

# 食道癌簡介

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# 2011年國人常見癌症發生人數

發生序位	原發部位	2011年	
		個案數	標準化率 (單位：每10萬人口)
1	大腸	14,087	43.8
2	肝及肝內膽管	11,292	35.8
3	肺、支氣管及氣管	11,059	34.0
4	女性乳房	10,056	64.3
5	口腔、口咽及下咽	6,890	22.2
6	攝護腺	4,628	29.7
7	胃	3,824	11.6
8	皮膚	2,985	9.0
9	子宮體	1,722	10.9
10	子宮頸	1,673	10.5
	全癌症	92,682	295.1

註：1. 發生序位係以2011年癌症發生人數由高至低排序。

2. 資料來源：台灣癌症登記資料庫(不含原位癌)

# 2011年男性10大癌症發生率

發生序位	原發部位	2011年	
		個案數	標準化發生率 (單位：每10萬人口)
1	大腸	8,140	52.6
2	肝及肝內膽管	7,920	52.0
3	肺、支氣管及氣管	6,938	44.2
4	口腔、口咽及下咽	6,308	41.5
5	攝護腺	4,628	29.7
6	胃	2,430	15.2
7	食道	2,063	13.3
8	皮膚	1,590	9.9
9	膀胱	1,389	8.7
10	鼻咽	1,123	8.5
	<b>全癌症</b>	<b>51,965</b>	<b>339.4</b>

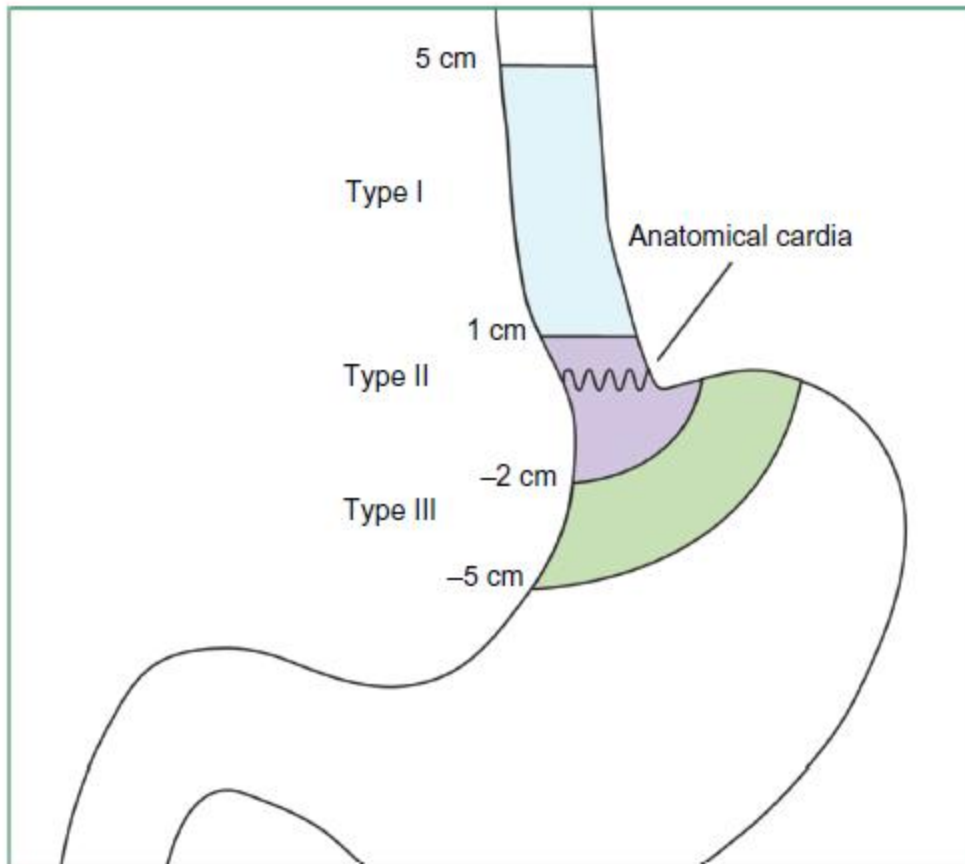
- 註：1.序位係以標準化發生率（每10萬人口）排序。  
 2.年齡標準化發生率，係以西元2000年世界標準人口為標準人口計算。  
 3.資料來源：台灣癌症登記資料(不含原位癌)

中上段: **Squamous cell carcinoma**---抽菸喝酒

上方常和下咽癌一起發生

下段(EG junction): **obesity and GE reflux;**

**adenocarcinoma**---照胃癌治療



## ***Barrett's esophagus***

無論中上或下方的早期病變(**moderate to severe dysplasia**):  
都可局部內視鏡刮除

除非反覆發生或開始  
**carcinoma in situ**(有零期病變):  
才考慮手術

# 常無早期症狀

1. 食道痛 胸痛 逆流燒心痛 不一定有 有也  
不一定是, 中晚期吞嚥困難及吐血已太慢
2. A. 針對有菸酒 及曾患頭頸癌患者  
B. 肥胖及有胃食道逆流病史者  
主動定期胃鏡檢查 方能早期發現早期治療

### **Primary tumor (T)**

- TX Primary tumor cannot be assessed
- T0 No evidence of primary tumor
- Tis High-grade dysplasia
- T1 Tumor invades lamina propria, muscularis mucosae, or submucosa
- T1a Tumor invades lamina propria or muscularis mucosae
- T1b Tumor invades submucosa
- T2 Tumor invades muscularis propria
- T3 Tumor invades adventitia
- T4 Tumor invades adjacent structures
- T4a Resectable tumor invading pleura, pericardium, or diaphragm
- T4b Unresectable tumor invading other adjacent structures aorta, vertebral body, trachea, etc

### **Regional lymph nodes (N)**

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in 1–2 regional lymph nodes
- N2 Metastasis in 3–6 regional lymph nodes
- N3 Metastasis in seven or more regional lymph nodes

### **Distant metastasis (M)**

- M0 No distant metastasis
- M1 Distant metastasis

### **Histologic grade (G)**

- GX Grade cannot be assessed-stage grouping as G1
- G1 Well-differentiated
- G2 Moderately differentiated
- G3 Poorly differentiated
- G4 Undifferentiated-stage grouping as G3 squamous

## Squamous cell carcinoma<sup>a</sup>

Stage	T	N	M	Grade	Tumor location <sup>b</sup>
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### Anatomic stage/prognostic groups

Stage 0	Tis	N0	M0	1, X	Any
Stage IA	T1	N0	M0	1, X	Any
Stage IB	T1	N0	M0	2-3	Any
	T2-3	N0	M0	1, X	Lower, X
Stage IIA	T2-3	N0	M0	1, X	Upper, Middle
	T2-3	N0	M0	2, 3	Lower, X
Stage IIB	T2-3	N0	M0	2, 3	Upper, Middle
	T1-2	N1	M0	Any	Any
Stage IIIA	T1-2	N2	M0	Any	Any
	T3	N1	M0	Any	Any
	T4a	N0	M0	Any	Any
Stage IIIB	T3	N2	M0	Any	Any
Stage IIIC	T4a	N1-2	M0	Any	Any
	T4b	Any	M0	Any	Any
	Any	N3	M0	Any	Any
Stage IV	Any	Any	M1	Any	Any

## Adenocarcinoma

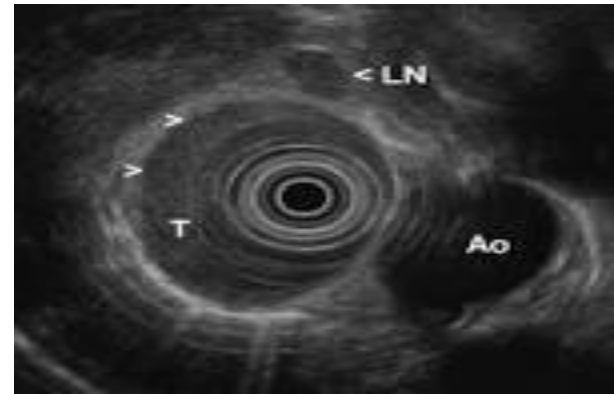
Stage	T	N	M	Grade
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Stage 0	Tis	N0	M0	1, X	
Stage IA	T1	N0	M0	1-2, X	
Stage IB	T1	N0	M0	3	
		T2	N0	M0	1-2, X
Stage IIA	T2	N0	M0	3, X	
Stage IIB	T3	N0	M0	Any	
		T1-2	N1	M0	Any
Stage IIIA	T1-2	N2	M0	Any	
		T3	N1	M0	Any
		T4a	N0	M0	Any
Stage IIIB	T3	N2	M0	Any	
Stage IIIC	T4a	N1-2	M0	Any	
		T4b	Any	M0	Any
		Any	N3	M0	Any
Stage IV	Any	Any	M1	Any	

# 診斷

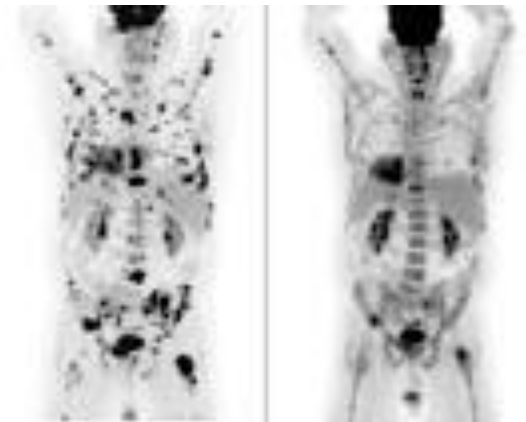
## 1. EUS(endoscopic ultrasonography):

