

高雄榮民總醫院

食道癌診療原則

2020年02月25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 cancer, Version 4.2019

會議討論

上次會議：2019/05/28

本共識與上一版的差異

上一版	新版
<p>1. 原 Resectable 治療選項為 Surgical Resection，術後 T3N0M0 輔助治療 RT。</p> <p>2. 復發治療於術後無 CCRT 群，治療選項為 CCRT and/or best supportive care。</p> <p>3. 原有免疫治療處方：Keytruda。</p>	<p>1. Resectable 新增 Endoscopic therapies 選項，術後 T3N0M0 新增輔助治療 CCRT。 page 5</p> <p>2. 復發治療於術後無 CCRT 群，治療選項新增 or Chemotherapy or Surgery，並將流程圖做修正。 page 8</p> <p>3. 新增免疫治療處方：Nivolumab。 page.11</p>

食道癌 (總表)

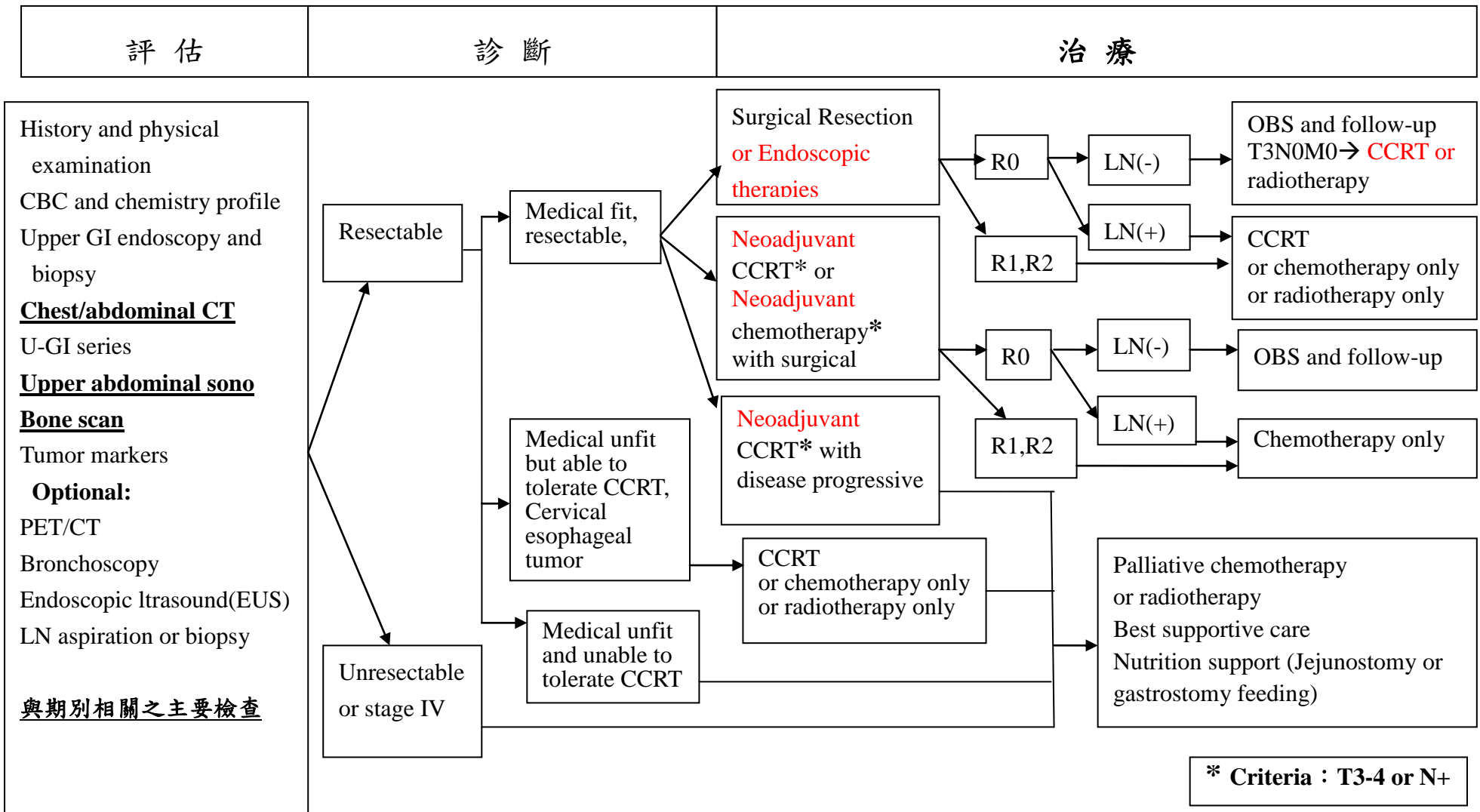
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評估	診斷	治療	追蹤
<p>History and physical examination CBC and chemistry profile Upper GI endoscopy and biopsy <u>Chest/abdominal CT</u> UGI series <u>Upper abdominal sonography</u> <u>Bone scan</u> Tumor markers Optional : PET/CT Bronchoscopy Endoscopic ultrasound(EUS) LN aspiration or biopsy</p> <p><u>與期別相關之主要檢查</u></p>	<p>Resectable</p> <p>Unresectable or Stage IV</p>	<p>Multi-disciplinary Evaluation (GI, CS, CTC. ...) Nutrition assessment (Jejunostomy feeding, NG feeding, TPN) Evaluation of other medical comorbidity Performance status</p> <p>Palliative chemoradiotherapy or radiotherapy Best supportive care and Nutrition support (Jejunostomy or gastrostomy feeding)</p> <p>Medical fit, resectable, See page 5</p> <p>Medical unfit for surgery but able to tolerate CCRT or Cervical esophageal tumor See page 6</p> <p>Medical unfit for surgery and unable to tolerate CCRT See page 6</p>	<ol style="list-style-type: none"> 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 1year 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

