前言

- 我國大腸直腸癌發生人數從84年的4,217人，到95年發生人數增至10,248人，首次超越肝癌，成為我國癌症發生人數最多的癌症。
- 已開發國家大腸直腸癌死亡率的下降，被認為是有效篩檢的結果。高風險群的篩檢可以發現癌病變前的存在，減少大腸直腸癌的發生以及死亡率。
- 本指引適用於大腸直腸癌的診斷及治療的原則。依據醫院實際的情況建立，並參考美NationalComprehensive Cancer Network (NCCN) 的 Clinical Practise Guidelines，定期修訂。

本共識依下列參考資料修改版本：

本院共識參考NCCN Clinical Practice Guidelines in Oncology
Colon-rectum cancer V.3.2014

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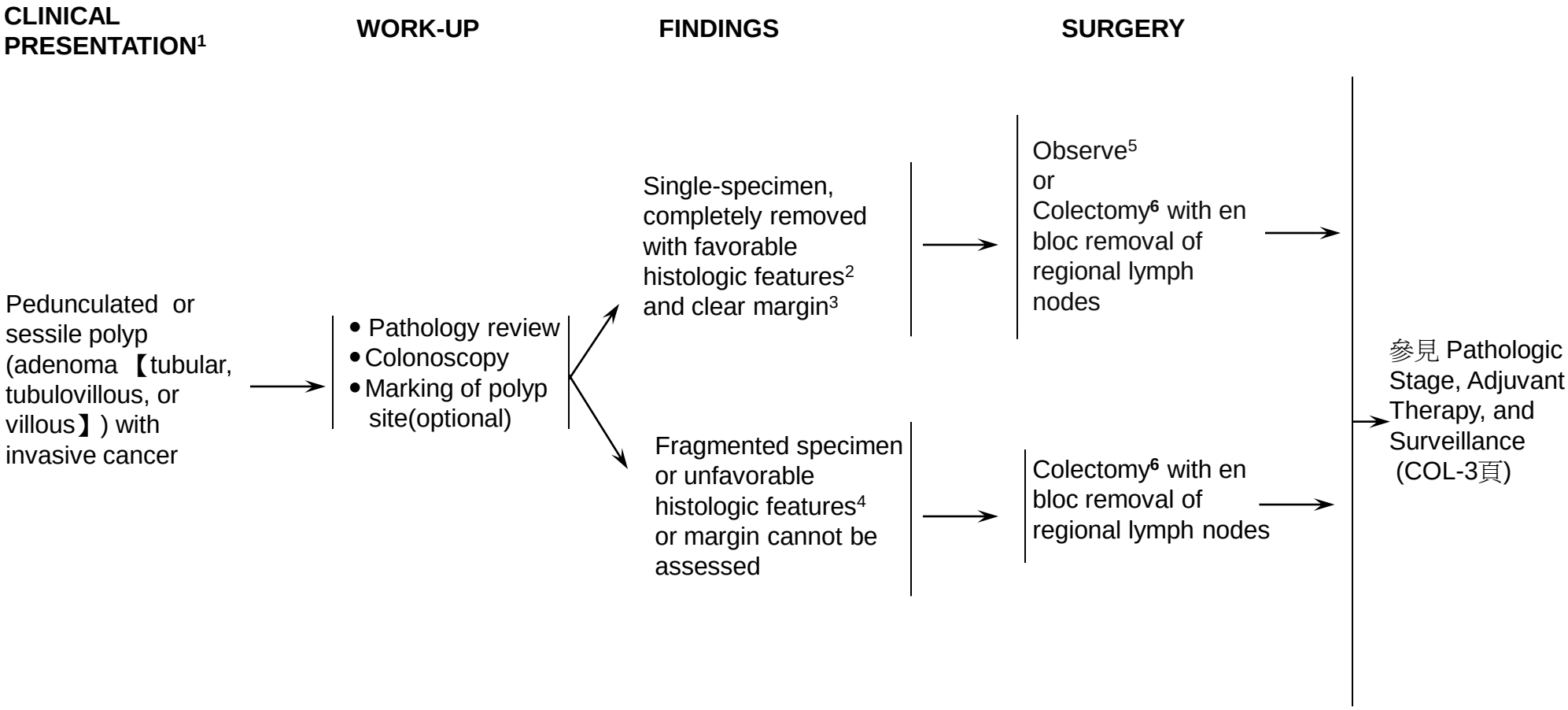


1 All patients with colon cancer should be counseled for family history.
2 favorable histologic features: grad 1 or 2, no angiolymphatic invasion, and negative margin of resection
3 Cancer less than 1 mm from the resected margin regardless of the portion of the polyp under evaluation.
4 unfavorable histologic features: grad 3 or 4, angiolymphatic invasion, or a postive margin
5 Observation may be considered, with the understanding that there is significantly greater incidence of adverse outcome (residual disease, recurrent disease, mortality, hematogenous metastasis, but not lymph node metastasis) than polypoid malignant polyps.
6 參見 Principles of Surgery (COL-A頁).