經內視鏡超音波 判斷局部T and N status 更準確



## 2. PET 正子攝影

對局部淋巴結判斷及遠端轉移偵測重要





# 光動力治療(photodynamic)

就是這道光！治療食道癌患者 快速恢復進食

李章銘 醫師

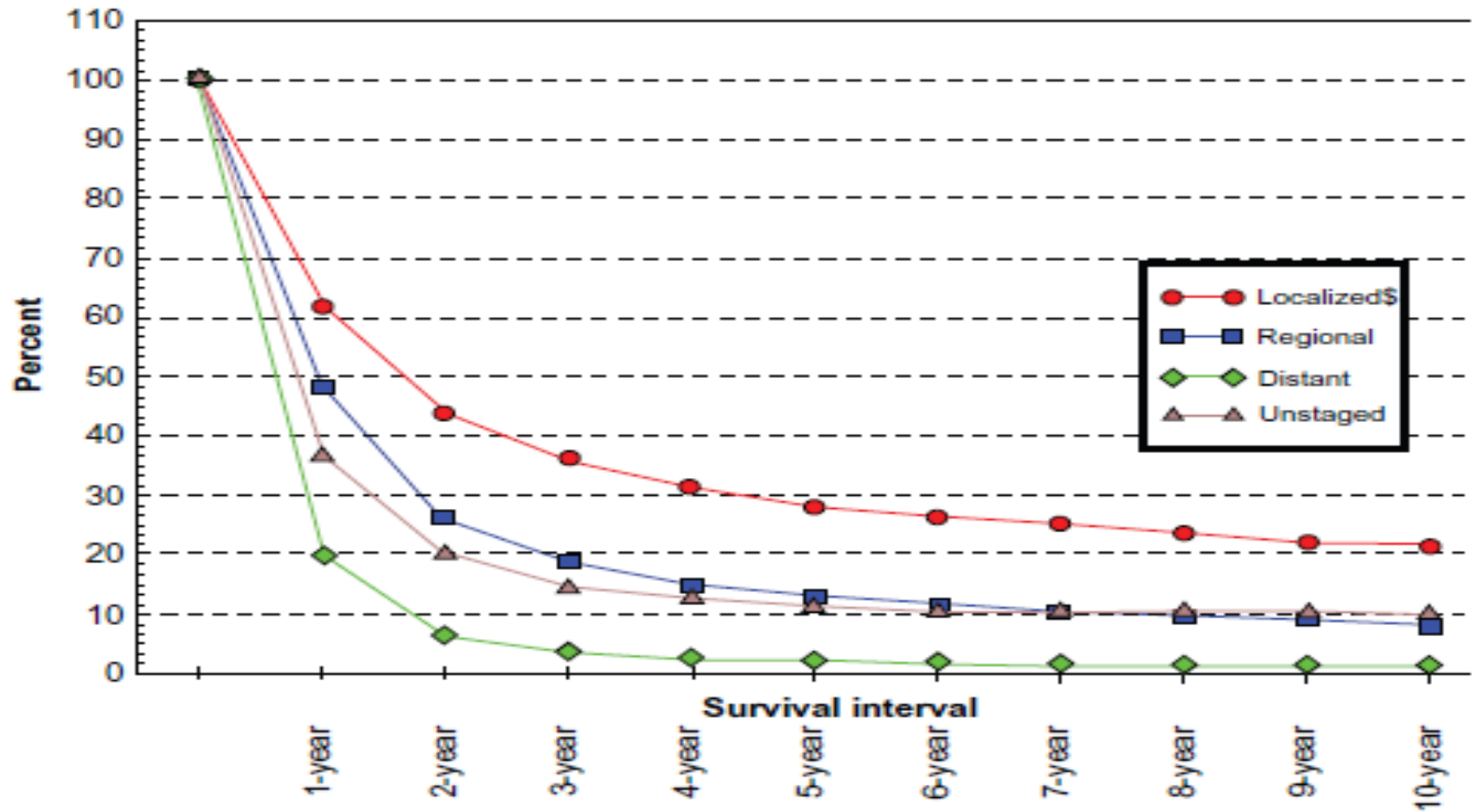
在古代，人類已懂得利用光來作為治療疾病的工具，但直到十九世紀末，才逐漸有學者進行光療法的研究。發展至今，「光」已被有系統的應用在不同的醫學領域中，而光動力療法，即是現下最受矚目用來治療癌症的方法。

光動力療法（Photodynamic Therapy, 簡稱PDT）又稱為光照射療法，結合了光電科技與生物醫學，其原理是組織中的外加光感物質在受到特定波長光激活後，將光能量轉移給組織內的其他物質，發起光化學反應，產生對細胞具有毒性的自由基及單相氧，進而破壞、殺死癌細胞組織。

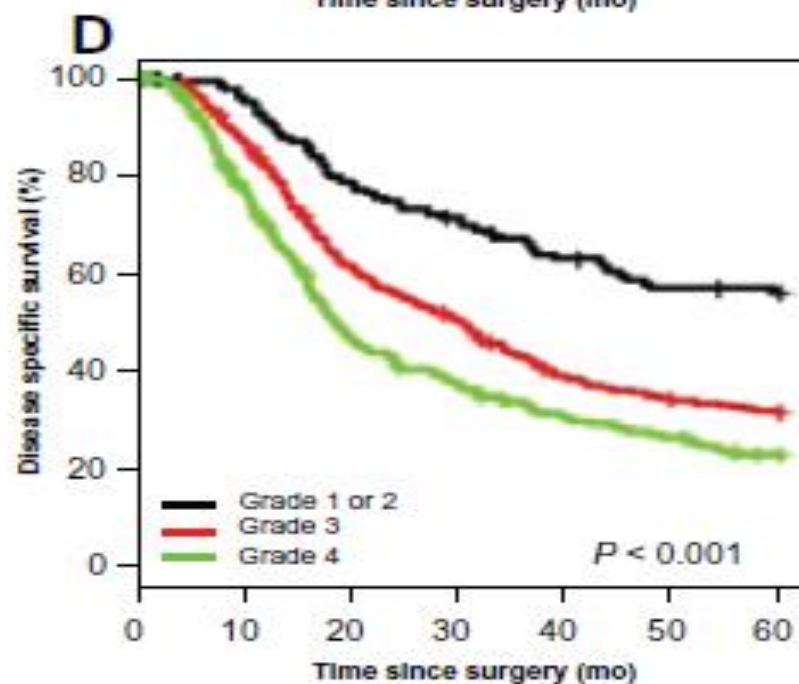
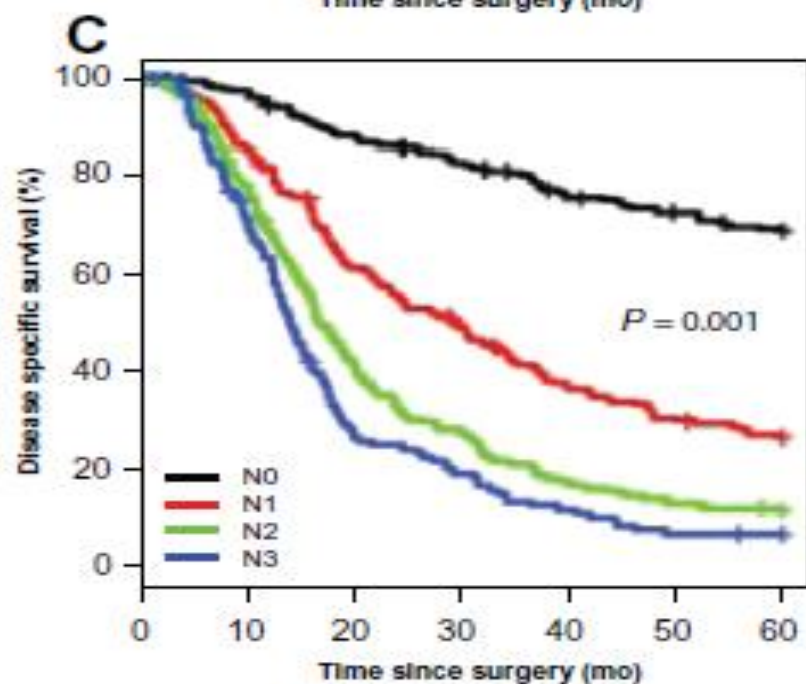
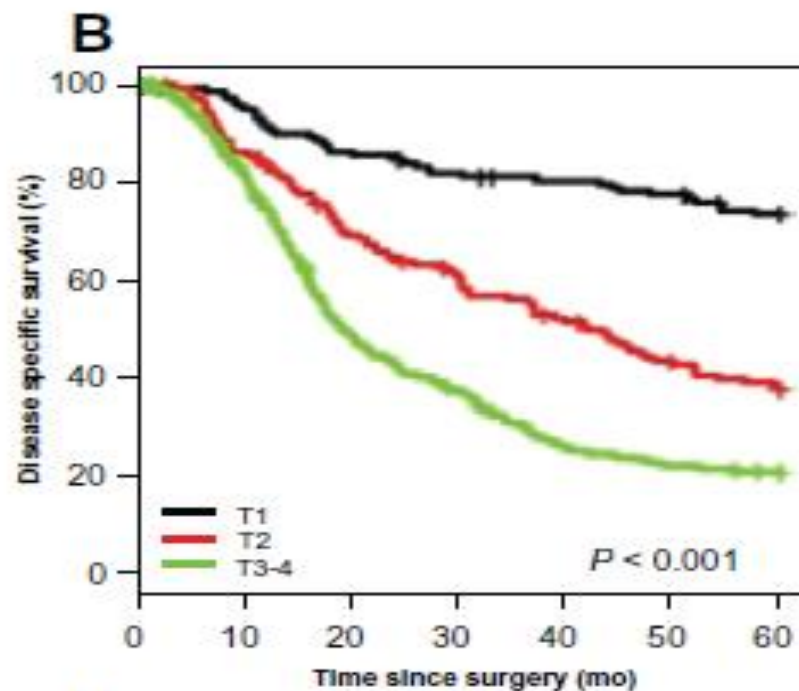
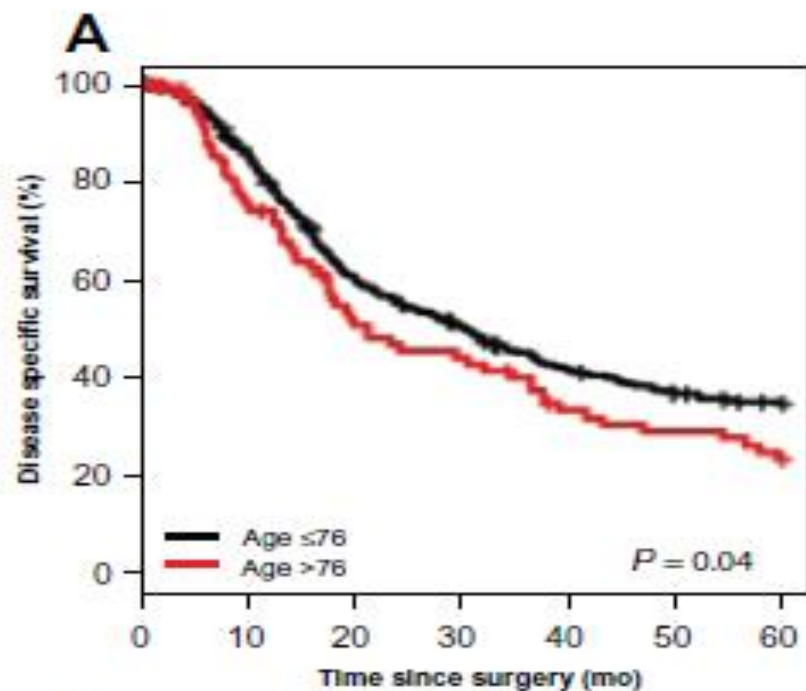
**\*反覆發作的severe dysplasia or CIS  
可在刮除後輔助光動力治療 也許可避開開刀**

