

胃癌診療指引共識

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二、討論日期：113 年 11 月 29 日

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114 年版與上一版差異：

113 年修訂版	114 年修訂版
<p>《胃癌診療指引共識 -1》</p> <p>初步評估</p> <p>新增</p> <p>MSI 選擇性檢查</p> <p>主要治療</p> <p>新增</p> <p>T2-T4 →圍術期化療 (選擇性)+ 手術</p> <p> └─▶ 若腫瘤基因高度微衛星不穩定性或錯配修復系統存在缺陷，則使用前導性免疫檢查點抑制劑 ± 手術</p>	<p>《胃癌診療指引共識 -1》</p> <p>選擇性檢查新增：評估胃幽門螺旋桿菌。</p> <p>《胃癌診療指引共識 -2》</p> <p>手術結果→ R0 → Tis 或 T1，N0</p> <p>《胃癌診療指引共識 -3》</p> <p>腫瘤減積手術 + 腹腔 (熱) 化療 (選擇性) 或全身性治療</p>

《胃癌診療指引共識 -1》

初步評估

必要檢查

- 病史及理學檢查
- 胸部 X 光
- 腹部及骨盆腔電腦斷層加顯影劑
- 上消化道內視鏡及切片
- 營養評估
- 胸部電腦斷層加顯影劑 (若要 HIPEC 則必做)
- Her2/neu (stage IV)

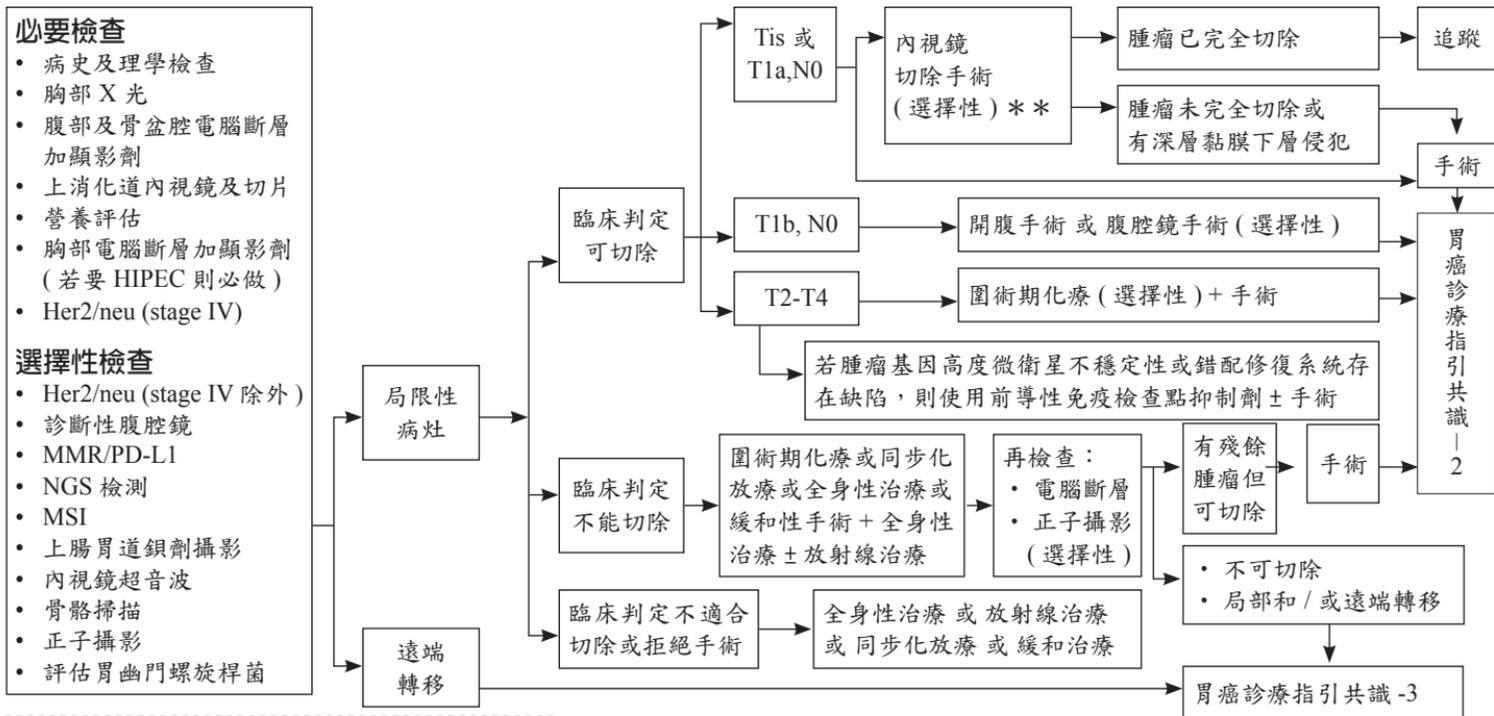
選擇性檢查

- Her2/neu (stage IV 除外)
- 診斷性腹腔鏡
- MMR/PD-L1
- NGS 檢測
- MSI
- 上腸胃道鉭劑攝影
- 內視鏡超音波
- 骨骼掃描
- 正子攝影
- 評估胃幽門螺旋桿菌