直結腸癌臨床指引

CLINICAL PRESENTATION[1] **WORK-UP** **FINDINGS** **SURGERY**

Colon cancer appropriate for resection →

- Pathology review
- Colonoscopy
- CBC, platelets, chemistry profile, CEA
- Chest/Abdominal/pelvic CT[5]
- Chest x-ray
- Abdominal ultrasound
- PET –CT (optional)
- Endorectal ultrasound or pelvic MRI for rectal cancer

Resectable, nonobstructing → Colectomy[2] with en bloc removal of regional lymph nodes →

Resectable, obstructing (unprepped) →

1. Resection with diversion → Colectomy[2] with en bloc removal of regional lymph nodes →
   or
2. One-stage colectomy[2] with en bloc removal of regional lymph nodes →
   or
3. Diversion → Colectomy[2] with en bloc removal of regional lymph nodes →
   or
4. Stent[4]

→ 參見 Pathologic Stage, Adjuvant Therapy, and Surveillance (COL-3頁)

Unresectable or medically inoperable → Palliative therapy[4] → 參見Chemotherapy for Advanced or Metastatic Disease (COL-B頁)

Suspected or proven metastatic adenocarcinoma from large bowel → 參見 Management of suspected or proven metastases (COL-5頁)

[1] All patients with colon cancer should be counseled for family history.
[2] 參見 Principles of Surgery (COL-A頁).
[3] The payment is **not** covered by National Health Insurance.
4 Palliative therapy may include diversion surgery, RT for uncontrolled bleeding, stent for obstruction, supportive care.
5 CT should be with IV and oral contrast. Consider abd/pelvic MRI with MRI contrast plus a non-contrast chest CT if either CT of abd/pelvis is inadequate or if patient has a contraindication to CT with contrast.

直結腸癌臨床指引—結腸癌

PATHOLOGIC STAGE	ADJUVANT THERAPY	SURVEILLANCE[1]
Tis; T1, N0, M0; T2, N0, M0	None	• History and physical every 3-6 mo for 2 y, then every 6 mo for a total of 5 y • CEA[2] every 3-6 mo for 2 y, then every 6 mo for a total of 5 y for *T2 or greater lesions* • Chest/Abdominal/pelvic CT may be considered for patients at high risk for recurrence[3] • Colonoscopy in 1 y, repeat in 1 y if abnormal or at least every 2-3 y if negative for polyps If no preoperative colonoscopy due to obstructing lesion, colonoscopy in 3-6 mo
T3,N0,M0 (no high risk features)	Clinical trial or Observation	
T3, N0, M0; at high risk For systemic recurrence[4] Or T4, N0, M0	Adjuvant C/T[1] or Clinical trial or Observation	

參見 Recurrence and Work-up (COL-8頁)