**\*或是第一二期患者  
開刀後作光動力  
輔助性治療**

# 治療反應差



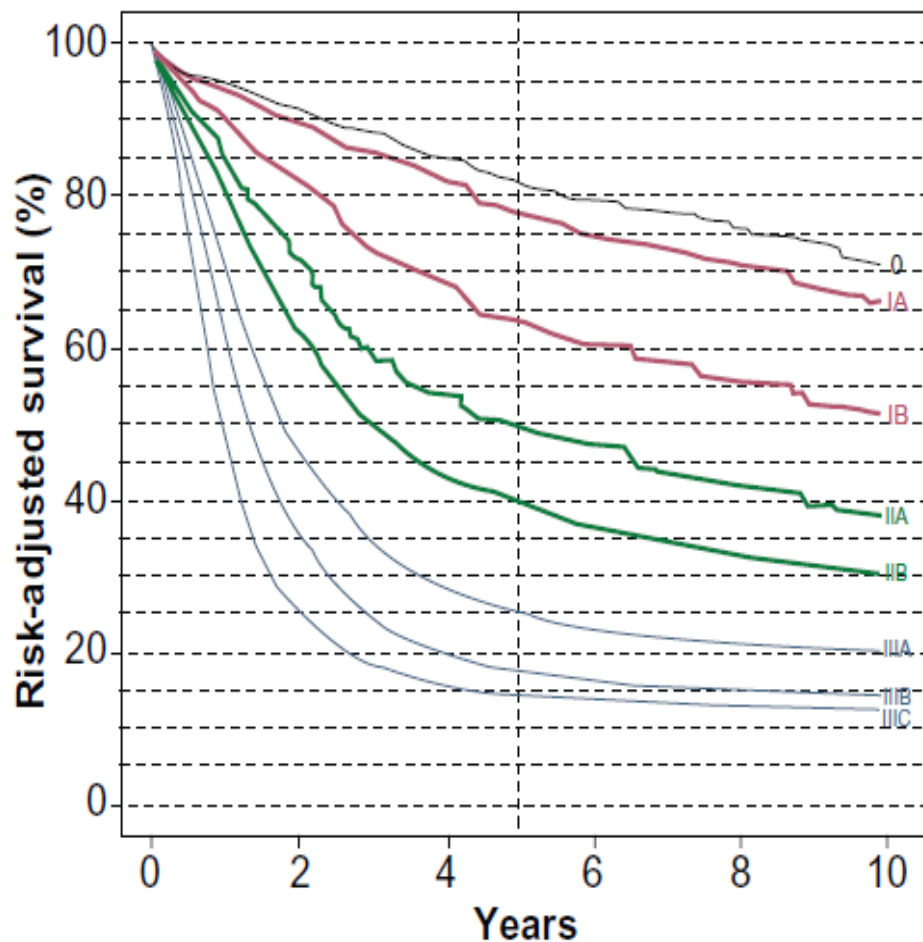
Stage of disease	1 year	2 years	3 years	4 years	5 years
Stage 1	73.2	59.8	51.1	45.5	40.5
Stage 2	64.9	42.9	32.1	26.4	22.8
Stage 3	50.2	27.6	18.8	14.7	12.5
Stage 4	23.9	8.5	4.9	3.5	2.8



# SCC 仍較差

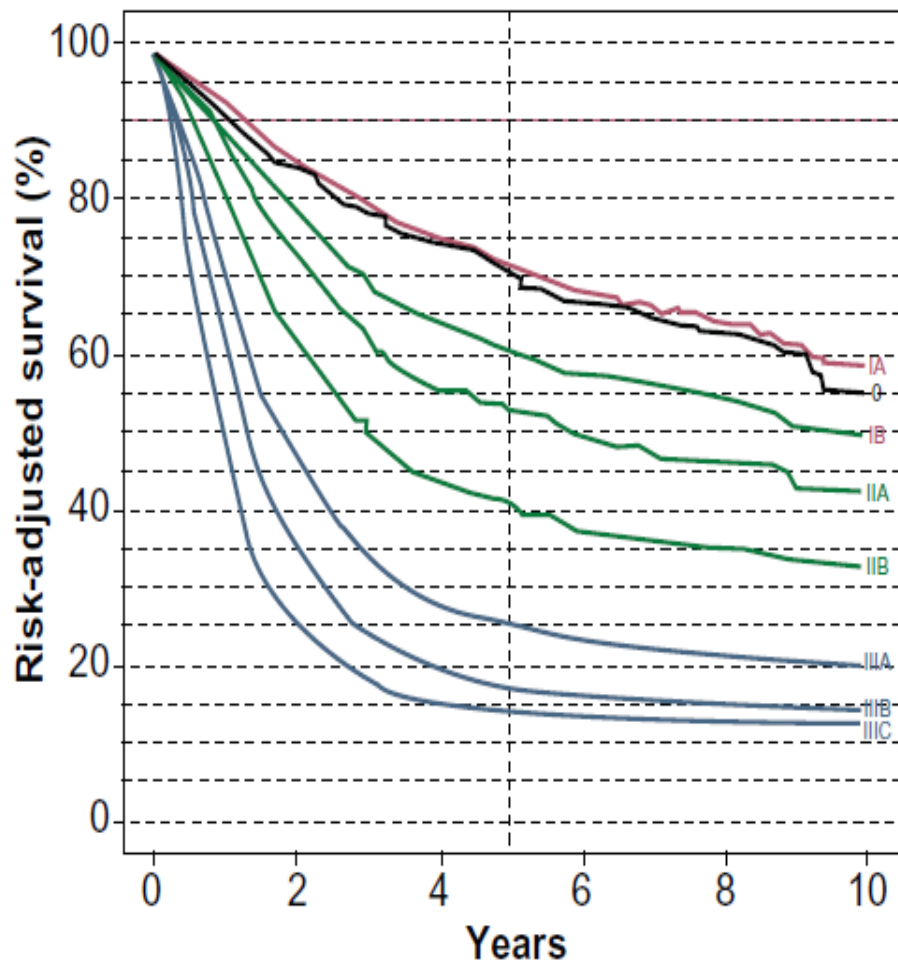
A

## Adenocarcinoma



B

## Squamous cell carcinoma



# 男性

## 觀察存活率

部位別	全癌症	結直腸	肝	肺	口腔	攝護腺	胃	食道	皮膚	膀胱	白血病
一年	67.1	81.6	53.5	41.8	79.5	91.9	59.0	44.8	90.7	84.2	57.9
二年	54.8	70.8	41.3	25.0	65.3	83.6	44.6	26.1	83.9	75.5	45.6
三年	47.9	62.8	33.7	17.7	59.5	76.2	37.9	19.6	78.2	68.8	40.7
四年	43.1	57.1	28.2	13.9	55.0	69.1	33.3	16.5	72.8	63.4	37.5
五年	39.6	52.5	24.3	11.8	51.5	63.2	30.1	14.5	69.3	59.1	34.8