臨床診斷

臨床分期

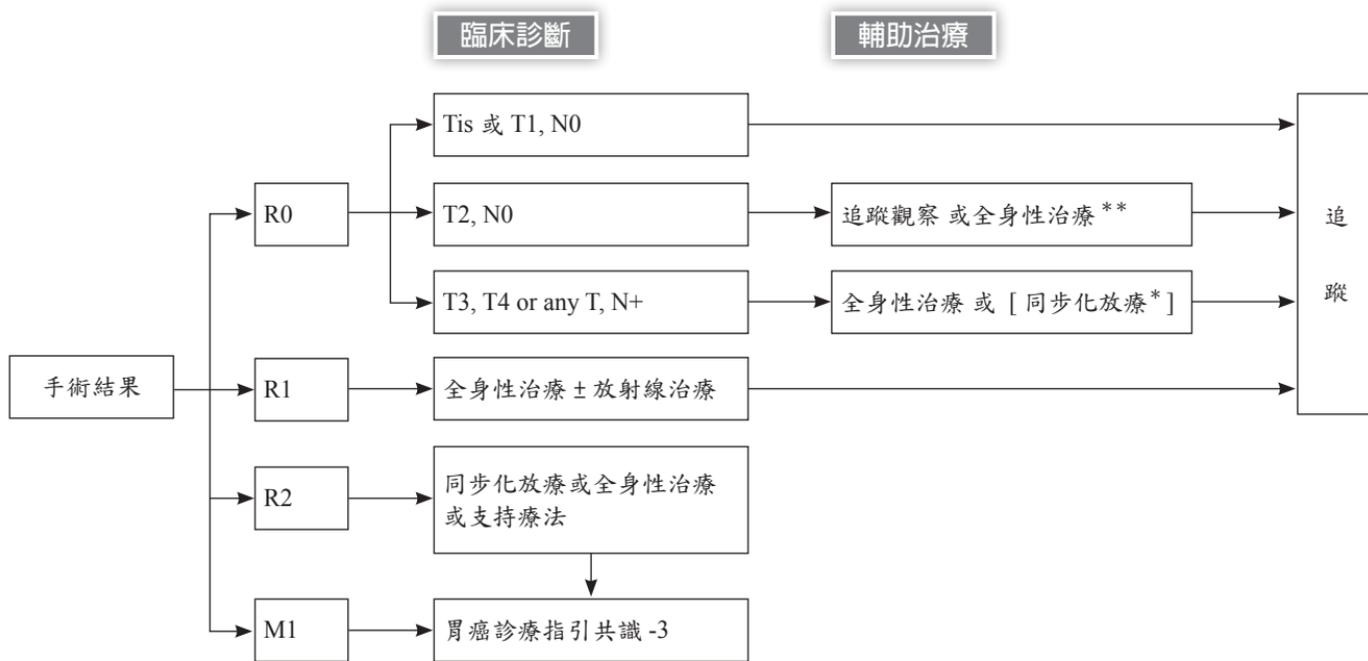
主要治療



註：Tis, T1, T2, T3, T4 為腫瘤大小和範圍；N0: 無淋巴轉移

**：凡是選擇內視鏡切除手術，手術前必做 EUS

《胃癌診療指引共識 -2》



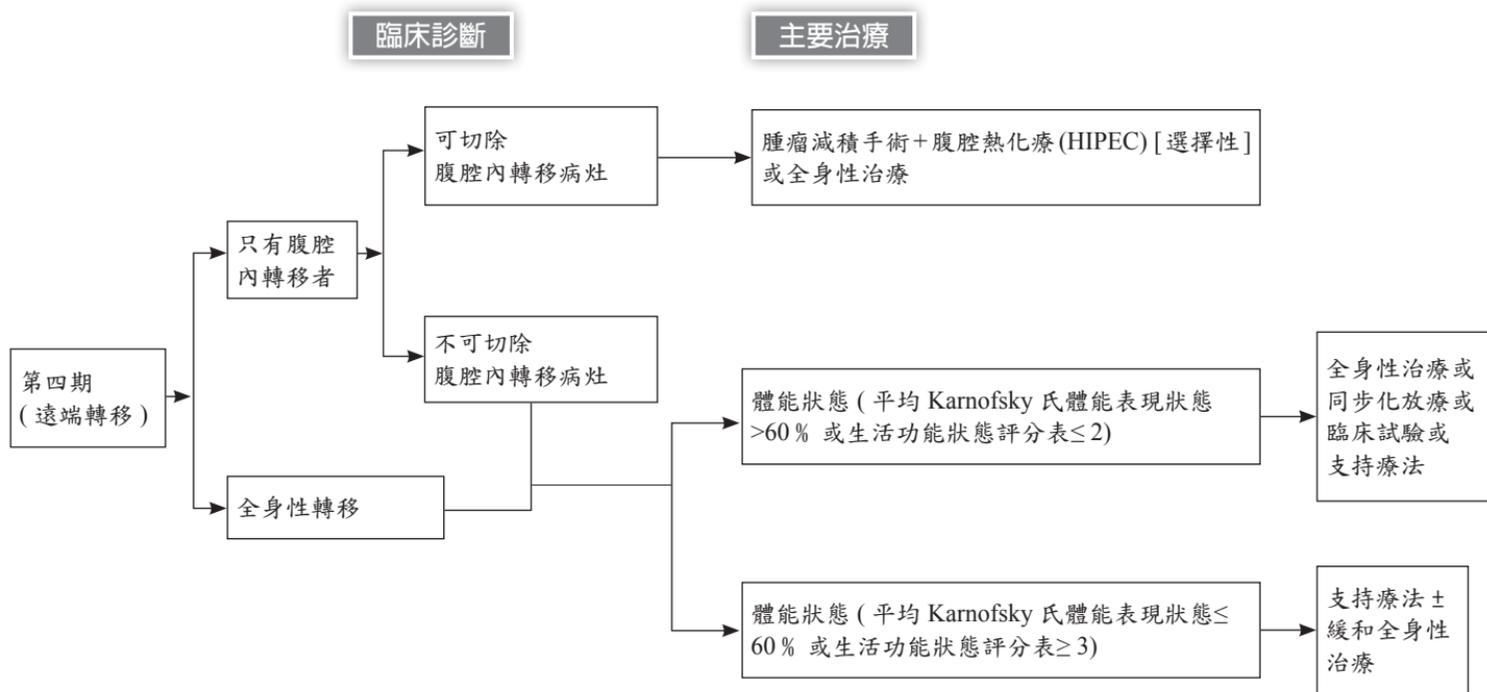
* stage III 以上且 N2-3，或未做到 D2 dissection，或經團隊會議決議有必要，需做 Adjuvant CCRT.

**根據 NCCN (T2.N0: High risk features include poorly differentiated or higher grade cancer. Lymphovascular invasion. neural invasion or < 50 years of age .)