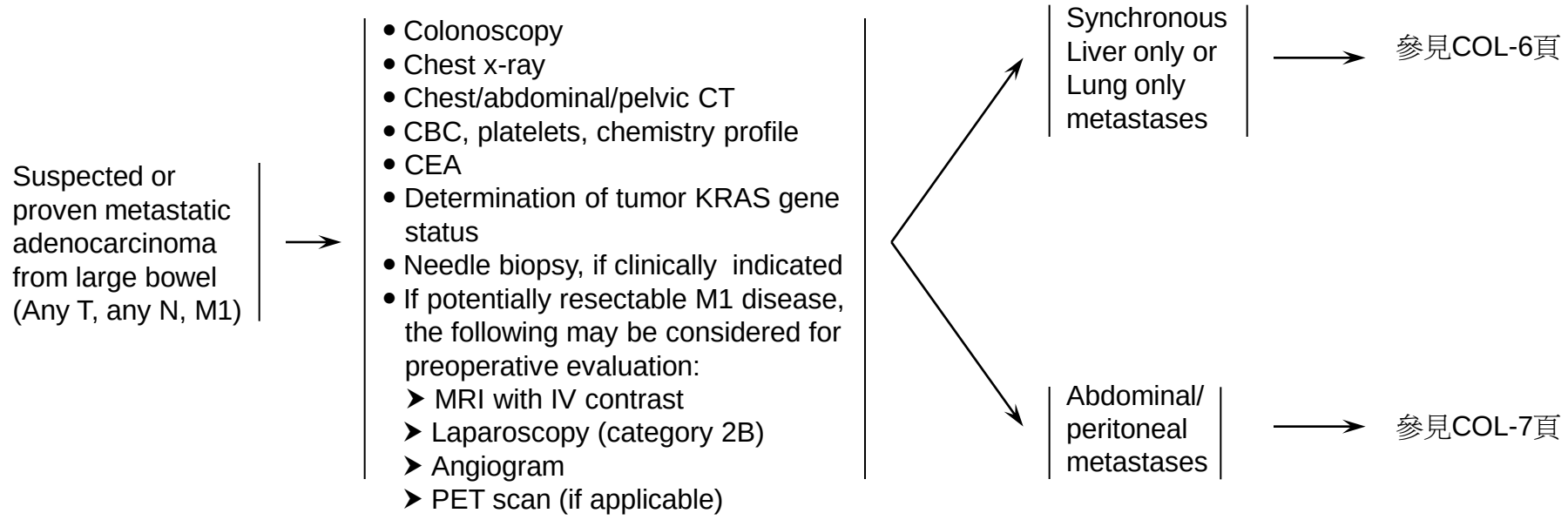
Node positive disease, 參見COL-4頁

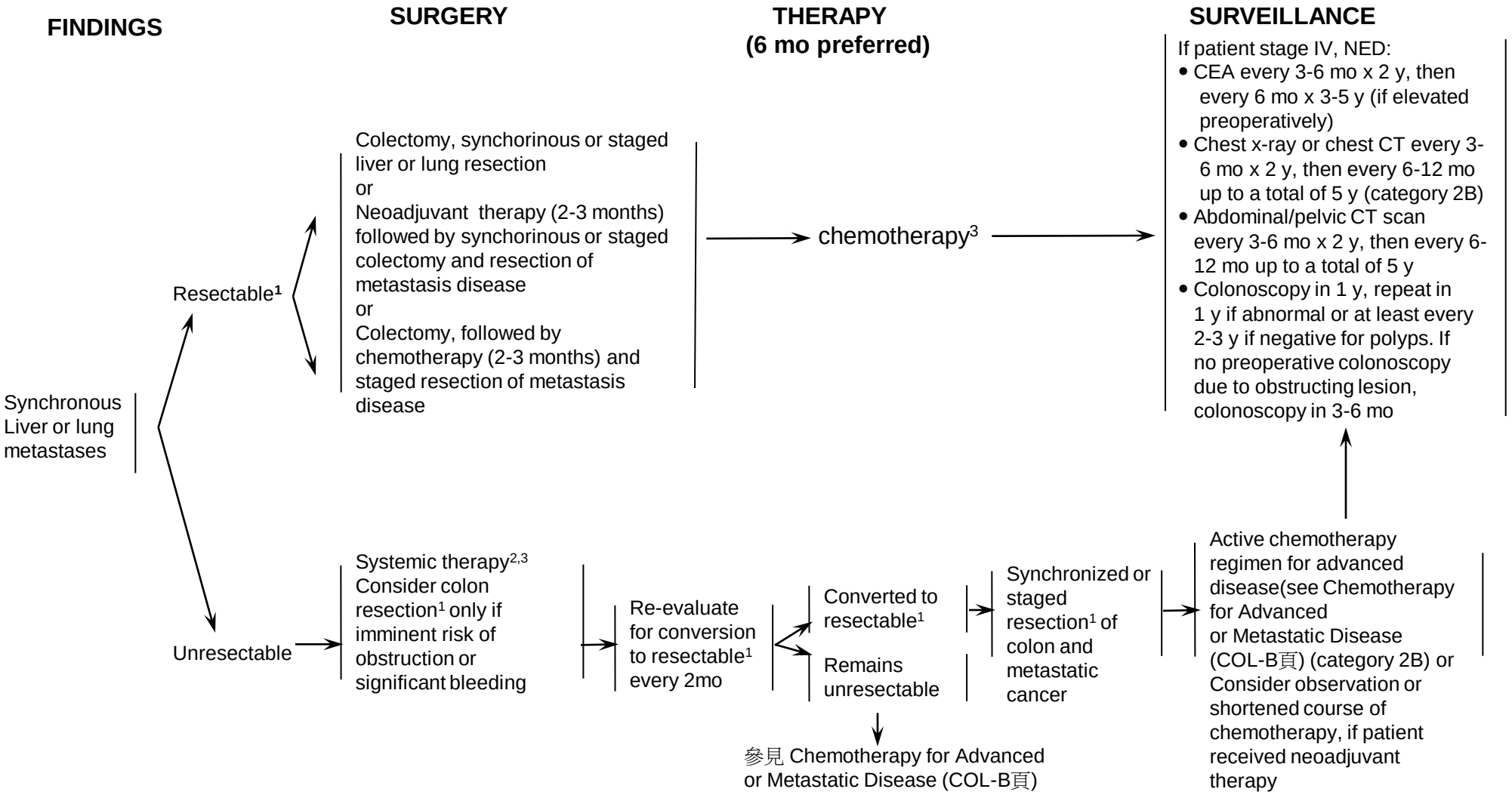
1 chemoregimen 見Appendix-3頁
2 If CEA is elevated at initial diagnosis, CEA is a surrogate marker for disease recurrence or progression
3 CT scan may be useful for patients at high risk for recurrence (e.g., perineural or venous invasion of tumor or poorly differentiated tumors).
4 high risk factors for recurrence; poorly differentiated histology, lymphatic/vascular invasion, bowel obstruction, <12 lymph nodes examined, perineural invasion, localized perforation or close, indeterminate or positive margin.

PATHOLOGIC STAGE	ADJUVANT THERAPY	SURVEILLANCE[1]
T1-4, **N1-2**, M0	Adjuvant C/T[1] or Adjuvant RT ± C/T[4]	• History and physical every 3-6 mo for 2 y, then every 6 mo for a total of 5 y • CEA[2] every 3-6 mo for 2 y, then every 6 mo for a total of 5 y for *T2 or greater lesions* • Chest/Abdominal/pelvic CT may be considered for patients at high risk for recurrence[3] • Colonoscopy in 1 y, repeat in 1 y if abnormal or at least every 2-3 y if negative for polyps If no preoperative colonoscopy due to obstructing lesion, colonoscopy in 3-6 mo

→ 參見 Recurrence and Work-up (COL-8頁)

