT or Neoadjuvant Chemotherapy 術後 R1 或 LN(+)治療選項僅 Chemotherapy only	1. 評估新增 MSI、PD-L1、HER2(腺癌) if metastatic disease。 <p style="text-align: right;">page 4、5、6</p> 2. 內視鏡治療註明 T1a <p style="text-align: right;">page 5</p> 4. 不適合手術和無法承受 CCRT 群，修改治療選項同 Neoadjuvant CCRT* with Disease progressive <p style="text-align: right;">page 6</p> 5. Neoadjuvant CCRT or Neoadjuvant Chemotherapy 術後 R1 或 LN(+)治療選項增加 or Radiation (if not given before) <p style="text-align: right;">page 7</p>

# 食道癌 (總表)

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評估	診斷	治療	追蹤
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History and physical examination  
CBC and chemistry profile  
Upper GI endoscopy and biopsy  
**Chest/abdominal CT**  
UGI series  
**Upper abdominal sonography**  
**Bone scan**  
Tumor markers  
**Optional :**  
PET/CT  
Bronchoscopy  
Endoscopic ultrasound(EUS)  
LN aspiration or biopsy  
**MSI、PD-L1、HER2(腺癌) if metastatic disease**  
**與期別相關之主要檢查**

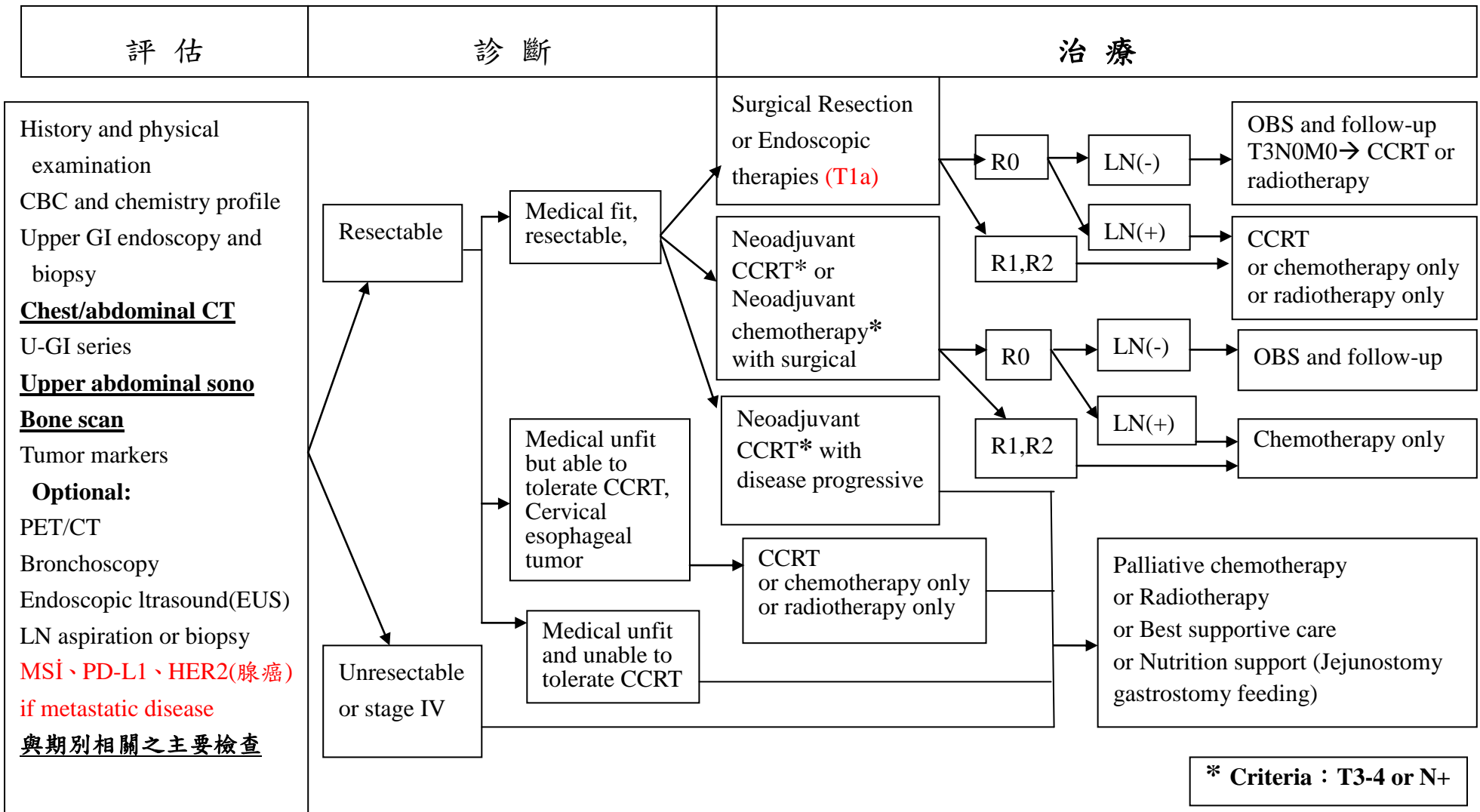


- 1.If asymptomatic:History and physical every 3 month for 2 years,than every 6 month for 3~5 years.
2. Chemistry profile CBC, Tumor marker,as clinically indicated
- 3.Imaging :  
\* CXR every 3 month for 2 years,than every 6 month for 3~5 years.  
\* Chest CT every 6 month for 2 years , than every 1 year for 3~5 years.
4. Dilatation of anastomotic stenosis (OP).
5. Upper GI endoscopy and biopsy as clinically indicated

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

# 食道癌 (治療)

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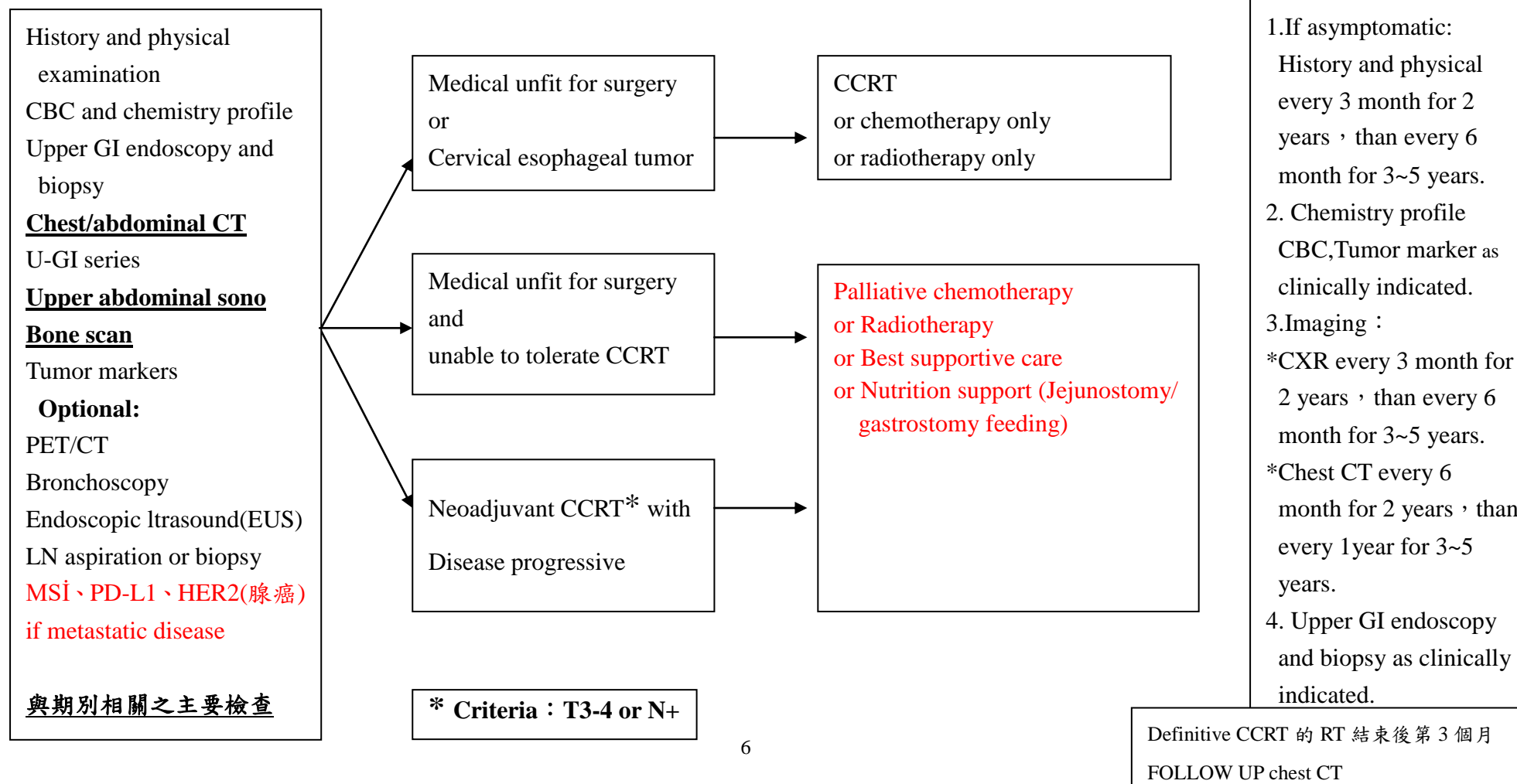
\* Criteria : T3-4 or N+