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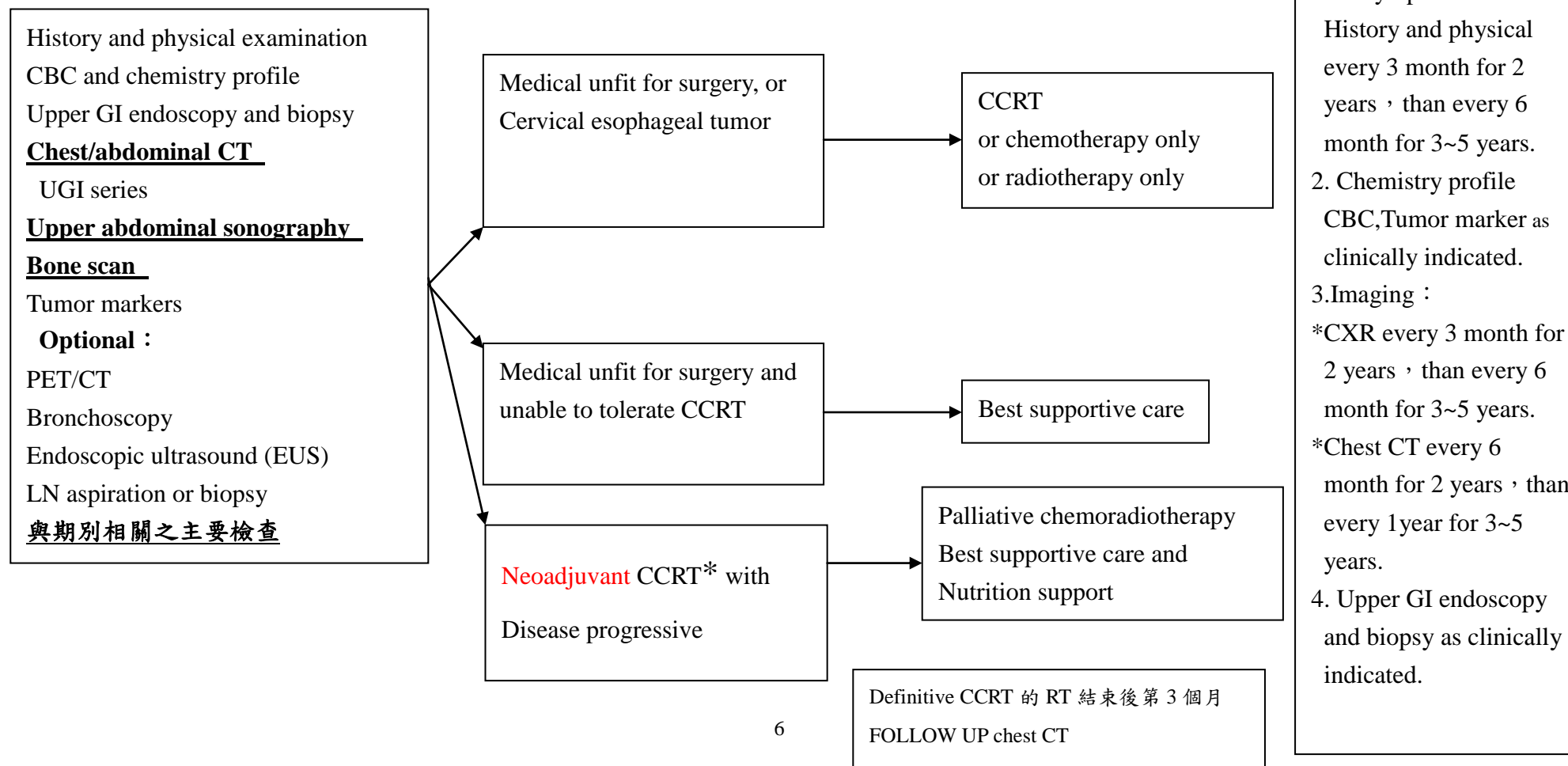