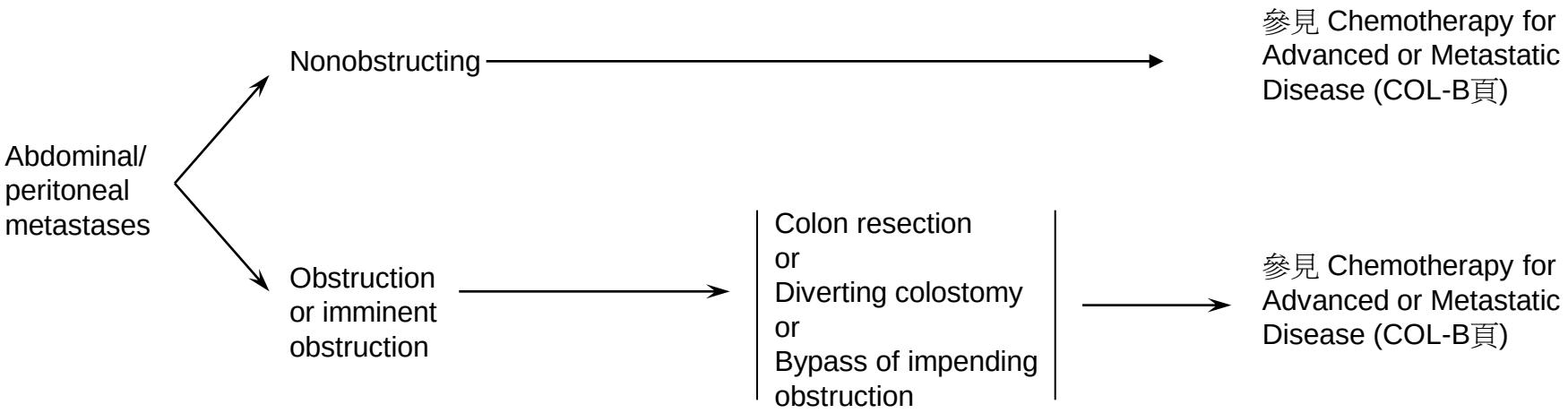
1 chemoregimen 見Appendix-3頁
2 If CEA is elevated at initial diagnosis, CEA is a surrogate marker for disease recurrence or progression.
3 CT scan may be useful for patients at **high risk for recurrence** (e.g., perineural or venous invasion of tumor, or poorly differentiated tumors).
4 (1) tumors invade adjoining structure (T4N0 or N+)
(2)tumors complicated by perforation or fistula
(3) incomplete resection (microscopic residual or gross residual)


CLINICAL PRESENTATION
WORK-UP
FINDINGS
Suspected or proven metastatic adenocarcinoma from large bowel (Any T, any N, M1)
• Colonoscopy
• Chest x-ray
• Chest/abdominal/pelvic CT
• CBC, platelets, chemistry profile
• CEA
• Determination of tumor KRAS gene status
• Needle biopsy, if clinically indicated
• If potentially resectable M1 disease, the following may be considered for preoperative evaluation:
➤ MRI with IV contrast
➤ Laparoscopy (category 2B)
➤ Angiogram
➤ PET scan (if applicable)
Synchronous Liver only or Lung only metastases
參見COL-6頁
Abdominal/ peritoneal metastases
參見COL-7頁