## 相對存活率

部位別	全癌症	結直腸	肝	肺	口腔	攝護腺	胃	食道	皮膚	膀胱	白血病
一年	69.2	84.4	54.8	43.6	80.5	96.5	61.6	45.6	94.8	87.8	59.6
二年	58.1	75.6	43.3	26.9	66.9	92.4	48.3	27.1	91.6	82.2	47.9
三年	52.4	69.3	36.2	19.7	61.7	88.7	42.7	20.7	89.2	78.0	43.6
四年	48.6	65.4	31.1	16.0	57.8	85.1	38.9	17.8	86.9	75.1	40.8
五年	46.0	62.4	27.5	14.0	54.8	82.5	36.7	15.9	86.5	73.0	38.5

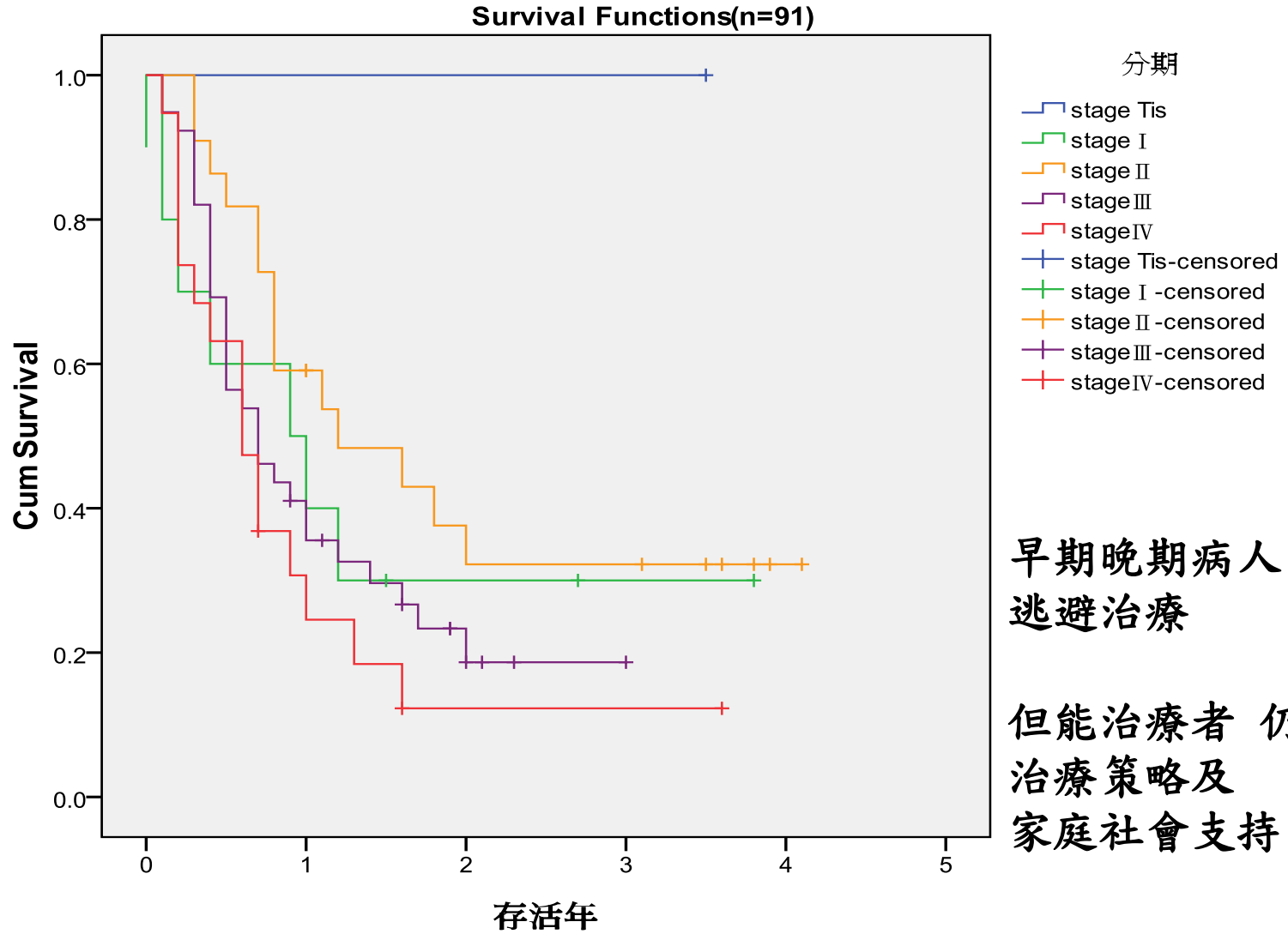
註：上述資料僅含侵襲癌

# 本院食道癌

期別	總個數	死亡個數	存活年中位數		
			估計	95% 信賴區間	
				下界	上界
stage Tis	1	0	-	-	-
stage I	10	7	0.9	0.00	1.83
stage II	22	14	1.2	0.13	2.27
stage III	39	30	0.7	0.33	1.07
stage IV	19	16	0.6	0.34	0.86
整體	91	67	0.8	0.60	1.00

早期篩檢仍重要

# 本院食道癌



# 治療

1. 上方**SCC**若和下咽癌合併

2. 上中段 **SCC**

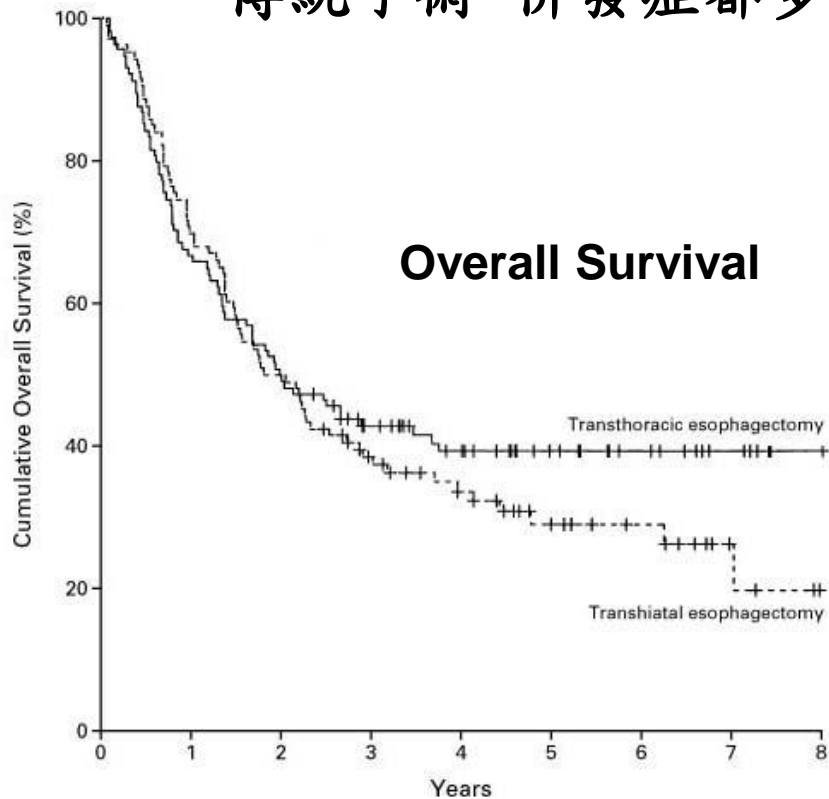
3. 下段 **EG junction adenocarcinoma**



# Surgery

## Trans-hiatal versus Trans-thoracic Esophagectomy

傳統手術 併發症都多



	Trans-hiatal	Trans-thoracic
Patient No.	106	114
<b>Post-op complications</b>		
<i>Pulmonary</i>	29(27%)	65 (57%)
<i>Cardiac</i>	17 (16%)	30 (26%)
<i>Anastomotic leak</i>	15 (14%)	18 (16%)
<i>Vocal-cord</i>	14 (13%)	24 (21%)
<i>Chylous leak</i>	2 (2%)	11 (10%)
<i>Wound infection</i>	8 (8%)	11 (10%)
<b>In-hospital mortality</b>	2 (2%)	5 (4%)

# 食道上段SCC合併下咽癌

1. 食道初期 下咽初中期 **combined surgery 再 adjuvant CCRT**
2. 食道中期(T3N1)以上 只要下咽非中末期  
先**Neoadjuvant CCRT** 若反應好  
之後**combined surgery**
3. 食道和下咽都中末期  
先引導式化療 **TPF(歐洲紫杉醇 白金 5-FU)** 若反應好
  - A. **CCRT到最後(食道 5000-6000 cGy; 下咽 7000 cGy)**  
or
  - B. **Neoadjuvant CCRT到4000 cGy 再 combined surgery**