註：Tis,T1,T2,T3, T4 為腫瘤大小和範圍；N0: 無淋巴轉移

註：病理 stage III 以上，加驗 Her2/neu；MSI/MMR by IHC (選擇性)

《胃癌診療指引共識 -3》



註 1 HIPEC 腹腔熱化療經台北市衛生局核定為自費手術項目
註 2 有出血或阻塞之病兆，可行緩和手術 / 放射線治療 / 營養支持。

《胃癌治療後追蹤流程》

(一) 手術後一至二年內

- (1) 應每三至六個月進行至少一項胸部及腹部影像學檢查及腫瘤指標追蹤。術後一年內需有至少一次內視鏡檢查，後依臨床狀況追蹤胃鏡。
- (2) 接受內視鏡切除手術者(ESD、EMR)，術後一年內，每半年追蹤胃鏡一次，之後每年追蹤胃鏡一次。

(二) 手術後三至五年內

- (1) 應每六至十二個月進行至少一項胸部及腹部影像學檢查及腫瘤指標追蹤。依臨床狀況追蹤胃鏡。
- (2) 接受內視鏡切除手術者(ESD、EMR)，每年追蹤胃鏡一次。

(三) 術後五年後依臨床狀況追蹤胸部及腹部影像學檢查及腫瘤指標追蹤。

《參考文獻》

1. NCCN Clinical Practice Guidelines in Oncology. Gastric Cancer. Version 4. 2024.
2. Gill RS, Al-Adra DP, Nagendran J, et al. Treatment of gastric cancer with peritoneal carcinomatosis by cytoreductive surgery and HIPEC: A systematic review of survival, mortality, and morbidity. *Journal of Surgical Oncology* 2011;104: 692–698.
3. Ung L, Chua TC, Morris DL, Cure for peritoneal metastases? An evidence-based review. *ANZ J Surg.* 2013; 83 (11) : 821-6.
4. Levine EA, Stewart JH, Shen P, Russell GB, Loggie BL, Votanopoulos KI. Intraperitoneal chemotherapy for peritoneal surface malignancy: experience with 1,000 patients. *J Am Coll Surg.* 2014 Apr;218(4):573-85.
5. Jorgensen JT, Hersom M. HER2 as a Prognostic Marker in Gastric Cancer - A Systematic Analysis of Data from the Literature. *J Cancer* 2012;3:137-144
6. Grabsch H, Sivakumar S, Gray S, et al. HER2 expression in gastric cancer: Rare, heterogeneous and of no prognostic value - conclusions from 924 cases of two independent series. *Cell Oncol* 2010;32:57-65
7. Choi KS, Jung HY, Choi KD, et al. EMR versus gastrectomy for intramucosal gastric cancer: comparison of long-term outcomes. *Gastrointest Endosc* 2011;73:942-948
8. Smalley SR, Benedetti JK, Haller DG, et al. Updated Analysis of SWOG-Directed Intergroup Study 0116: A Phase III Trial of Adjuvant Radiochemotherapy Versus Observation After Curative Gastric Cancer Resection. *Journal of Clinical Oncology* 2012;30:2327-2333.
9. Kang JH, Lee SI, Lim do H, et al. Salvage chemotherapy for pretreated gastric cancer: a randomized phase III trial comparing chemotherapy plus best supportive care with best supportive care
10. Repici A, Zullo A, Hassan C, et al. Endoscopic submucosal dissection of early gastric neoplastic lesions: a western series. *Eur J Gastroenterol Hepatol* 2013;25:1261-1264.
11. Gill RS, Al-Adra DP, Nagendran J, et al. Treatment of gastric cancer with peritoneal carcinomatosis by cytoreductive surgery and HIPEC: A systematic review of survival, mortality, and morbidity. *Journal of Surgical Oncology* 2011;104: 692–698.
12. Ung L, Chua TC, Morris DL, Cure for peritoneal metastases? An evidence-based review. *ANZ J Surg.* 2013; 83 (11) : 821-6.
13. Levine EA, Stewart JH, Shen P, Russell GB, Loggie BL, Votanopoulos KI. Intraperitoneal chemotherapy for peritoneal surface

- malignancy: experience with 1,000 patients. *J Am Coll Surg.* 2014 Apr;218(4):573-85.
14. Rudloff U, Langan RC, Mullinax JE, Beane JD, Steinberg SM, Beresnev T, Webb CC, Walker M, Toomey MA, Schrupp D, Pandalai P, Stojadinovic A, Avital I., Impact of maximal cytoreductive surgery plus regional heated intraperitoneal chemotherapy (HIPEC) on outcome of patients with peritoneal carcinomatosis of gastric origin: results of the GYMSSA trial. *J Surg Oncol.* 2014;110(3):275-84.
 15. Kim KW, Chow O, Parikh K, Blank S, Jibara G, Kadri H, Labow DM, Hiotis SP. Peritoneal carcinomatosis in patients with gastric cancer, and the role for surgical resection, cytoreductive surgery, and hyperthermic intraperitoneal chemotherapy. *Am J Surg.* 2014, 207(1):78-83.

《胃癌抗癌藥物治療指引》

Perioperative Chemotherapy

Preferred Regimens

Oxaliplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W	3 pre + 3 post	21
Leucovorin	400	1	Q2W	3 pre + 3 post	
5-FU	400	1	Q2W	3 pre + 3 post	
5-FU	1200*	1-2	Q2W	3 pre + 3 post	

* Continuous infusion for 24 hours

Oxaliplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W		18
Leucovorin	200	1	Q2W		
5-FU	2600*	1	Q2W		

* Continuous infusion for 24 hours

Oxaliplatin + Capecitabine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	130	1	Q3W		16
Capecitabine	1000 PO BID	1-14			

5-FU + Leucovorin + Oxaliplatin + Docetaxel (FLOT)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W	3 pre + 3 post	22
Leucovorin	400	1	Q2W	3 pre + 3 post	
5-FU	400	1	Q2W	3 pre + 3 post	
5-FU	1200*	1-2	Q2W	3 pre + 3 post	

* Continuous infusion for 24 hours

Other Recommended Regimens

Cisplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	50	1	Q2W	4 pre + 4 post	23
5-FU	1000*	1-2	Q2W	4 pre + 4 post	