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評估	診斷	治療	追蹤
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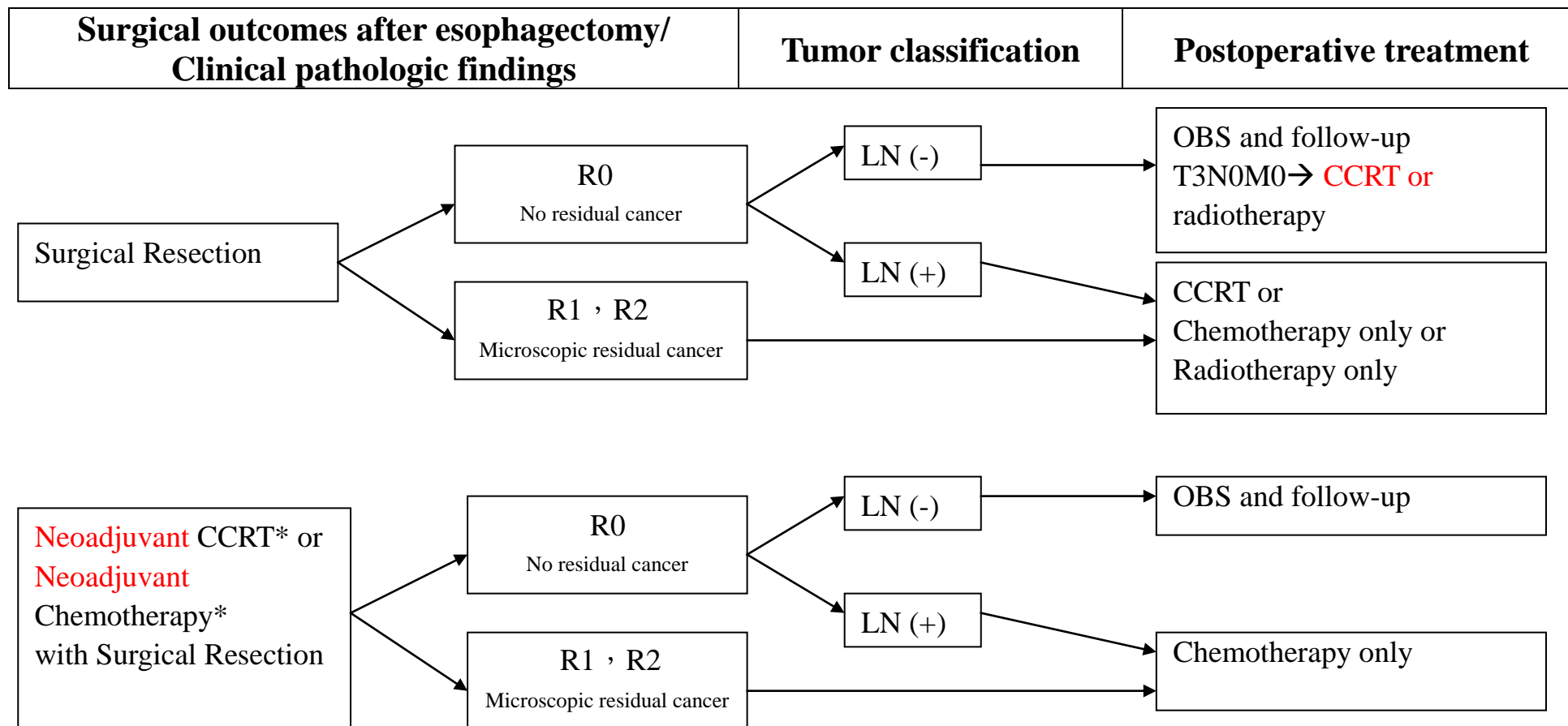