# 食道上中段 SCC

1. 癌前病變 moderate to severe dysplasia  
內視鏡刮除
2. CIS and superficial T1a lesions 仍可用內視鏡刮除  
+/- 光動力治療
3. T1/2 N0  
Selective T3 or N1---胸腔鏡微創手術  
有時必要要傳統術式  
若意外發現 margin+ or 較嚴重淋巴結侵犯  
輔助性CCRT
4. T3N1以上(stage III at least)---  
Neoadjuvant CCRT(4000 cGy) then surgery  
還是直接治癒性 curative CCRT(5000-6000 cGy)

國人愛吃熱食、熱炒的飲食習慣對於食道長期造成負擔，尤其是抽煙、喝酒和吃檳榔，更是對食道刺激的主要來源；而由於食道並沒有任何感官神經，因此有**90%**的患者都是在腫瘤組織阻塞食道近四分之三，發生吞嚥困難時，才知道要求助於醫生，但是此時的食道癌通常已經是第三期，在治療上非常困難；台大醫院胸腔外科主任李章銘醫師表示，台大目前發展微創手術，可以取代傳統胸腔與腹腔手術對食道癌患者的治療，採用微創手術的患者傷口小、感染併發症的機率相對降低，可大幅提升患者的治癒率與存活率。

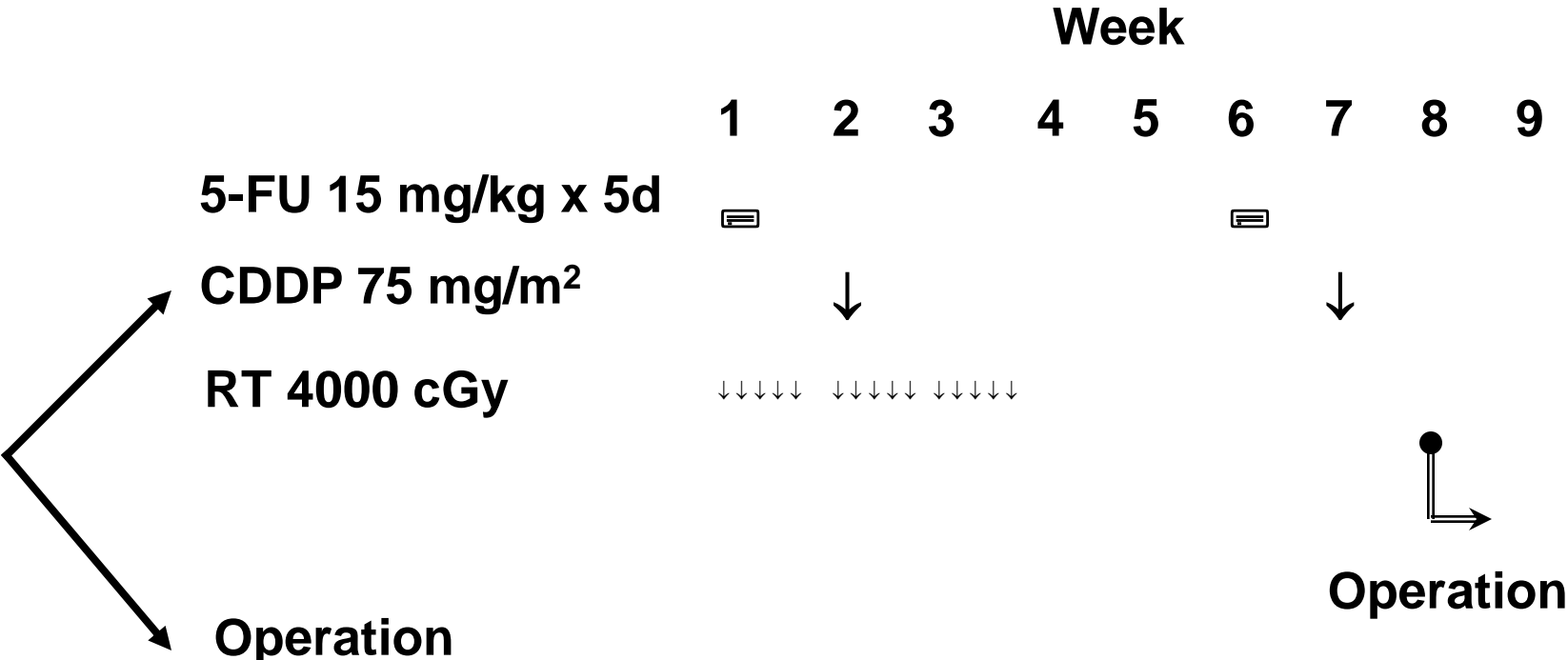


傳統食道癌切除手術傷口



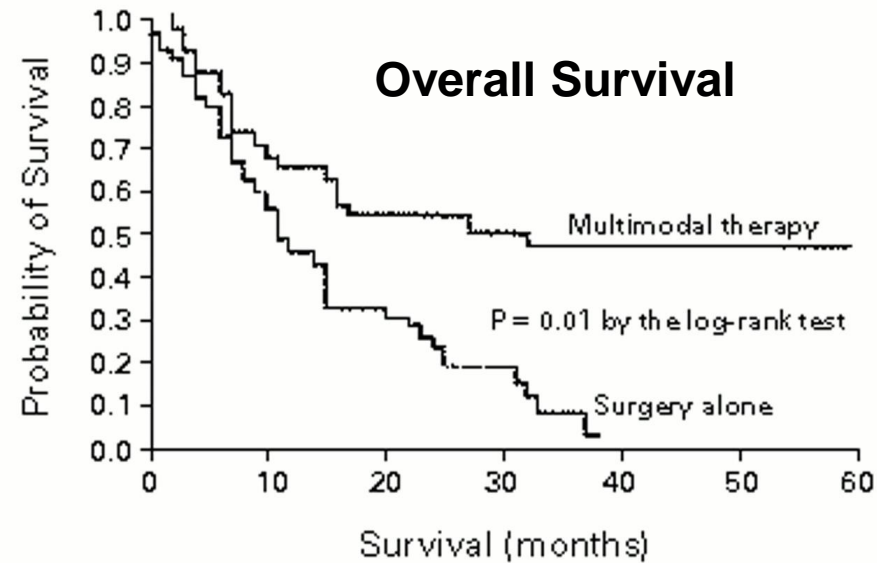
胸腔鏡和腹腔鏡之傷口

# Neoadjuvant Chemoradiotherapy Walsh Study



- Resectable adenocarcinoma of mid, lower esophagus, and cardia

# Walsh Study : Result



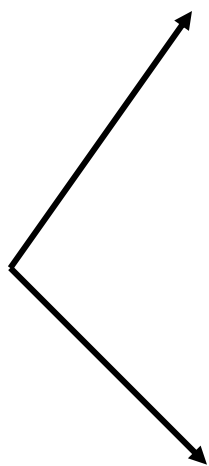
只有手術組太差 受質疑  
**CCRT加手術 勝 只有手術**

	Surgery	CMT + S
Total Patient No.	55	58
<b>Histology</b>	Adenocarcinoma	
<b>3-yr Survival</b>	6%	32%
<b>Median Survival</b>	12M	17M
<b>Pathologic S (CR)</b>		3
0	0	13
1	2	1
2	10	25
3	38	13
4	5	3
<b>Toxicities</b>		
$\geq$ Grade 3		15%