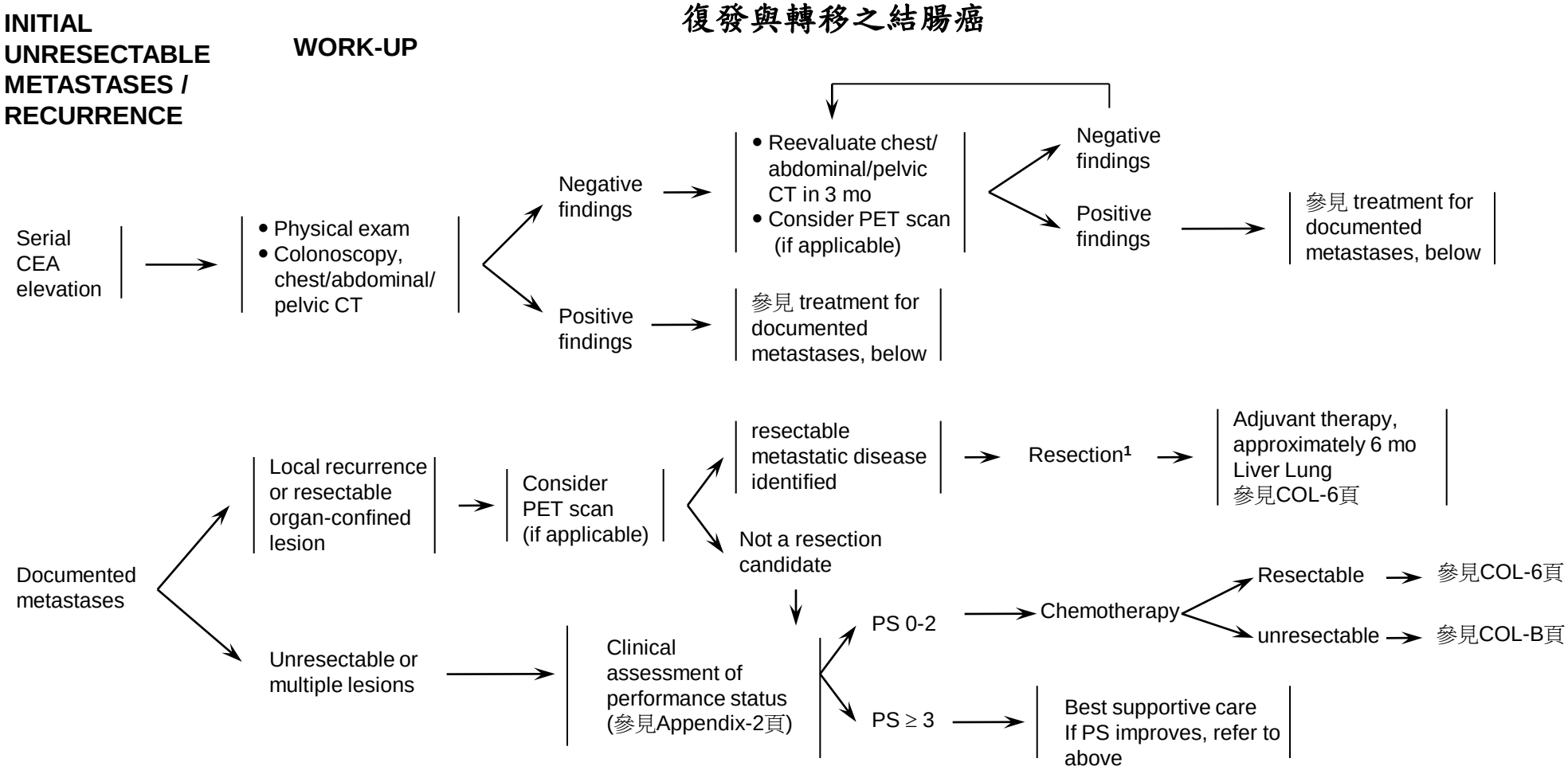


1 參見 Principles of Surgery (COL-A頁).
2 When preoperative therapy is planned, surgical re-evaluation should be planned within 8-10 weeks after initiation of treatment to minimize hepatic toxicity.
3 chemoregimen 見Appendix-3頁

FINDINGS **SURGERY** **ADJUVANT THERAPY**



復發與轉移之結腸癌



[1] Consider combination chemotherapy (Oxa-FL or Irino-FL) as neoadjuvant treatment.

結腸癌之手術原則

Colectomy

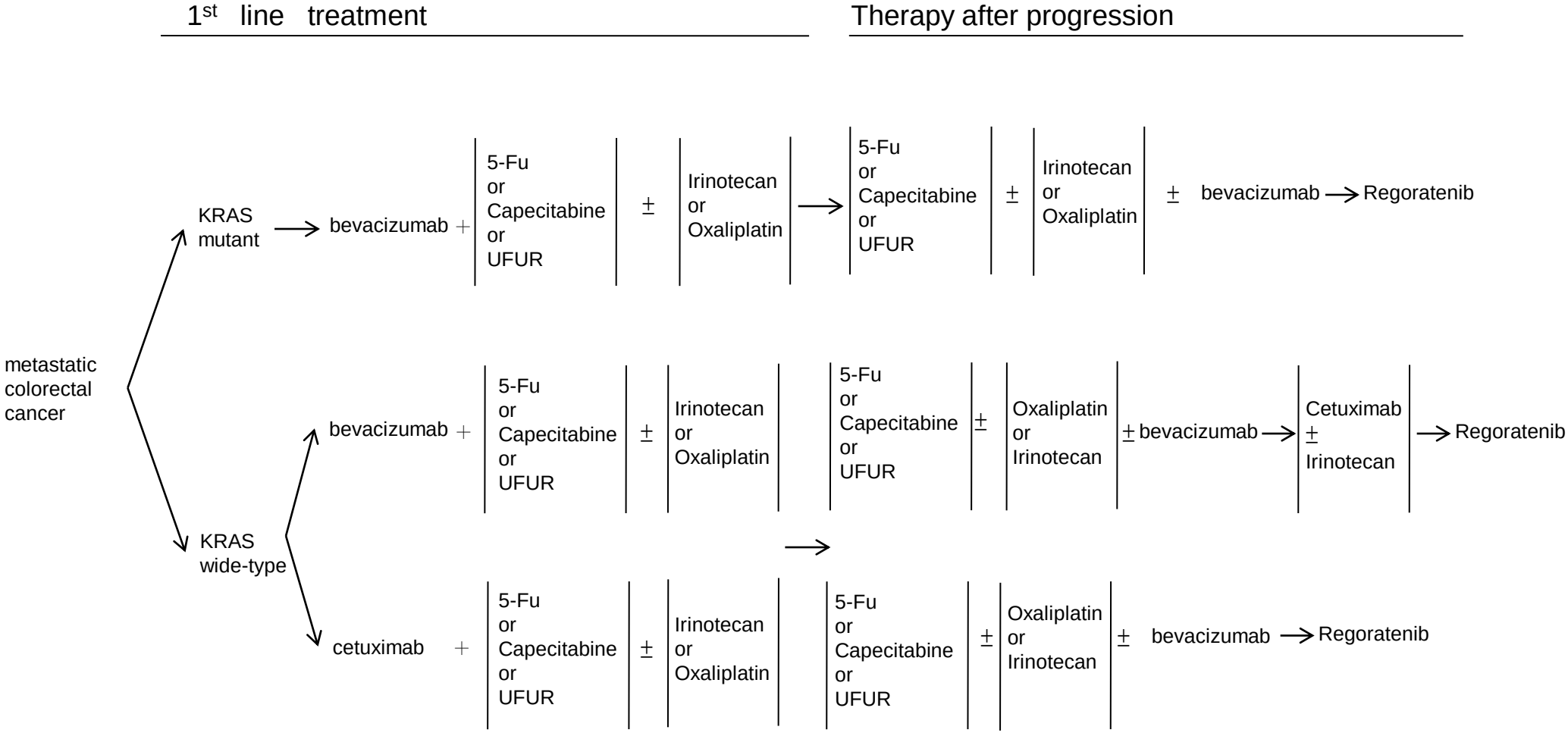
- Lymphadenectomy
  - ➤ Lymph nodes at the origin of feeding vessel should be identified for pathologic exam.
  - ➤ Lymph nodes outside the field of resection considered suspicious should be biopsied or removed.
  - ➤ Positive nodes left behind indicate an incomplete (R2) resection.
  - ➤ Even for Stage III disease, the number of lymph nodes correlates with survival.