- If asymptomatic:
History and physical every 3 month for 2 years , than every 6 month for 3~5 years.
- Chemistry profile
CBC, Tumor marker as clinically indicated.
- Imaging :
*CXR every 3 month for 2 years , than every 6 month for 3~5 years.
*Chest CT every 6 month for 2 years , than every 1year for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

食道癌 (手術)

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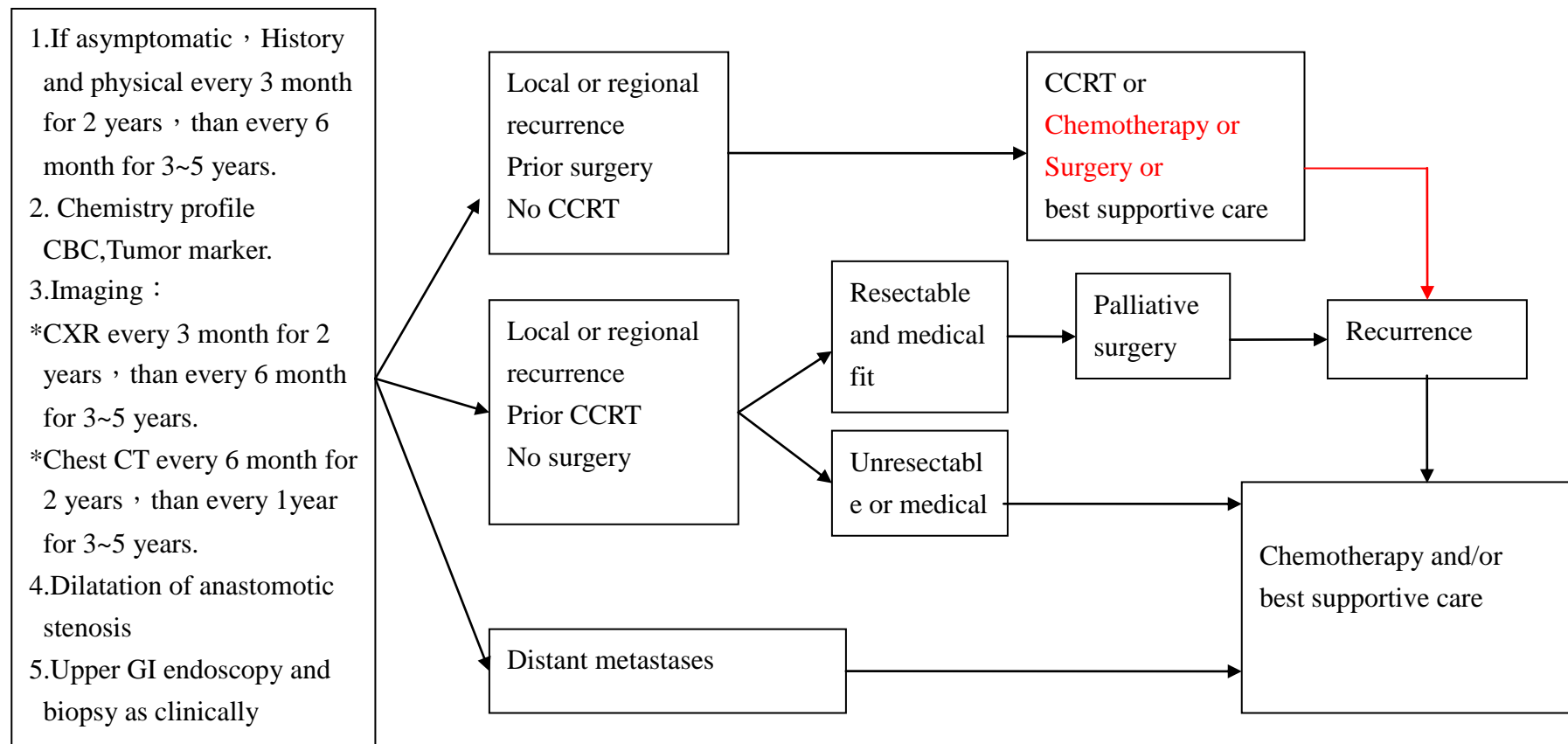
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食道癌 (復發)