# 食道癌 (不適合手術)

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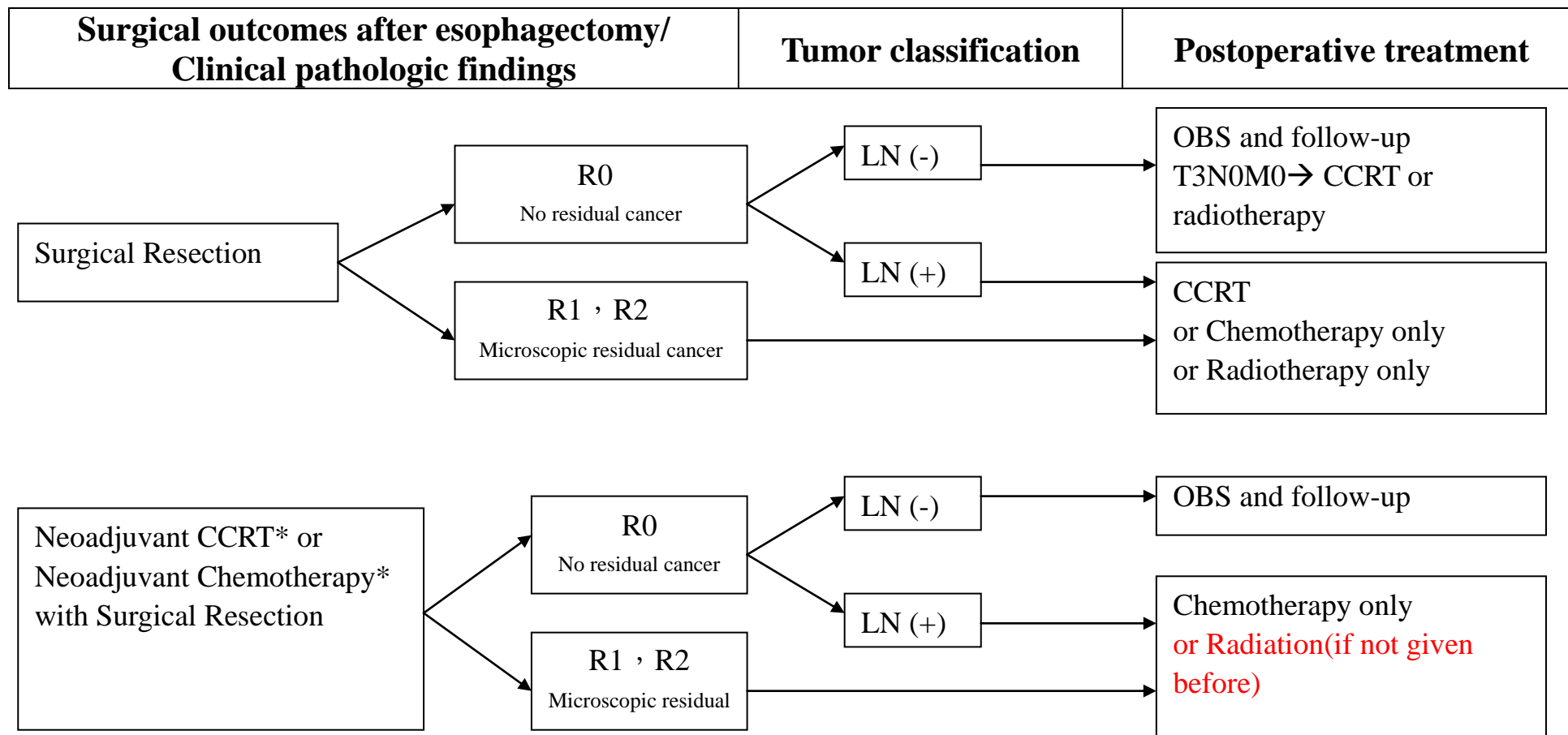
評估	診斷	治療	追蹤
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# 食道癌 (手術)