* Continuous infusion for 24 hours

Preoperative Chemoradiation Therapy

Cisplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	100	1, 29	Q35D	1	1
5-FU	1000*	1-4, 29-32	Q35D	1	

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	15	1-5	Q3W	2	2
5-FU	800*	1-5	Q3W	2	

* Continuous infusion for 24 hours

Cisplatin + Capecitabine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	30	1	QW	5	4
Capecitabine	800 PO BID	1-5	QW	5	

Oxaliplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W	3(RT) + 3	3
Leucovorin	400	1	Q2W	3(RT) + 3	
5-FU	400	1	Q2W	3(RT) + 3	
5-FU	800*	1-2	Q2W	3(RT) + 3	

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W	3(RT)	24
5-FU	300*	1-4	Q2W	3(RT)	

* Continuous infusion for 24 hours

Oxaliplatin + Capecitabine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1, 15, 29		1	5
Capecitabine	625 PO BID	1-5	QW	5	

Paclitaxel + Fluoropyrimidine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	45	1	QW	5	7
5-FU	300*	1-5	QW	5	

* Continuous infusion for 24 hours

Paclitaxel + Carboplatin

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	50	1	QW	5	6
Carboplatin	AUC 2	1	QW	5	

Fluoropyrimidine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
5-FU	200-250	1-5	QW	5	25

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Capecitabine	625-825 PO BID	1-5	QW	5	26

Postoperative Chemoradiation

For patients who have undergone primary D2 lymph node dissection

5-FU (bolus) and Leucovorin Modifications

1 cycle before and 2 cycles after chemoradiation

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Capecitabine	750-1000 PO BID	1-14	Q3W	1 before + 2 after	8

2 cycle before and 4 cycles after chemoradiation

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Leucovorin	400	1	Q2W	2 before + 4 after	9
5-Fu	400	1	Q2W	2 before + 4 after	
5-Fu	1200*	1-2	Q2W	2 before + 4 after	

* Continuous infusion for 24 hours

With radiation

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
5-FU	225 (200-250)*	1-5 or 1-7	QW	5	10

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Capecitabine	825 PO BID	1-5 or 1-7	QW	3	11

Postoperative Chemotherapy

(For patients who have undergone primary D2 lymph node dissection)

Oxaliplatin + Capecitabine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	130	1	Q3W	8	12
Capecitabine	1000 PO BID	1-14	Q3W	8	

Cisplatin + Capecitabine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	60	1	Q3W	6	13
Capecitabine	1000 PO BID	1-14	Q3W	6	

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
UFUR	300-350/day PO	1-28			18

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
TS-1	40-75 PO	1-28 (1-14)	Q42D (Q3W)		19

Oxaliplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W		15
Leucovorin	400	1	Q2W		
5-FU	400	1	Q2W		
5-FU	1200*	1-2	Q2W		

* Continuous infusion for 24 hours

Oxaliplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W		14
Leucovorin	200	1	Q2W		
5-FU	2600*	1	Q2W		

* Continuous infusion for 24 hours

Cisplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	60	1	Q3W	6	17
5-FU	1200*	1-4	Q3W	6	

* Infusion for 12 hours

Docetaxel + TS-1

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
TS-1	40-60 mg* PO BID	1-14	Q3W	1	20
Followed by Docetaxel	40	1	Q3W	6	
TS-1	40-60 mg* PO BID	1-14	Q3W	6	
Followed by TS-1	40-60 mg* PO BID	1-14	Q6W	For 1 year	

* < 1.25 m², 40 mg; ≥ 1.25 to < 1.5 m², 50 mg; ≥ 1.5 m², 60 mg

Chemoradiation For Unresectable Disease

Preferred Regimens

Oxaliplatin + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W	3 (RT) + 3	3
Leucovorin	400	1	Q2W	3 (RT) + 3	
5-FU	400	1	Q2W	3 (RT) + 3	
5-FU	800*	1-2	Q2W	3 (RT) + 3	

* Continuous infusion for 24 hours

Oxaliplatin + Capecitabine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1, 25, 29		1	5
Capecitabine	625 PO BID	1-5	QW	5	

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	100 (75-100)	1	Q4W	2 (RT) + 2	1
5-FU	1000* (750-1000)	1-4	Q4W	2 (RT) + 2	

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	30	1	QW	5	4
Capecitabine	800 PO BID	1-5	QW	5	

Other Recommended Regimens

Paclitaxel + Fluoropyrimidine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	45 (45-50)	1	QW	5	7
5-FU	300*	1-5	QW	5	

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	45-50	1	QW	5	7
Capecitabine	625-825 PO BID	1-5	QW	5	

Neoadjuvant or Perioperative Immunotherapy

Nivolumab and Ipilimumab followed by Nivolumab (MSI-H/dMMR)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Nivolumab	240 mg	1	Q2W	Pre-op x 6	27
Ipilimumab	1 mg/kg	1	Q6W	Pre-op x 2	
Followed by surgery					
Nivolumab	480 mg	1	Q4W	Post-op x 9	

Pembrolizumab (MSI-H/dMMR)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Pembrolizumab	200 mg	1	Q3W	Pre-op x 2	28, 29
Followed by surgery					
Pembrolizumab	200 mg	1	Q3W	Post-op x 5	

Tremelimumab + Durvalumab (MSI-H/dMMR)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Tremelimumab	300 mg	1	Q12W	Pre-op x 1	30
Durvalumab	1500 mg	1, 29, 57	Q12W	Post-op x 1	