Walsh TN, N Engl J Med 335:462-467, 1996  
 Dis Esophagus 15:121-4, 2002

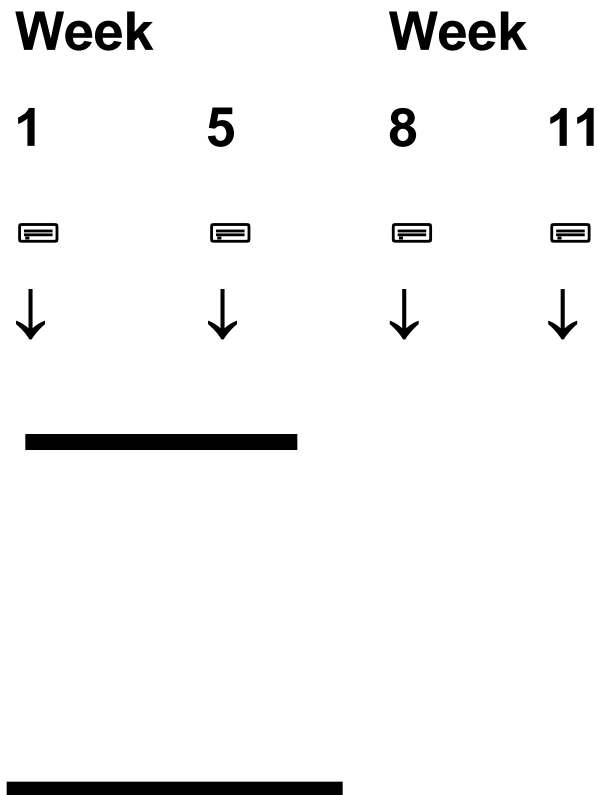
# RTOG 85-01 : Schema

R  
A  
N  
D  
O  
M  
I  
Z  
E



5-FU 1000 mg/m<sup>2</sup>x 4d  
CDDP 75 mg/m<sup>2</sup>  
+  
RT 5000 cGy

RT 6400 cGy

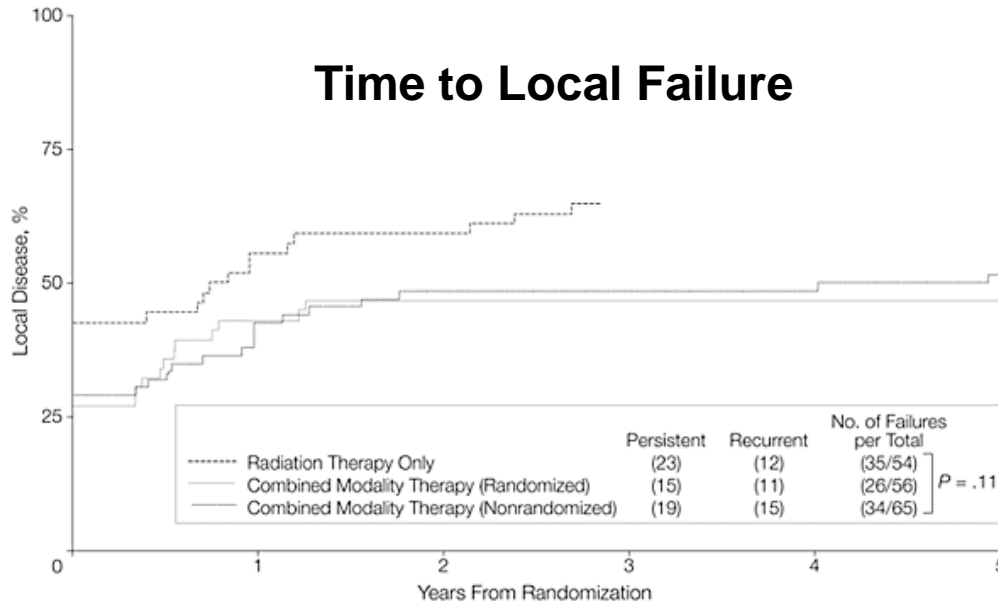


# RTOG 85-01 :

## Results

**CCRT 勝 只有RT**

**Time to Local Failure**



**N Engl J Med 326:1593-1598, 1992**

**J Clin Oncol 15:277-284, 1997**

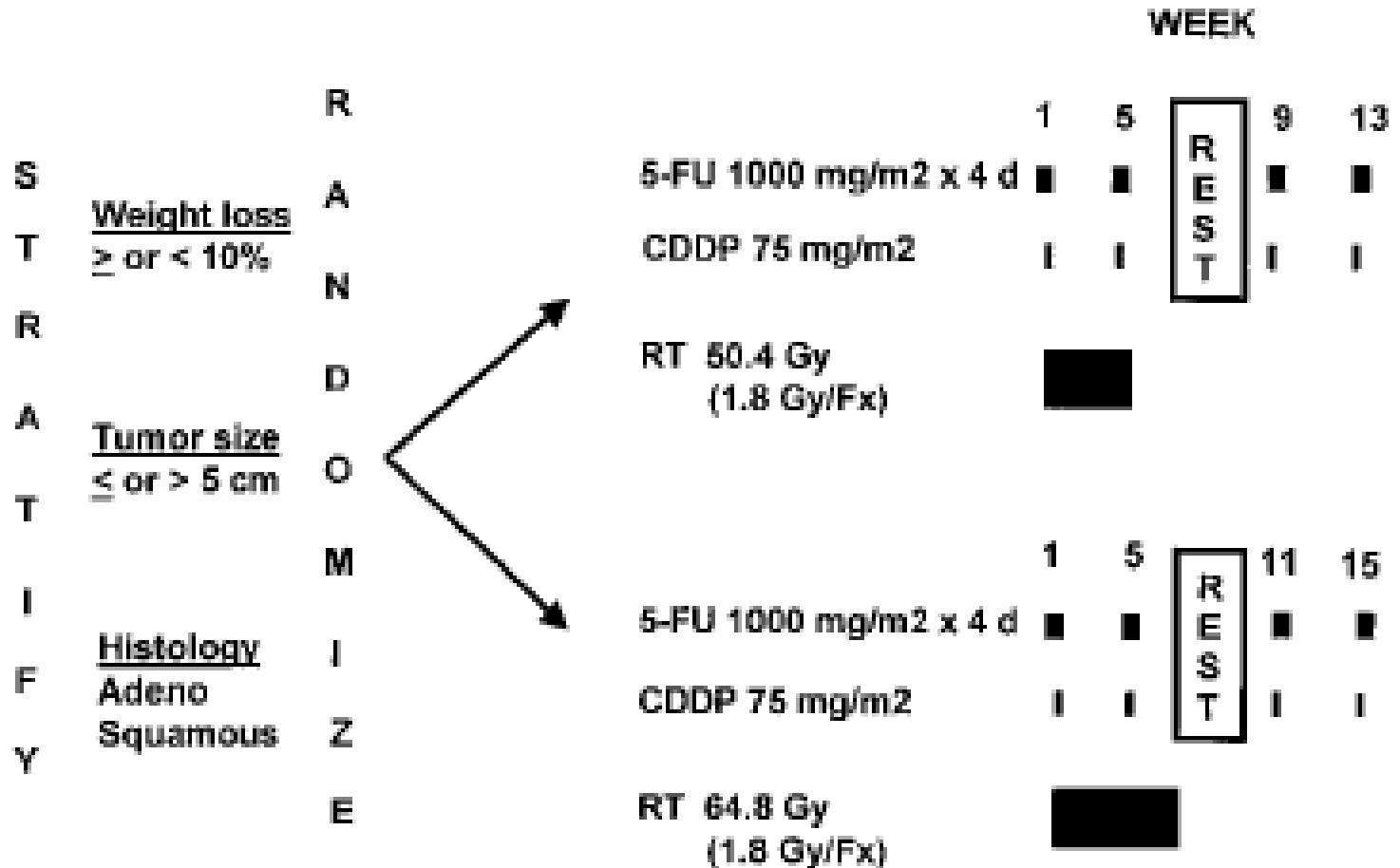
**JAMA 281:1623-1627, 1999**

	RT only	RT+CT (R/non-R)
Patient No.	62	61 / 69
<b>5-yr Survival</b>	0%	26% / 14%
<b>Median Survival</b>	9.3M	14.1/16.7M
<b>Treatment Failure</b>		
<i>Persistent</i>	37%	25% / 28%
<i>Local / Regional</i>	16%	13% / 20%
<i>Distant</i>	15%	8% / 16%
<i>Local + Distant</i>	15%	8% / 10%
<b>Toxicities</b>		
<i>Grade 4</i>	2%	8% / 4%
<i>Grade 5</i>	0%	2% / 0%