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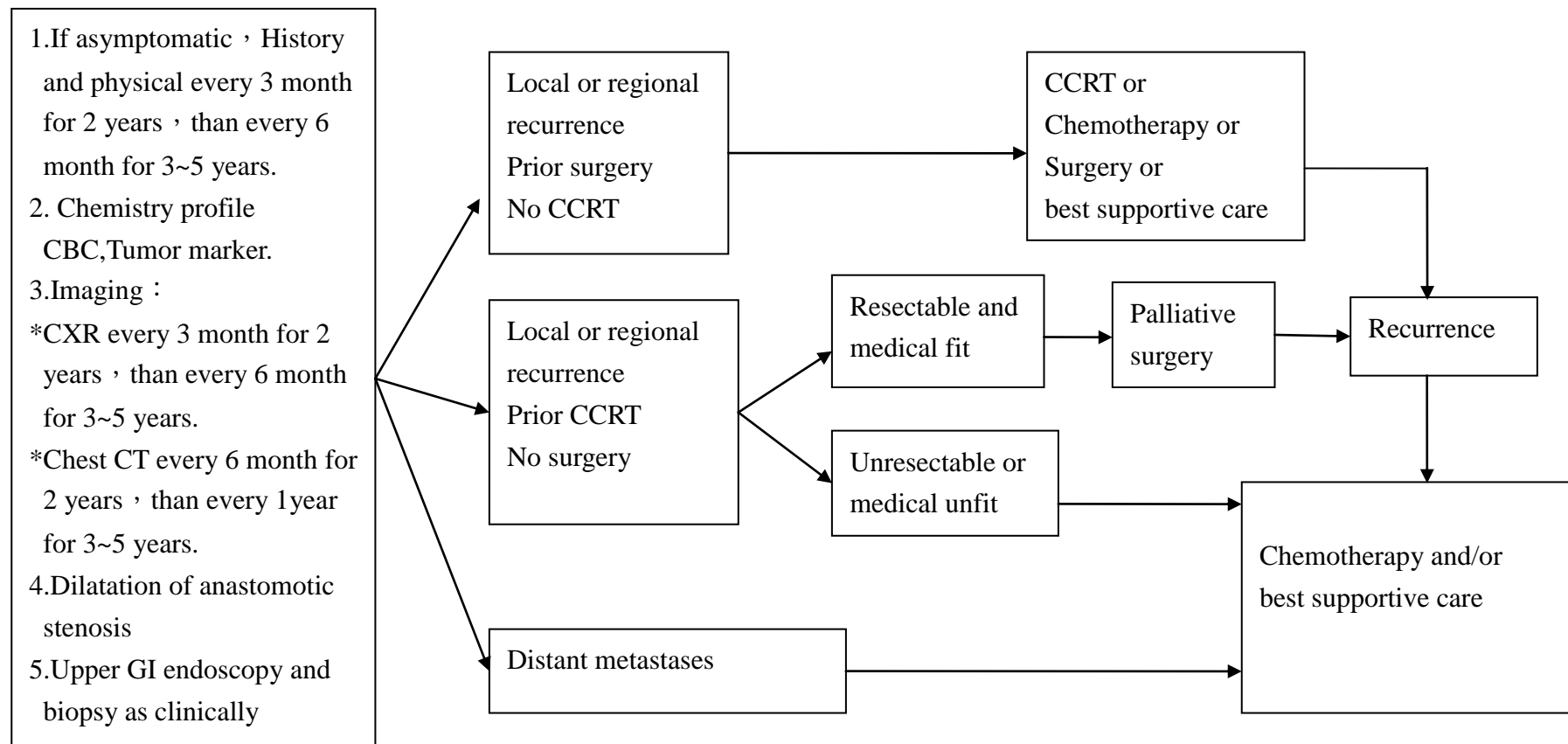
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# 食道癌 (復發)