參考文獻

1. Tepper J, Krasna MJ, Niedzwiecki D, et al. Phase III trial of trimodality therapy with cisplatin, fluorouracil, radiotherapy, and surgery compared with surgery alone for esophageal cancer: CALGB 9781. *J Clin Oncol* 2008;26:1086-1092.
2. Bedenne L, Michel P, Bouche O, et al. Chemoradiation followed by surgery compared with chemoradiation alone in squamous cancer of the esophagus: FFCO 9102. *J Clin Oncol* 2007;25:1160-1168
3. Conroy T, Galais MP, Raoul JL, et al. Definitive chemoradiotherapy with FOLFOX versus fluorouracil and cisplatin in patients with oesophageal cancer (PRODIGE5/ ACCORD17): final results of a randomised, phase 2/3 trial. *Lancet Oncol* 2014;15:305-314
4. Lee SS, Kim SB, Park SI, et al. Capecitabine and cisplatin chemotherapy (XP) alone or sequentially combined chemoradiotherapy containing XP regimen in patients with three different settings of stage IV esophageal cancer. *Jpn J Clin Oncol* 2007;37:829-835
5. Javle MM, Yang G, Nwogu CE, et al. Capecitabine, oxaliplatin and radiotherapy: a phase IB neoadjuvant study for esophageal cancer with gene expression analysis. *Cancer Invest* 2009;27:193-200
6. van Hagen P, Hulshof MC, van Lanschot JJ, et al. Preoperative chemoradiotherapy for esophageal or junctional cancer. *N Engl J Med* 2012;366:2074-2084.
7. Ajani JA, Winter K, Okawara GS, et al. Phase II trial of preoperative chemoradiation in patients with localized gastric adenocarcinoma (RTOG 9904): quality of combined modality therapy and pathologic response. *J Clin Oncol* 2006;24:3953-3958.
8. Jansen EP, Boot H, Saunders MP, et al. A phase I-II study of postoperative capecitabine-based chemoradiotherapy in gastric cancer. *Int J Radiat Oncol Biol Phys* 2007;69:1424-1428.
9. NCCN. [GAST-F 7 of 12] gastric cancer: version 2, 2018.
10. Leong T, Joon DL, Willis D, et al. Adjuvant chemoradiation for gastric cancer using epirubicin, cisplatin, and 5-fluorouracil before and after three-dimensional conformal radiotherapy with concurrent infusional 5-fluorouracil: a multicenter study of the Trans-Tasman Radiation Oncology Group. *Int J Radiat Oncol Biol Phys* 2011;79:690-695.
11. Lee HS, Choi Y, Hur WJ, et al. Pilot study of postoperative adjuvant chemoradiation for advanced gastric cancer: adjuvant 5-FU/ cisplatin and chemoradiation with capecitabine. *World J Gastroenterol* 2006;12:603-607.

12. Noh SH, Park SR, Yang HK, et al. Adjuvant capecitabine plus oxaliplatin for gastric cancer after D2 gastrectomy (CLASSIC): 5-year follow-up of an open-label, randomised phase 3 trial. *Lancet Oncol* 2014; 15:1389-1396.
13. Lee J, Lim do H, Kim S, et al. Phase III trial comparing capecitabine plus cisplatin versus capecitabine plus cisplatin with concurrent capecitabine radiotherapy in completely resected gastric cancer with D2 lymph node dissection: the ARTIST trial. *J Clin Oncol* 2012;30:268-273.
14. Al-Batran S-E, Hartmann JT, Probst S, et al. Phase III trial in metastatic gastroesophageal adenocarcinoma with fluorouracil, leucovorin plus either oxaliplatin or cisplatin: a study of the Arbeitsgemeinschaft Internistische Onkologie. *J Clin Oncol* 2008;26:1435-1442.
15. Enzinger PC, Burtness B, Hollis D, et al. CALGB 80403/ ECOG 1206: A randomized phase II study of three standard chemotherapy regimens (ECF, IC, FOLFOX) plus cetuximab in metastatic esophageal and GE junction cancer [abstract]. *J Clin Oncol* 2010;28 (Suppl 15):Abstract 4006.
16. Kim GM, Jeung HC, Rha SY, et al. A randomized phase II trial of S-1-oxaliplatin versus capecitabine-oxaliplatin in advanced gastric cancer. *Eur J Cancer* 2012;48:518-526.
17. T. M. Kim, J. S. Kim, et al. Adjuvant 5-FU/cisplatin (FP) chemotherapy in curatively resected stage IIIA-IV M0 gastric cancer. *Journal of Clinical Oncology* 2005; 23: 4214-4214.
18. Product Information: UFUR Capsule. tegafur, uracil oral capsules. 2015.
19. Product Information: TS-1 capsules. Tegafur, Gimeracil, Oteracil potassium oral capsules. 2015.
20. Yoshida K, Kodera Y, Kochi M, et al. Addition of Docetaxel to Oral Fluoropyrimidine Improves Efficacy in Patients With Stage III Gastric Cancer: Interim Analysis of JACCRO GC-07, a Randomized Controlled Trial. *Clinical Oncology* 2019; 37:1296-1304.
21. Enzinger PC, Burtness BA, Niedzwiecki D, et al. CALGB 80403 (Alliance)/E1206: a randomized phase II study of three chemotherapy regimens plus cetuximab in metastatic esophageal and gastroesophageal junction cancers. *J Clin Oncol* 2016;34:2736-2742.
22. Al-Batran S-E, Homann N, Pauligk C, et al. Perioperative chemotherapy with fluorouracil plus leucovorin, oxaliplatin, and