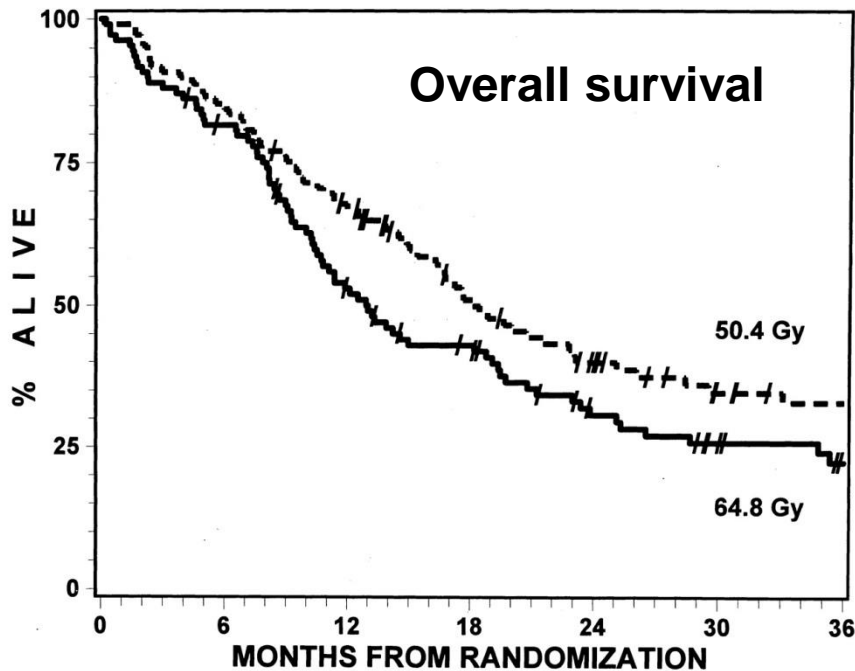
# Nonsurgical Combination of C/T & RT

## INT 0123



# INT 0123 : Results

電高劑量只是增加毒性 反而不好



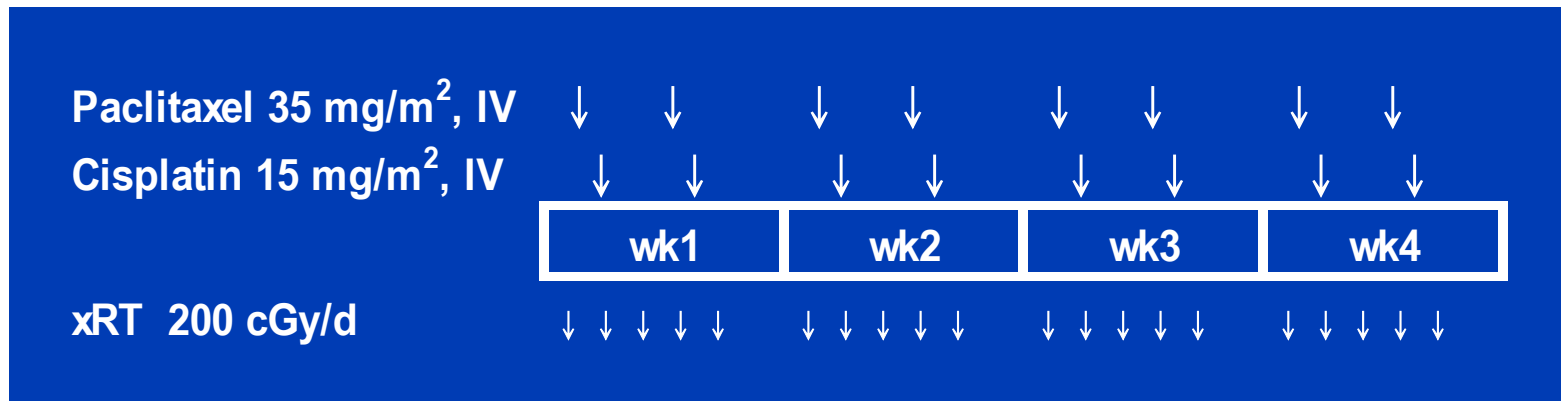
※No survival advantage with the high-dose arm despite biased analysis

	High dose	Standard
Total Patient No.	109	109
<b>Histology</b>	SCC 87% AC 13 %	SCC 84% AC 16 %
<b>Stage</b>	T <sub>1-4</sub> N <sub>0-1</sub> M <sub>0</sub>	T <sub>1-4</sub> N <sub>0-1</sub> M <sub>0</sub>
<b>2-yr Survival</b>	31%	40%
<b>Median Survival</b>	13M	18.1M
<b>Treatment Failure</b>		
<i>Persistent</i>	33%	34%
<i>Local / Regional</i>	16%	19%
<i>Distant</i>	9%	16%
<i>Regional &amp; distant</i>	0%	2%
<b>Toxicities</b>		
<i>Grade 5</i>	10%	2%

# Locally Advanced Esophageal ca.

## Taxane-based CMT

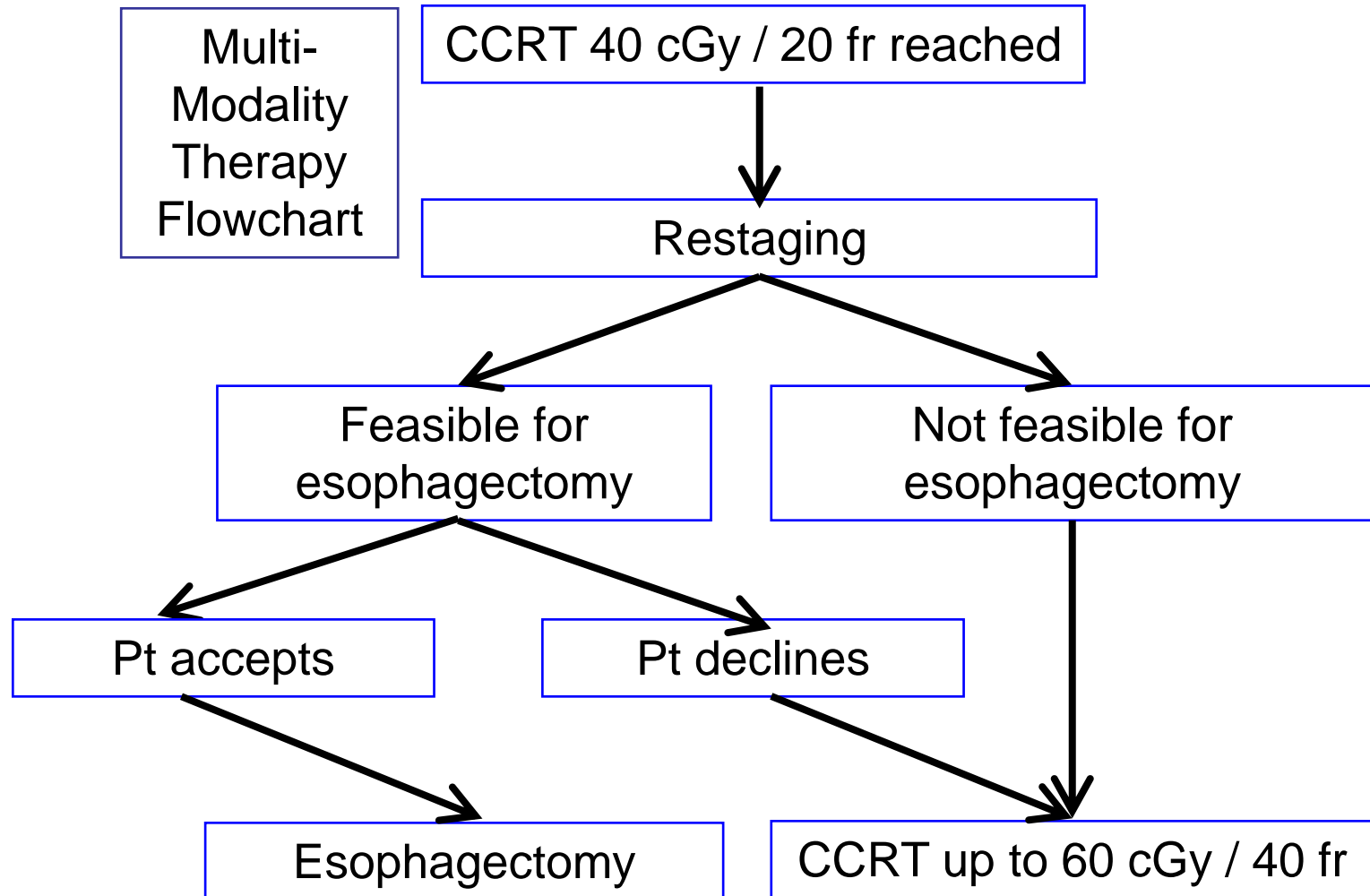
- CCRT with twice weekly paclitaxel-cisplatin



→ Esophagectomy will be performed 4 to 6 weeks after completing CCRT

台大 紫杉醇+白金 CCRT 之後開刀

# Phase II Study in Advanced EC Twice-weekly TP-CCRT



# Twice-weekly TP-CCRT

## Efficacy

- Pathology of resected specimens (39 patients):
  - **Pathology CR: 13 (33%)**
  - Residual tumors in local tumors: 23
  - Any LN (+): 15
- Definitive CCRT, (25 patients):
  - **Clinical CR: 15**

# Twice-weekly TP-CCRT Toxicities

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<b>Grade 3 (or 4) Toxicities</b>	<b>Patients (N=70)</b>
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<b>Leukopenia</b>	<b>22%</b>
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<b>Thrombocytopenia</b>	<b>12%</b>
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<b>Febrile neutropenia</b>	<b>15%</b>
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<b>Infection</b>	<b>10%</b>
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<b>CCRT-related death</b>	<b>2</b>
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Rupture of aorto-esophageal fistula

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# Comparison with Similar Studies

<b>Efficacy</b>	<b>Alelstein<sup>1</sup></b> Cleveland	<b>Safran<sup>2</sup></b> Brown U	<b>NTUH<sup>3</sup></b>
<b>Pathologic CR (%)</b>	23	29	<b>33</b>
<b>Survival – median (mon)</b>	--	--	<b>39</b>
<b>2-y S. (%)</b>	30+	42	--
<b>Grade3/4 neutropenia (%)</b>	95	24	<b>22</b>
<b>Febrile neutropenia (%)</b>	40	--	<b>15</b>
<b>Tx-related death (%)</b>	0	--	

*1. Pre-op CCRT was composed of T175 (24h) x 1d + P25x 4d for 2 courses , combined with a split course of RT (45Gy in total). 2. Pre-op CCRT was composed of weekly T60 (3h) + P25, concomitantly with xRT for 40 Gy. 3Among 12 patients, 10 who had completed the whole treatment protocol were eligible for evaluation of efficacy.*

# 食道上中段 SCC

CCRT(4000 cGy) then surgery vs CCRT(5000-6000 cGy)

至今幾個研究 都不分勝敗

硬要講 有開刀者較不會復發

故同步電化療再協同胸腔鏡微創手術是目前治療潮流

現在有學說研究 引導式化療 TP-HDFL with Erbitux 一療程  
若有很好的反應 表示腫瘤會對電化療反應很好  
那就可直接 curative CCRT(5000-6000 cGy) 不用開刀



# 復發及轉移性食道SCC

	Histology	No. of patients	Response
Bleomycin	SCC	80	15%
Mitomycin C	SCC	58	26%
Fluorouracil	SCC	26	15%
Vindesine	SCC	86	22%
Vinorelbine	SCC	30	20%
Cisplatin	SCC	152	28%
	AC	12	8%
Paclitaxel	SCC	18	28%
	AC	32	34%