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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



# 食道癌

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## 化學治療處方

Neoadjuvant / Adjuvant / CCRT / Metastasis	Schedule	Performance status
<b>Cisplatin</b> 60-75mg/m <sup>2</sup> , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 ( Ccr <60 ) <b>Fluorouracil</b> , 600-1000 mg/m <sup>2</sup> , IV ,D1-4 (Reference No.22)	Q28 D x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Cisplatin</b> 60-75 mg/m <sup>2</sup> , IV ,D1 / Carboplatin AUC 4-6 mg, IV ,D1 ( Ccr <60 ) <b>Etoposide</b> 60-100 mg/m <sup>2</sup> , IV ,D1-3 (Reference No.23)	Q21 D x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Taxol</b> 140-175 mg/m <sup>2</sup> , IV ,D1 <b>Cisplatin</b> 20 mg/m <sup>2</sup> , IV ,D1-5 / Carboplatin AUC 1mg, IV ,D1-5 ( Ccr <60 ) <b>Fluorouracil</b> ,600-750 mg/m <sup>2</sup> , IV ,D1-5 (Reference No.24)	Q28D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Taxol</b> 160-200 mg/m <sup>2</sup> , IV ,D1 <b>Cisplatin</b> 60-80 mg/m <sup>2</sup> , 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
<b>Docetaxel</b> 60-85mg/m <sup>2</sup> , IV ,D1 <b>Cisplatin</b> 60-85mg/m <sup>2</sup> , IV ,D1 / Carboplatin AUC4-6 mg, IV ,D1 ( Ccr <60 ) (Reference No.31)	Q21D x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Docetaxel</b> 60-75mg/m <sup>2</sup> , IV ,D1 <b>Cisplatin</b> 60-75mg/m <sup>2</sup> , IV ,D1 / Carboplatin AUC4-6 mg, IV ,D1 ( Ccr <60 ) <b>Fluorouracil</b> ,600-750 mg/m <sup>2</sup> , IV ,D1-5 / Fluorouracil,800-1200 mg/m <sup>2</sup> , IV ,D1-3 (Reference No.26,33)	Q21D x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