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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

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化學治療處方

Neoadjuvant / Adjuvant / CCRT / Metastasis	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 x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky 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 x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky 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 Kamofsky 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 Kamofsky 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 x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
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 x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60

Neoadjuvant / Adjuvant / CCRT / Metastasis	Schedule	Performance status
Gemzar 1000mg/m ² , IV ,D1.8 (Reference No.32)	Q21~28D 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky 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 Kamofsky 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 x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
Mitomycin 5- 7 mg/m ² , IV ,D1 Cisplatin 50-60 mg/m ² , IV ,D1,/ Carboplatin AUC 4-6 mg, IV ,D1, (Ccr <60) Fluorouracil ,480~600 mg/m ² /d, IV (Reference No.28)	MitomycinQ42D Cisplatin Q21D 5-FU QD MCF x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
Mitomycin 5- 7 mg/m ² , IV ,D1 Cisplatin 45-60 mg/m ² , IV ,D1/ Carboplatin AUC 4-6 mg, IV ,D1 (Ccr <60) Ufur 3CAP/m ² , PO,D1-14 (Reference No.28)	MitomycinQ42D Cisplatin Q21D Ufur QD MCU x 4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
Ufur 3CAP/m ² , PO,D1-14 (Reference No.39)	QD x1year	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
TS-1 (BSA >1.5) 120mg/day, PO BID, D1-28 TS-1 (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 Kamofsky 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 Kamofsky 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 Kamofsky Performance score ≥ 60
Tarceva 150mg 1TAB, PO, QD (Reference No.29)	QD until disease progression	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
Afatinib 40mg/day, PO, QD (Reference No.36)	QD until disease progression	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60

免疫治療處方

Keytruda 2mg/kg ,IV, D1 (Reference No.39)	Q21D until disease progression	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 60
Nivolumab 3mg/kg , IV , D1 (Reference No.41)	Q14D until disease progression	ECOG Performance score ≤ 2 or Kamofsky Performance score ≥ 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 ≤ 2 or Kamofsky Performance score ≥ 60
CCRT with weekly cisplatin 40mg/M2,IV,D1 (Reference No.40)	QW x4-6 cycles	ECOG Performance score ≤ 2 or Kamofsky 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
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
Tis	High-grade dysplasia, defined as malignant cells confined to the epithelium by the basement membrane
T1	Tumor invades the lamina propria, muscularis mucosae, or submucosa
T1a	Tumor invades the lamina propria or muscularis mucosae
T1b	Tumor invades the submucosa
T2	Tumor invades the muscularis propria
T3	Tumor invades adventitia
T4	Tumor invades adjacent structures
T4a	Tumor invades the pleura, pericardium, azygos vein, diaphragm, or peritoneum
T4b	Tumor invades other adjacent structures, such as the aorta, vertebral body, or airway
N	Regional Lymph Nodes
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
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

M	Distant Metastasis
M0	No distant metastasis
M1	Distant metastasis
G	Histologic Grade
GX	Grade cannot be assessed
G1	Well differentiated
G2	Moderately differentiated
G3	Poorly differentiated, undifferentiated

Squamous Cell Carcinoma

Location	Location Criteria
X	Location unknown
Upper	Cervical esophagus to lower border of azygos vein
Middle	Lower border of azygos vein to lower border of inferior pulmonary vein
Lower	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
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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