- docetaxel versus fluorouracil or capecitabine plus cisplatin and epirubicin for locally advanced, resectable gastric or gastroesophageal junction adenocarcinoma (FLOT4): a randomised, phase 2/3 trial. *Lancet* 2019;393:1948-1957.
23. Ychou M, Boige V, Pignon J-P, et al. Perioperative chemotherapy compared with surgery alone for resectable gastroesophageal adenocarcinoma: an FNCLCC and FFOCD multicenter phase III trial. *J Clin Oncol* 2011;29:1715-1721.
 24. Goodman KA, Ou FS, Hall NC, et al. Randomized Phase II Study of PET Response-Adapted Combined Modality Therapy for Esophageal Cancer: Mature Results of the CALGB 80803 (Alliance) Trial. *J Clin Oncol.* 2021 Sep 1;39(25):2803-2815. doi: 10.1200/JCO.20.03611. Epub 2021 Jun 2. PMID: 34077237; PMCID: PMC8407649.
 25. Leong T, Joon DL, Willis D, et al. Adjuvant chemoradiation for gastric cancer using epirubicin, cisplatin, and 5-fluorouracil before and after three-dimensional conformal radiotherapy with concurrent infusional 5-fluorouracil: a multicenter study of the Trans-Tasman Radiation Oncology Group. *Int J Radiat Oncol Biol Phys.* 2011 Mar 1;79(3):690-5. doi: 10.1016/j.ijrobp.2009.11.042. Epub 2010 May 14. PMID: 20472363.
 26. Javle MM, Yang G, Nwogu CE, et al. Capecitabine, oxaliplatin and radiotherapy: a phase IB neoadjuvant study for esophageal cancer with gene expression analysis. *Cancer Invest.* 2009 Feb;27(2):193-200. doi: 10.1080/07357900802172093. PMID: 19235592.
 27. André T, Tougeron D, et al. Neoadjuvant Nivolumab Plus Ipilimumab and Adjuvant Nivolumab in Localized Deficient Mismatch Repair/Microsatellite Instability–High Gastric or Esophagogastric Junction Adenocarcinoma: The GERCOR NEONIPIGA Phase II Study. *Journal of Clinical Oncology* 41, no. 2 (January 10, 2023) 255-265.
 28. Ludford K, Ho WJ, Thomas JV, et al. Neoadjuvant Pembrolizumab in Localized Microsatellite Instability High/Deficient Mismatch Repair Solid Tumors. *J Clin Oncol.* 2023 Apr 20;41(12):2181-2190. doi: 10.1200/JCO.22.01351. Epub 2023 Jan 9. PMID: 36623241; PMCID: PMC10489404.
 29. Liu L, Woo Y, D'Apuzzo M, Melstrom L, et al. Immunotherapy-Based Neoadjuvant Treatment of Advanced Microsatellite Instability-High Gastric Cancer: A Case Series. *J Natl Compr Canc Netw.* 2022 Aug;20(8):857-865. doi: 10.6004/jncn.2022.7023. PMID: 35948034.
 30. Kelly RJ, Lee J, Bang YJ, et al. Safety and Efficacy of Durvalumab and Tremelimumab Alone or in Combination in Patients with Advanced Gastric and Gastroesophageal Junction Adenocarcinoma. *Clin Cancer Res.* 2020 Feb 15;26(4):846-854. doi: 10.1158/1078-0432.CCR-19-2443. Epub 2019 Nov 1. PMID: 31676670; PMCID: PMC7748730.

Systemic Therapy for Metastatic or Locally Advanced Cancer

(Where local therapy is not indicated)

First-line Therapy

Trastuzumab (with chemotherapy)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Trastuzumab	8 → 6 mg/kg	1	Q3W		1

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Trastuzumab	6 → 4 mg/kg	1	Q2W		1

Pembrolizumab (with chemotherapy)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Pembrolizumab	200 mg	1	Q3W		29

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Pembrolizumab	400 mg	1	Q6W		30

Preferred Regimens

Fluoropyrimidine + Cisplatin

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	100	1	Q4W	6	4
5-FU	1000*	1-5	Q4W	6	

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	50	1	Q2W		5, 6
Leucovorin	200	1	Q2W		
5-FU	2000*	1	Q2W		

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Cisplatin	80	1	Q3W		7
Capecitabine	850~1000* PO BID	1-4	Q3W		

*NCCN 2023 & 團隊共識

Oxaliplatin + Fluoropyrimidine ± Nivolumab (PD-L1 CPS ≥ 5)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
± Nivolumab	240 mg	1	Q2W		8
Oxaliplatin	85	1	Q2W		
Leucovorin	400	1	Q2W		
5-FU	400	1	Q2W		
5-FU	1200*	1-2	Q2W		

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q2W		5
Leucovorin	200	1	Q2W		
5-FU	2600*	1	Q2W		

* Continuous infusion for 24 hours

Oxaliplatin + Capecitabine ± Nivolumab (PD-L1 CPS ≥ 5)

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
± Nivolumab	360 mg	1	Q2W		9
Oxaliplatin	130	1	Q3W		
Capecitabine	800~1000* PO BID	1-14	Q3W		

*NCCN 2023 & 團隊共識

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Oxaliplatin	85	1	Q3W		27
Capecitabine	625 PO BID	1-14	Q3W		

High dose FL

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Leucovorin	150	1	QW	6	24
5-FU	2600*	1	QW	6	

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Pembrolizumab	200 mg	1	Q3W		29

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Pembrolizumab	400 mg	1	Q6W		30

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Nivolumab	1 mg/kg	1	Q3W	4	31
Ipilimumab	3 mg/kg	1	Q3W	4	
Followed by					
Nivolumab	240 mg	1	Q2W	Max 2 years	

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Nivolumab	240 mg	1	Q2W	8	32
Ipilimumab	1 mg/kg	1	Q6W	2	
Followed by					
Nivolumab	240 or 480 mg	1	Q2W or Q4W	Max 2 years	

Other Regimens

Paclitaxel + Cisplatin/Carboplatin

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	200*	1	Q3W		10
Cisplatin	75	2	Q3W		

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	175	1	Q3W		25
Cisplatin	70	1	Q3W		

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	90	1	Q2W		11
Cisplatin	50	1	Q2W		

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	200	1	Q3W		12
Carboplatin	AUC 5	1	Q3W		

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	175	1	Q3W		26
Carboplatin	AUC 5	1	Q3W		

Docetaxel + Cisplatin

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Docetaxel	70	1	Q3W	Max 6	13, 14
Cisplatin	70	1	Q3W	Max 6	

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Docetaxel	85	1	Q3W		13, 14
Cisplatin	75	1	Q3W		

Fluoropyrimidine

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Leucovorin	400	1	Q2W		16
5-FU	400	1	Q2W		
5-FU	1200*	1-2	Q2W		

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
5-FU	800*	1-5	Q4W		15

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Capecitabine	1250 PO BID	1-14	Q3W	Max 6	16

Taxane

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Docetaxel	75 or 100	1	Q3W		17, 18

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	250	1	Q3W		19

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Paclitaxel	80	1	QW	4	20

Irinotecan + 5-FU

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Irinotecan	180	1	Q2W		21
Leucovorin	400	1	Q2W		
5-FU	400	1	Q2W		
5-FU	1200*	1-2	Q2W		