Neoadjuvant / Adjuvant / CCRT / Metastasis	Schedule	Performance status
<b>Gemzar</b> 1000mg/m <sup>2</sup> , IV ,D1.8 (Reference No.32)	Q21~28D 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Gemzar</b> 800-1000mg/m <sup>2</sup> , IV ,D1.8 <b>Cisplatin</b> 60-80mg/m <sup>2</sup> , 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
<b>Cisplatin</b> 60 mg/m <sup>2</sup> , IV ,D1/ Carboplatin AUC 4-6 mg, IV ,D1 ( Ccr <60 ) <b>Xeloda</b> 2.5TAB/ m <sup>2</sup> , PO,D1-14 (Reference No.27)	Q21 D x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Mitomycin</b> 5- 7 mg/m <sup>2</sup> , IV ,D1 <b>Cisplatin</b> 50-60 mg/m <sup>2</sup> , IV ,D1,/ Carboplatin AUC 4-6 mg, IV ,D1, ( Ccr <60 ) <b>Fluorouracil</b> ,480~600 mg/m <sup>2</sup> /d, IV (Reference No.28)	MitomycinQ42D Cisplatin Q21D 5-FU QD MCF x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Mitomycin</b> 5- 7 mg/m <sup>2</sup> , IV ,D1 <b>Cisplatin</b> 45-60 mg/m <sup>2</sup> , IV ,D1/ Carboplatin AUC 4-6 mg, IV ,D1 ( Ccr <60 ) <b>Ufur</b> 3CAP/m <sup>2</sup> , PO,D1-14 (Reference No.28)	MitomycinQ42D Cisplatin Q21D Ufur QD MCU x 4-6 cycles	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>Ufur</b> 3CAP/m <sup>2</sup> , PO,D1-14 (Reference No.39)	QD x1year	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60
<b>TS-1</b> (BSA >1.5) 120mg/day, PO BID, D1-28 <b>TS-1</b> (BSA 1.25-1.5) 100mg/day, PO BID, D1-28 (吃四週休二週或吃二週休一週) (Reference No.37)	Q42D x1year	ECOG Performance score ≤ 2 or Karnofsky Performance score ≥ 60

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## 標靶治療處方

<b>Ramucirumab</b> 8 mg/kg, IV, D1 (Reference No.34)	Q14D	ECOG Performance score $\leq$ 2 or Karnofsky Performance score $\geq$ 60
<b>Ramucirumab</b> (8 mg/kg, IV, D1, D15) <b>Paclitaxel</b> (50~80 mg/m <sup>2</sup> , IV, D1, D8, D15) (Reference No.35)	Q28D	ECOG Performance score $\leq$ 2 or Karnofsky Performance score $\geq$ 60
<b>Tarceva</b> 150mg 1TAB, PO, QD (Reference No.29)	QD until disease progression	ECOG Performance score $\leq$ 2 or Karnofsky Performance score $\geq$ 60
<b>Afatinib</b> 40mg/day, PO, QD (Reference No.36)	QD until disease progression	ECOG Performance score $\leq$ 2 or Karnofsky Performance score $\geq$ 60

## 免疫治療處方

<b>Keytruda</b> 2mg/kg ,IV, D1 (Reference No.39)	Q21D until disease progression	ECOG Performance score $\leq$ 2 or Karnofsky Performance score $\geq$ 60
<b>Nivolumab</b> 3mg/kg , IV , D1 (Reference No.41)	Q14D until disease progression	ECOG Performance score $\leq$ 2 or Karnofsky Performance score $\geq$ 60