- Laparoscopic-assisted colectomy may be considered based upon the following criteria:
  - ➤ Surgeon with experience performing laparoscopically-assisted colorectal operations.
  - ➤ No advanced local or metastatic disease except for palliation.
  - ➤ Not indicated for acute bowel obstruction or perforation from cancer.
  - ➤ Thorough abdominal exploration is required.

- Management of patients with carrier status of known HNPCC
  - ➤ Consider more extensive colectomy for patients with a strong family history of colon cancer or young age (< 50 y).

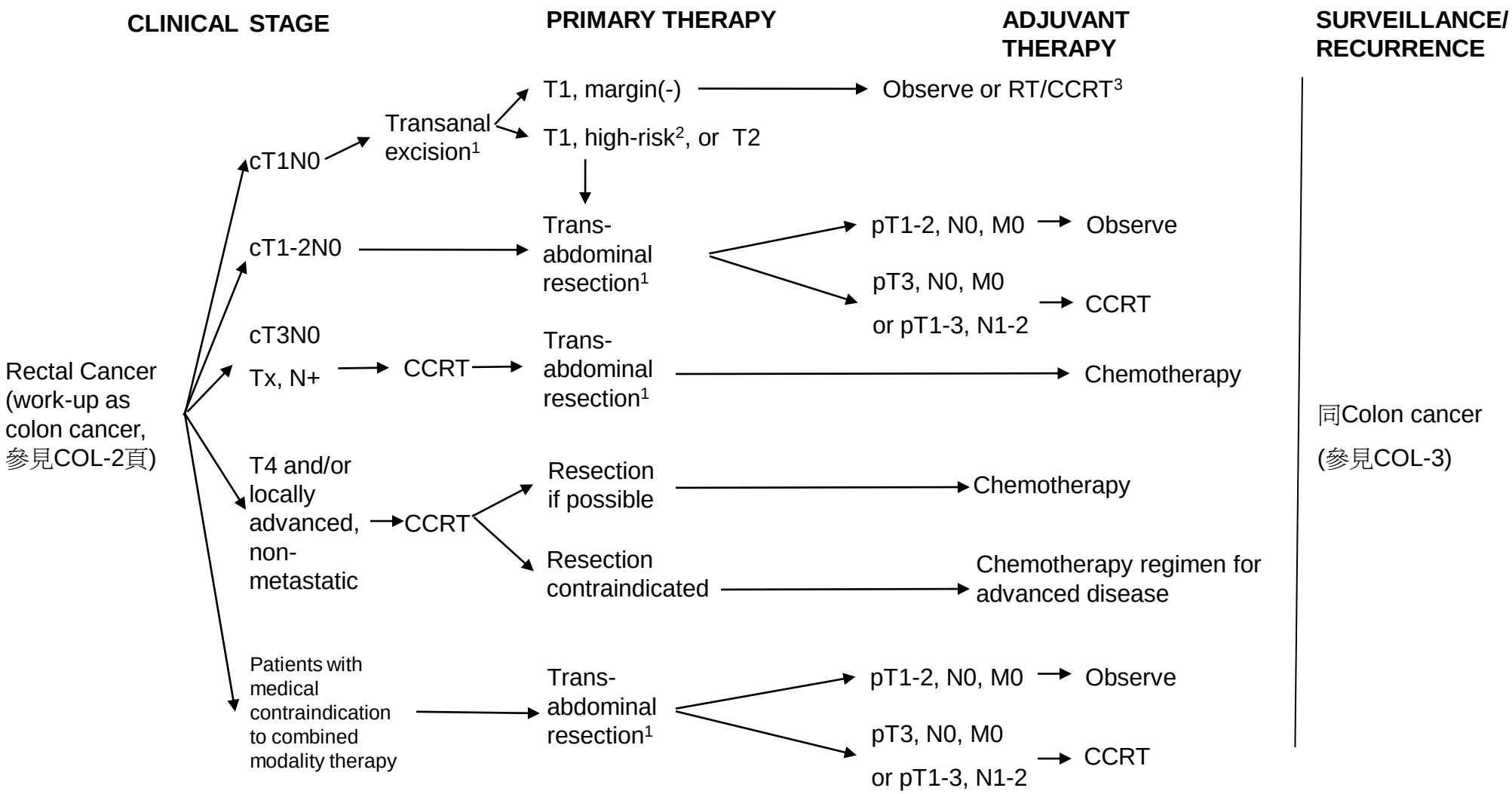
- Resection needs to be complete to be considered curative.

- Best results are seen with solitary lesion when resecting metastatic liver disease.