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Irinotecan	80	1		6 + 2 off treatment	28
Leucovorin	500	1	QW	6 + 2 off treatment	
5-FU	2000*	1	QW	6 + 2 off treatment	

* Continuous infusion for 24 hours

DCF modifications

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Docetaxel	50	1	Q2W		22
Oxaliplatin	85	1	Q2W		
5-FU	1200*	1-2	Q2W		

* Continuous infusion for 24 hours

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Docetaxel	40	1	Q2W		23
Leucovorin	400	1	Q2W		
5-FU	400	1	Q2W		
5-FU	1000*	1-2	Q2W		
Cisplatin	40	3	Q2W		

* Continuous infusion for 24 hours

ECF modifications

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Epirubicin	50	1	Q3W		2, 3
Cisplatin	60	1	Q3W		
Capecitabine	625 PO BID	1-21	Q3W		

藥品名	劑量 mg/m ²	給藥日	頻率	週期	參考文獻
Epirubicin	50	1	Q3W		2, 3
Oxaliplatin	130	1	Q3W		
Capecitabine	625 PO BID	1-21	Q3W		

參考文獻

1. Bang YJ, Van Cutsem E, Feyereislova A, et al. Trastuzumab in combination with chemotherapy versus chemotherapy alone for treatment of HER2-positive advanced gastric or gastro-oesophageal junction cancer (ToGA): a phase 3, open-label, randomised controlled trial. *Lancet* 2010;376:687-697.
2. Cunningham D, Starling N, Rao S, et al. Capecitabine and oxaliplatin for advanced esophagogastric cancer. *N Engl J Med* 2008;358:36-46
3. Sumpter K, Harper-Wynne C, Cunningham D, et al. Report of two protocol planned interim analyses in a randomised multicentre phase III study comparing capecitabine with fluorouracil and oxaliplatin with cisplatin in patients with advanced oesophagogastric cancer receiving ECF. *Br J Cancer* 2005;92:1976-1983.
4. Lorenzen S, Schuster T, Porschen R, et al. Cetuximab plus cisplatin-5-fluorouracil versus cisplatin-5-fluorouracil alone in first-line metastatic squamous cell carcinoma of the esophagus: a randomized phase II study of the Arbeitsgemeinschaft Internistische Onkologie. *Ann Oncol* 2009;20:1667-1673.
5. Al-Batran S-E, Hartmann JT, Probst S, et al. Phase III trial in metastatic gastroesophageal adenocarcinoma with fluorouracil, leucovorin plus either oxaliplatin or cisplatin: a study of the Arbeitsgemeinschaft Internistische Onkologie. *J Clin Oncol* 2008;26:1435-1442.
6. Bouche O, Raoul JL, Bonnetain F, et al. Randomized multicenter phase II trial of a biweekly regimen of fluorouracil and leucovorin (LV5FU2), LV5FU2 plus cisplatin, or LV5FU2 plus irinotecan in patients with previously untreated metastatic gastric cancer: a Federation Francophone de Cancerologie Digestive Group Study--FFCD 9803. *J Clin Oncol* 2004;22:4319-4328.
7. Kang YK, Kang WK, Shin DB, et al. Capecitabine/cisplatin versus 5-fluorouracil/cisplatin as first-line therapy in patients with advanced gastric cancer: a randomised phase III noninferiority trial. *Ann Oncol* 2009;20:666-673.
8. Enzinger PC, Burtness B, Hollis D, et al. CALGB 80403/ ECOG 1206: A randomized phase II study of three standard chemotherapy regimens (ECF, IC, FOLFOX) plus cetuximab in metastatic esophageal and GE junction cancer [abstract]. *J Clin Oncol* 2010;28 (Suppl 15):Abstract 4006.
9. Kim GM, Jeung HC, Rha SY, et al. A randomized phase II trial of S-1-oxaliplatin versus capecitabine-oxaliplatin in advanced

- gastric cancer. *Eur J Cancer* 2012;48:518-526.
10. Ilson DH, Forastiere A, Arquette M, et al. A phase II trial of paclitaxel and cisplatin in patients with advanced carcinoma of the esophagus. *Cancer J* 2000;6:316-323.
 11. Petrasch S, Welt A, Reinacher A, et al. Chemotherapy with cisplatin and paclitaxel in patients with locally advanced, recurrent or metastatic oesophageal cancer. *Br J Cancer* 1998;78:511-514.
 12. Gadgeel SM, Shields AF, Heilbrun LK, et al. Phase II study of paclitaxel and carboplatin in patients with advanced gastric cancer. *Am J Clin Oncol* 2003;26:37-41.
 13. Kim JY, Do YR, Park KU, et al. A multi-center phase II study of docetaxel plus cisplatin as first-line therapy in patients with metastatic squamous cell esophageal cancer. *Cancer Chemother Pharmacol* 2010;66:31-36.
 14. Ajani JA, Fodor MB, Tjulandin SA, et al. Phase II multi-institutional randomized trial of docetaxel plus cisplatin with or without fluorouracil in patients with untreated, advanced gastric, or gastroesophageal adenocarcinoma. *J Clin Oncol* 2005;23:5660-5667.
 15. Ohtsu A, Shimada Y, Shirao K, et al. Randomized phase III trial of fluorouracil alone versus fluorouracil plus cisplatin versus uracil and tegafur plus mitomycin in patients with unresectable, advanced gastric cancer: The Japan Clinical Oncology Group Study (JCOG9205). *J Clin Oncol* 2003;21:54-59.
 16. Hong YS, Song SY, Lee SI, et al. A phase II trial of capecitabine in previously untreated patients with advanced and/ or metastatic gastric cancer. *Ann Oncol* 2004;15:1344-1347.
 17. Albertsson M, Johansson B, Friesland S, et al. Phase II studies on docetaxel alone every third week, or weekly in combination with gemcitabine in patients with primary locally advanced, metastatic, or recurrent esophageal cancer. *Med Oncol* 2007;24:407-412.
 18. Ford HE, Marshall A, Bridgewater JA, et al. Docetaxel versus active symptom control for refractory oesophagogastric adenocarcinoma (COUGAR-02): an open-label, phase 3 randomised controlled trial. *Lancet Oncol* 2014;15:78-86.
 19. Ajani JA, Ilson DH, Daugherty K, et al. Activity of taxol in patients with squamous cell carcinoma and adenocarcinoma of the esophagus. *J Natl Cancer Inst* 1994;86:1086-1091.
 20. Ilson DH, Wadleigh RG, Leichman LP, Kelsen DP. Paclitaxel given by a weekly 1-h infusion in advanced esophageal cancer. *Ann Oncol* 2007;18:898-902.