Not effective: gemcitabine, carboplatin

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# 復發及轉移性食道SCC

Table 1. Activity of Selected Cisplatin-Based Drug Combinations for Cancer of the Esophagus

References	Treatment Regimen	Histology	n	Response Rate (95% CI)	CR Rate (%)	Median Survival (mo)
Bleiberg et al 1997, <sup>18</sup> Hayashi et al 2001 <sup>33</sup>	Cisplatin/FU *	SC	94	34% (24%-44%)	2%	7.9
Conroy et al 2002 <sup>12</sup>	Cisplatin/vinorelbine	SC	75	34% (23%-46%)	0	6.8
Kok et al 1996, <sup>38</sup> Spiridonidis et al <sup>42</sup>	Cisplatin/etoposide	SC + AC	92	48% (38%-67%)	11%	9.8
Polee et al 2001 <sup>41</sup>	Cisplatin/etoposide/FU/LV	SC	69	34% (22%-46%)	4%	9.5
Hsu et al 2002 <sup>34</sup>	Cisplatin/methotrexate/FU/LV	SC + AC	26	28% (12%-49%)	0	5
Mackay et al 2002 <sup>39</sup>	Cisplatin/epirubicin/raltitrexed	AC	21	29% (11%-52%)	0	4.2
Ilson et al 2000, <sup>35</sup> Petrasch et al 1998 <sup>40</sup>	Cisplatin/paclitaxel *	SC + AC	58	38% (24%-52%)	2%	6.9
Ilson et al 1998 <sup>37</sup>	Cisplatin/paclitaxel/FU *	SC + AC	61	48% (35%-61%)	11%	10
Ilson et al 1999 <sup>36</sup>	Cisplatin/irinotecan *	SC + AC	35	57%	6%	

NOTE. All studies represent first line, phase II studies. Several studies included locally advanced patients for whom RECIST criteria do not apply for response assessment.  
Abbreviations: FU, fluorouracil; LV, leucovorin; SC, squamous cell carcinoma; AC, adenocarcinoma.  
\*Pooled data.

# 復發及轉移性食道SCC

Table 2. Non-Cisplatin-Based Drug Combinations for Cancer of the Esophagus

Reference	Treatment Regimen	Histology	Ist/2nd Line	n	Response Rate (95% CI)	CRs	Median Survival (mo)
Lordick et al 2003 <sup>49</sup>	Irinotecan/docetaxel *	SC + AC	2nd	24	12.5% (3%-32%)	0	4
Jatoi et al 2002 <sup>47</sup>	Irinotecan/docetaxel* *	AC	1st	46	26% (14%-41%)	0	7.3
Lovett et al 1991 <sup>50</sup>	Carboplatin/vinblastine	SC	1st	19	0%	0	NR
Phillip et al 1997 <sup>51</sup>	Carboplatin/paclitaxel*	AC	1st	14	36% (15%-51%)	0	NR
Kelleher et al 2003 <sup>48</sup>	Carboplatin/mitomycin C/FU	AC	1st	23	52% (40%-65%)	0	10.6
Braybrooke et al 1997 <sup>52</sup>	Mitomycin C/oral etoposide*	AC	1st	26	15% (4%-35%)	0	6

Abbreviations: NR, not reported; CI, confidence interval; AC, adenocarcinoma; SC, squamous cell carcinoma.  
\*Included both esophagus and gastric cancers.

# 復發及轉移性食道SCC

**Power regimen: TP-HDFL + Erbitux**

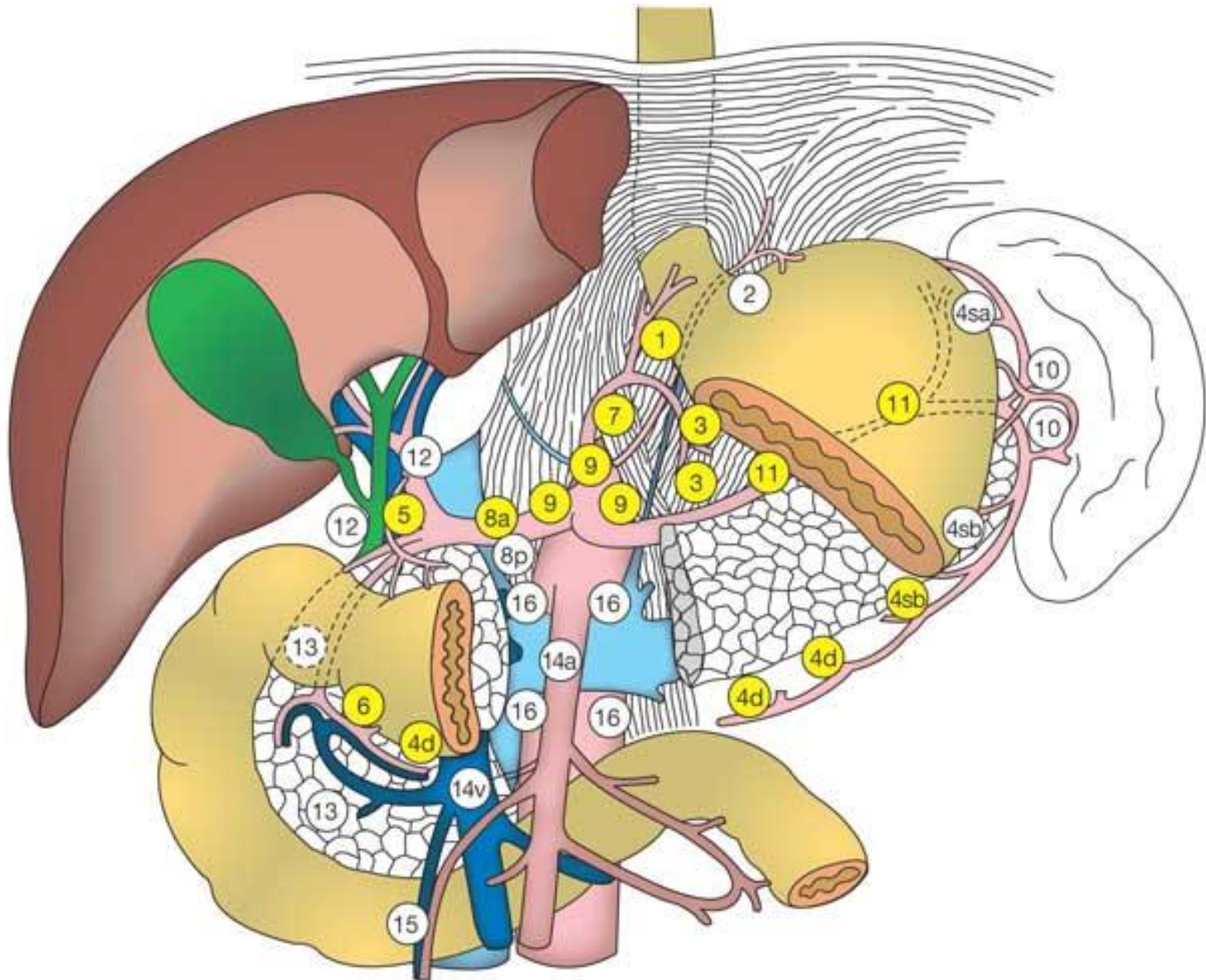
(太平洋紫杉醇 白金 5-FU +  
表皮生長因子接受體抗體)

二線處方：歐洲紫杉醇 CPT-11

# 食道下段 EG junction adenocarcinoma

1. 癌前病變 Barrett's esophagus 以及 T1a lesions  
內視鏡刮除 除非太大範圍病灶
2. 早中期病灶 手術切除照胃癌 起碼D2 dissection  
之後照術後stage 決定輔助性治療  
Stage II/III: TS-1(愛斯萬)  
Stage III/IV: XELOX(截瘤達 + 歐力普)  
RT for LN(+) disease 還未公認
3. 中後期病灶不好開刀者 照MAGIC study  
打ECF(小紅莓 白金 5-FU)三療程  
再開刀  
之後再打ECF三療程

# D2 dissection



# 結語

1. 早期發現早期治療食道癌  
抽菸喝酒或有頭頸癌病史者  
肥胖有胃食道逆流病史者      定期作胃鏡
2. 治療已大幅進步 但中後期仍有瓶頸 整體預後不佳  
勿畏懼求醫 耽誤早期時機
3. **EUS and PET important for diagnosis and staging.**
4. 癌前病變 **moderate to severe dysplasia, CIS, and T1a lesions**, 內視鏡刮除, 再視情況輔助光動力治療, 成效卓越.
5. 同步電化療再協同胸腔鏡微創手術是目前治療潮流  
後期末期患者 治療選擇 療效 及健保支持 仍薄弱不亮眼

# 結語

6. Supportive care(jejunostomy, ileostomy, 食道支架 for 食道狹窄 & TE fistula,chest care, pain control) and 復建(心肺 呼吸 脖子 吞嚥 腹腔).

\*高鈣處理  $\text{Corrected Ca} = (4 - \text{albumin checked}) * 0.2 + \text{Ca checked}$  mmol/L

If > 2.75---Consciousness; ileus; renal impairment

補水

雙磷酸鹽(Aredia/Zometa)