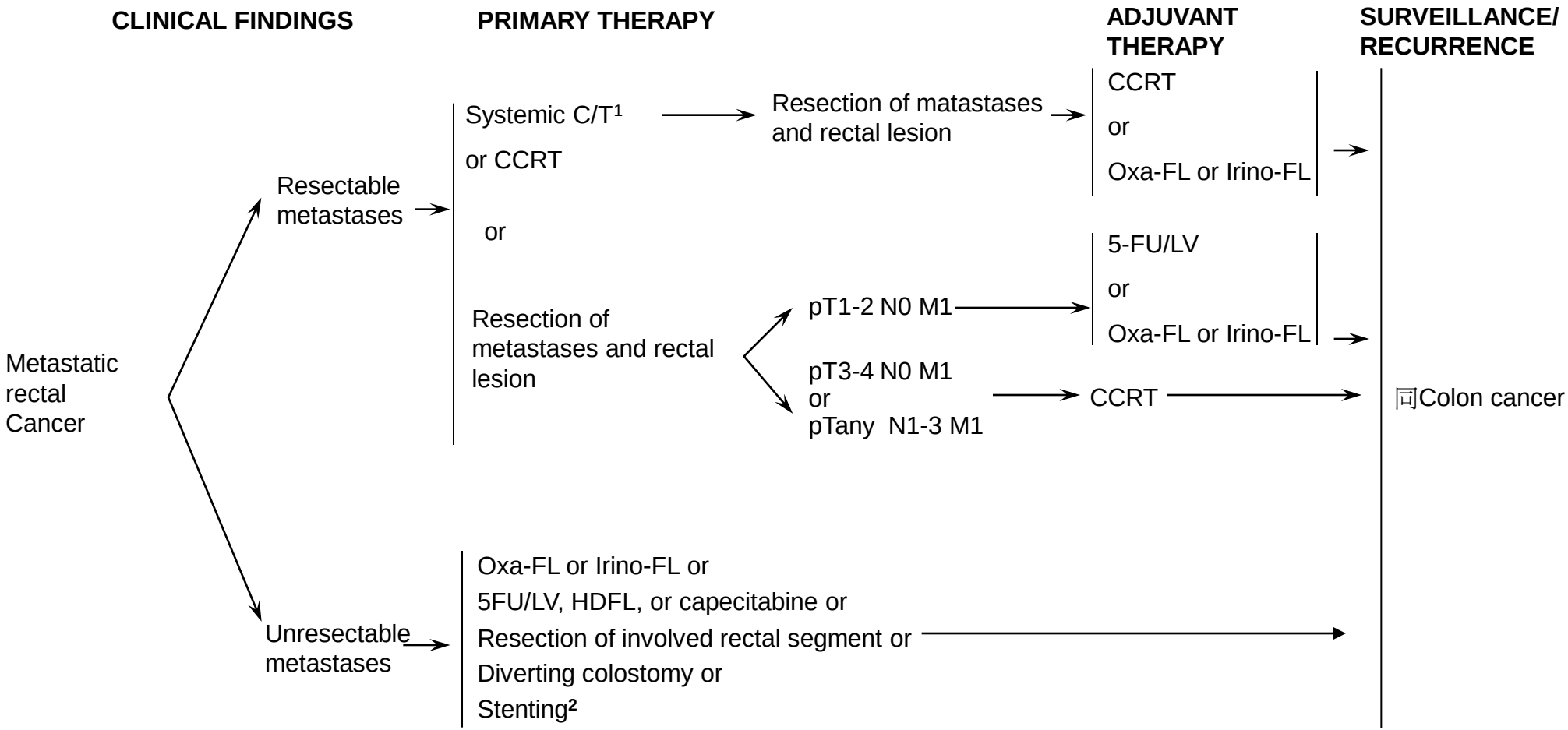


Cetuximab（如Erbitux）與Bevacizumab (如Avastin) 請參考健保給付標準(9.37及9.27)

直結腸癌臨床指引—直腸癌



1 參見 Principles of Surgery (REC-A頁)
2 high risk ; postive margins, poorly differentiated histology, lymphatic/vascular invasion, or sm3 invasion
3 參考tral:CALGB8984



Note：More regimens referred to Page Appendix-3頁

[1] Systemic C/T原則：5-Fu containing doublets in p`t good performance.
Avastin, Erbitux (EGFR(+) & K-Ras WT) is not reimbursed for claim.

[2] The stent is **NOT** paid by National Health Insurance, Taiwan.

直腸癌之手術原則(1 of 2)

Transanal excision:

- Criteria
  - < 30% circumference of bowel
  - < 3 cm in size
  - Margin clear (> 3 mm)
  - Mobile, nonfixed
  - Within 8 cm of anal verge
  - T1
  - Fragmented polyp with cancer, or indeterminate pathology (a full work-up may be initiated if local excision reveals invasive cancer)
  - No lymphovascular (LVI) or perineural invasion
  - Well to moderately differentiated
  - No evidence of lymphadenopathy on pretreatment imaging

Transabdominal Resection: Abdominoperineal resection or low anterior resection or coloanal anastomosis

- Management principles
  - Removal of primary tumor with adequate margins.
  - Treatment of draining lymphatics.
  - Restoration of organ integrity, if possible.
- Mesorectal excision
  - Reduces positive radial margin rate.
  - Extend 4-5 cm below distal edge of tumors for an adequate mesorectal excision.
  - Full rectal mobilization allows for a negative distal margin and adequate mesorectal excision.
- Lymph node dissection
  - Biopsy or remove clinically suspicious nodes beyond the field of resection if possible.
  - Extended resection not indicated in the absence of clinically suspected nodes.

直腸癌之手術原則(2 of 2)
CRITERIA FOR RESECTABILITY OF METASTASES

Liver

- Complete resection must be feasible based on anatomic grounds and the extent of disease, maintenance of noble hepatic function is required.
- There should be no unresectable extrahepatic sites of disease.
- Re-evaluation for resection can be considered in otherwise unresectable patients after neoadjuvant therapy.
- Hepatic resection is the treatment of choice for resectable liver metastases from colorectal cancer.
- Ablative techniques should be considered in conjunction with resection in unresectable patients.

Lung

- Complete resection based on the anatomic location and extent of disease with maintenance of adequate function is required.
- Resectable extrapulmonary metastases do not preclude resection.
- The primary tumor must be controlled.
- Re-resection can be considered in selected patients.