21. Guimbaud R, Louvet C, Ries P, et al. Prospective, randomized, multicenter, phase III study of fluorouracil, leucovorin, and irinotecan versus epirubicin, cisplatin, and capecitabine in advanced gastric adenocarcinoma: A French Intergroup (Fédération Francophone de Cancérologie Digestive, Fédération Nationale des Centres de Lutte Contre le Cancer, and Groupe Coopérateur Multidisciplinaire en Oncologie) Study. *J Clin Oncol* 2014;32:3520-3526.
22. Shah MA, Janjigian YY, Stoller R, et al. Randomized multicenter phase II study of modified docetaxel, cisplatin, and fluorouracil (DCF) versus DCF plus growth factor support in patients with metastatic gastric adenocarcinoma: a study of the US Gastric Cancer Consortium. *J Clin Oncol* 2015;33:3874-3879.
23. Shankaran V, Mulcahy MF, Hochster HS, et al. Docetaxel, oxaliplatin, and 5-fluorouracil for the treatment of metastatic or unresectable gastric or gastroesophageal junction (GEJ) adenocarcinomas: Preliminary results of a phase II study. *Gastrointestinal Cancers Symposium 2009:Abstract 47*
24. Lin YC, Liu HE, et al. Clinical benefit and response in patients with gastric cancer to weekly 24-hour infusion of high-dose 5-fluorouracil (5-FU) and leucovorin (LV). *Anticancer Res.* 1999;19(6C):5615-20.
25. Kim Y, Kim M, Lee SH, et al. Paclitaxel and cisplatin combination chemotherapy for advanced gastric cancer failed to 5-fluorouracil-based chemotherapy. *Journal of Clinical Oncology* 2010; 28(15).
26. Prithviraj GK, Baksh K, Fulp W, et al. Carboplatin and paclitaxel as first-line treatment of unresectable or metastatic esophageal or gastric cancer. *Dis Esophagus.* 2015 Nov-Dec;28(8):782-7.
27. Hall PS, Swinson D, Waters JS, et al. Optimizing chemotherapy for frail and elderly patients (pts) with advanced gastroesophageal cancer (aGOAC): The GO2 phase III trial. *J Clin Oncol* 2019;37:4006.
28. Wolff K, Wein A, Reulbach U, et al. Weekly high-dose 5-fluorouracil as a 24-h infusion and sodium folinic acid (AIO regimen) plus irinotecan in patients with locally advanced nonresectable and metastatic adenocarcinoma or squamous cell carcinoma of the oesophagus: a phase II trial. *Anticancer Drugs* 2009;20:165-173.
29. Fuchs CS, Doi T, Jang RW, et al. Safety and Efficacy of Pembrolizumab Monotherapy in Patients With Previously Treated Advanced Gastric and Gastroesophageal Junction Cancer: Phase 2 Clinical KEYNOTE-059 Trial. *JAMA Oncol.* 2018 May 10;4(5):e180013. doi: 10.1001/jamaoncol.2018.0013. Epub 2018 May 10. Erratum in: *JAMA Oncol.* 2019 Apr 1;5(4):579.

PMID: 29543932; PMCID: PMC5885175.

30. Shitara K, Van Cutsem E, Bang YJ, et al. Efficacy and Safety of Pembrolizumab or Pembrolizumab Plus Chemotherapy vs Chemotherapy Alone for Patients With First-line, Advanced Gastric Cancer: The KEYNOTE-062 Phase 3 Randomized Clinical Trial. *JAMA Oncol.* 2020 Oct 1;6(10):1571-1580. doi: 10.1001/jamaoncol.2020.3370. PMID: 32880601; PMCID: PMC7489405.
31. Janjigian YY, Shitara K, Moehler M, et al. First-line nivolumab plus chemotherapy versus chemotherapy alone for advanced gastric, gastro-oesophageal junction, and oesophageal adenocarcinoma (CheckMate 649): a randomised, open-label, phase 3 trial. *Lancet.* 2021 Jul 3;398(10294):27-40. doi: 10.1016/S0140-6736(21)00797-2. Epub 2021 Jun 5. PMID: 34102137; PMCID: PMC8436782.
32. Doki Y, Ajani JA, Kato K, et al. Nivolumab Combination Therapy in Advanced Esophageal Squamous-Cell Carcinoma. *N Engl J Med.* 2022 Feb 3;386(5):449-462. doi: 10.1056/NEJMoa2111380. PMID: 35108470.

《胃癌放射治療共識》

一、治療範圍

1. 胃部腫瘤
2. 手術後殘餘腫瘤或腫瘤原發部位
3. 腹腔內淋巴轉移病灶
4. 腹腔淋巴轉移高風險範圍

二、治療劑量 / 次數

1. 術後無殘餘：45-50.4Gy / (每次 1.8-2.0Gy)
2. 術後有殘餘：50-55.8Gy) / (每次 1.8-2.0Gy)

三、治療方式：

使用強度調控放射治療技術，包含弧形及螺旋放射規劃，可考慮搭配影像導引治療，治療選擇可使用同步照射高與低危險部位的方式或先給予整個照射部位部份劑量照射後，再針對高危險部位加強劑量。

四、參考文獻：

1. NCCN clinical practice guidelines in oncology-Gastric cancer. version 4. 2024.
2. Willett CG, et al. Principles and Practice of Radiation Oncology. 5th edition: Philadelphia: Lippincott Williams & Wilkins; 2007. pp. 1318-1335.
3. RTOG 0114 Protocol Information Randomized Phase II Comparison of Two Cisplatin-Paclitaxel Containing Chemoradiation Regimens in Resected Gastric Cancers 4.2011.