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## 放射治療處方

CCRT with weekly cisplatin 30mg/M2,IV,D1 (old age, Cr >1.5) (Reference No.40)	QW x4-6 cycles	ECOG Performance score $\leq 2$ or Karnofsky Performance score $\geq 60$
CCRT with weekly cisplatin 40mg/M2,IV,D1 (Reference No.40)	QW x4-6 cycles	ECOG Performance score $\leq 2$ or Karnofsky Performance score $\geq 60$

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**

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

*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
<b>Stage 0</b>	Tis	N0	M0	<b>Stage 0</b>	Tis	N0	M0	N/A	Any	<b>Stage I</b>	T0-2	N0	M0
<b>Stage I</b>	T1	N0-1	M0	<b>Stage IA</b>	T1a	N0	M0	G1	Any	<b>Stage II</b>	T3	N0	M0
<b>Stage II</b>	T2	N0-1	M0		T1a	N0	M0	GX	Any	<b>Stage IIIA</b>	T0-2	N1	M0
	T3	N0	M0	<b>Stage IB</b>	T1a	N0	M0	G2-3	Any	<b>Stage IIIB</b>	T3	N1	M0
<b>Stage III</b>	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
<b>Stage IVA</b>	T4	N0-2	M0		T2	N0	M0	G1	Any	<b>Stage IVA</b>	T4a	N1-2	M0
	Any T	N3	M0	<b>Stage IIA</b>	T2	N0	M0	G2-3	Any		T4a	NX	M0
<b>Stage IVB</b>	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	<b>Stage IVB</b>	Any T	Any N	M1
				<b>Stage IIB</b>	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				
				<b>Stage IIIA</b>	T1	N2	M0	Any	Any				
					T2	N1	M0	Any	Any				
				<b>Stage IIIB</b>	T2	N2	M0	Any	Any				
					T3	N1-2	M0	Any	Any				
					T4a	N0-1	M0	Any	Any				
				<b>Stage IVA</b>	T4a	N2	M0	Any	Any				
					T4b	N0-2	M0	Any	Any				
					Any T	N3	M0	Any	Any				
				<b>Stage IVB</b>	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
<b>Stage 0</b>	Tis	N0	M0	<b>Stage 0</b>	Tis	N0	M0	N/A	<b>Stage I</b>	T0-2	N0	M0
<b>Stage I</b>	T1	N0	M0	<b>Stage IA</b>	T1a	N0	M0	G1	<b>Stage II</b>	T3	N0	M0
<b>Stage IIA</b>	T1	N1	M0		T1a	N0	M0	GX	<b>Stage IIIA</b>	T0-2	N1	M0
<b>Stage IIB</b>	T2	N0	M0	<b>Stage IB</b>	T1a	N0	M0	G2	<b>Stage IIIB</b>	T3	N1	M0
<b>Stage III</b>	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	<b>Stage IC</b>	T1	N0	M0	G3	<b>Stage IVA</b>	T4a	N1-2	M0
<b>Stage IVA</b>	T1-4a	N2	M0		T2	N0	M0	G1-2		T4a	NX	M0
	T4b	N0-2	M0	<b>Stage IIA</b>	T2	N0	M0	G3		T4b	N0-2	M0
	Any T	N3	M0		T2	N0	M0	GX		Any T	N3	M0
<b>Stage IVB</b>	Any T	Any N	M1	<b>Stage IIB</b>	T1	N1	M0	Any	<b>Stage IVB</b>	Any T	Any N	M1
					T3	N0	M0	Any				
				<b>Stage IIIA</b>	T1	N2	M0	Any				
					T2	N1	M0	Any				
				<b>Stage IIIB</b>	T2	N2	M0	Any				
					T3	N1-2	M0	Any				
					T4a	N0-1	M0	Any				
				<b>Stage IVA</b>	T4a	N2	M0	Any				
					T4b	N0-2	M0	Any				
					Any T	N3	M0	Any				
				<b>Stage IVB</b>	Any T	Any N	M1	Any				



## Reference :

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**Reference for Radiotherapy :**

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