附錄：Performance status (PS) scales

ECOG scale	Description：ECOG scale
0	Asymptomatic；normal activity
1	Symptomatic；ambulatory；able to carry out activities of daily living
2	Symptomatic；in bed less than 50% of the day；occasionally needs nursing care
3	Symptomatic；in bed more than 50% of the day needs nursing care
4	Bed-ridden；may need hospitalization

Table 1. Definitions for T, N, M

Primary Tumor (T)
TX Primary tumor cannot be assessed
T0 No evidence of primary tumor
Tis Carcinoma in situ: intraepithelial or invasion of lamina propria a
T1 Tumor invades submucosa
T2 Tumor invades muscularis propria
T3 Tumor invades through the muscularis propria into the pericolorectal tissues
T4a Tumor penetrates to the surface of the visceral peritoneum b
T4b Tumor directly invades or is adherent to other organs or structures b,c
Regional Lymph Nodes (N)
NX Regional lymph nodes cannot be assessed
N0 No regional lymph node metastasis
N1 Metastasis in 1-3 regional lymph nodes
N1a Metastasis in one regional lymph node
N1b Metastasis in 2-3 regional lymph nodes
N1c Tumor deposit(s) in the subserosa, mesentery, or nonperitonealized pericolic or perirectal tissues without regional nodal metastasis
N2 Metastasis in four or more regional lymph nodes
N2a Metastasis in 4-6 regional lymph nodes
N2b Metastasis in seven or more regional lymph nodes
Distant Metastasis (M)
M0 No distant metastasis
M1 Distant metastasis
M1a Metastasis confined to one organ or site (eg, liver, lung, ovary, nonregional node)
M1b Metastases in more than one organ/site or the peritoneum

Table 2. Anatomic Stage/Prognostic Groups

Stage	TNM	Dukes *	MAC *
0	Tis	N0 M0	-
I	T1	N0 M0	A
	T2	N0 M0	A
IIA	T3	N0 M0	B1
IIB	T4a	N0 M0	B2
IIB	T4b	N0 M0	B2
IIC	T4b	N0 M0	B3
IIIA	T1-T2	N1/N1c M0	C1
	T1	N2a M0	C1
IIIB	T3-T4a	N1/N1c M0	C2
	T2-T3	N2a M0	C1/C2
	T1-T2	N2b M0	C1
IIIC	T4a	N2a M0	C2
	T3-T4a	N2b M0	C2
	T4b	N1-N2 M0	C3
IVA	Any T	Any N M1a	-
IVB	Any T	Any N M1b	-

Note : cTNM is the clinical classification, pTNM is the pathologic classification. The y prefix is used for those cancers that are classified after neoadjuvant pretreatment (e.g., ypTNM). Patients who have a complete pathologic response are ypT0N0cM0 that may be similar to Stage Group 0 or I. The r prefix is to be used for those cancers that have recurred after a disease-free interval (rTNM).

*Dukes B is a composite of better (T3 N0 M0) and worse (T4 N0 M0) prognostic groups, as is Dukes C (Any TN1 M0 and Any T N2 M0).

MAC is the modified Astler-Coller classification.

Updated on 2008/3/4

Oxaliplatin/5-FU/Leucovorin and capecitabine can be options of adjuvant chemotherapy (slide 3,4).

Updated on 2009/11/19

Adding Arm of "unresectable" as an emerging potential of increasing curative resectibility by add " Targeted therapy" to systemic chemotherapy.

Updated on 2010/04/27

Detailing of systemic chemotherapy can be very complicated and subject to doctors preference, although base on evidences.

Updated on 2011/07/12

1. 修訂本院臨床指引COL-2頁，加入RT for uncontrolled bleeding, supportive care。
2. 修訂本院臨床指引COL-3頁，整合risk factor。
3. 修訂本院臨床指引COL-5頁，加入Determination of tumor KRAS gene status。
   建議stage IV個案於治療前應盡量提團隊會議討論。
4. 修訂本院臨床指引COL-7頁，將impending obstruction修改為obstructed or imminent obstruction。
5. 修訂本院臨床指引COL-3頁及COL-頁，SURVEILLANCE CEA follow up 3-6 month。

Updated on 2012/07/10

1. 修訂本院臨床指引COL-2頁，work up加入Endorectal ultrasound or pelvic MRI for rectal cancer。
2. 修訂本院臨床指引COL-6頁，respectable 可考慮neoadjuvant C/T or colectomy first。
3. 修訂本院臨床指引REC-2頁，Resectable metastases可考慮CCRT。

Updated on 2013/10/01, 2013/10/29

1. 依據健保局規定修訂COL-B頁。
2. 修訂本院臨床指引COL-1頁，參考NCCN guideline將polyp及sessile放在一起，然後分為有無risk factor，completely remove可採觀察。
3. 修訂本院臨床指引COL-4頁， T4、tumor invade adjoining structure, tumor complicated。

Updated on 2014/08/19

1. 依據NCCN guidelines V3 2014 colon cancer COL-2建議work up及surveillance應新增排檢項目chest CT。
2. 依據NCCN guidelines V3 2014 rectum cancer REC-3建議修訂cT1N0之治療指引。
3. 依據NCCN guidelines V3 2014 rectum cancer REC-3建議pT3N0M0應進行輔助性治療(化療、放療)。

Updated on 2015/01/06

1. 修訂REC-1，s/p Transanal excision, pT1N0MB, I ,margin(-), 依據tral:CALGB8984可選擇RT/CCRT。
2. 修訂COL-B，新增Regoratenib。