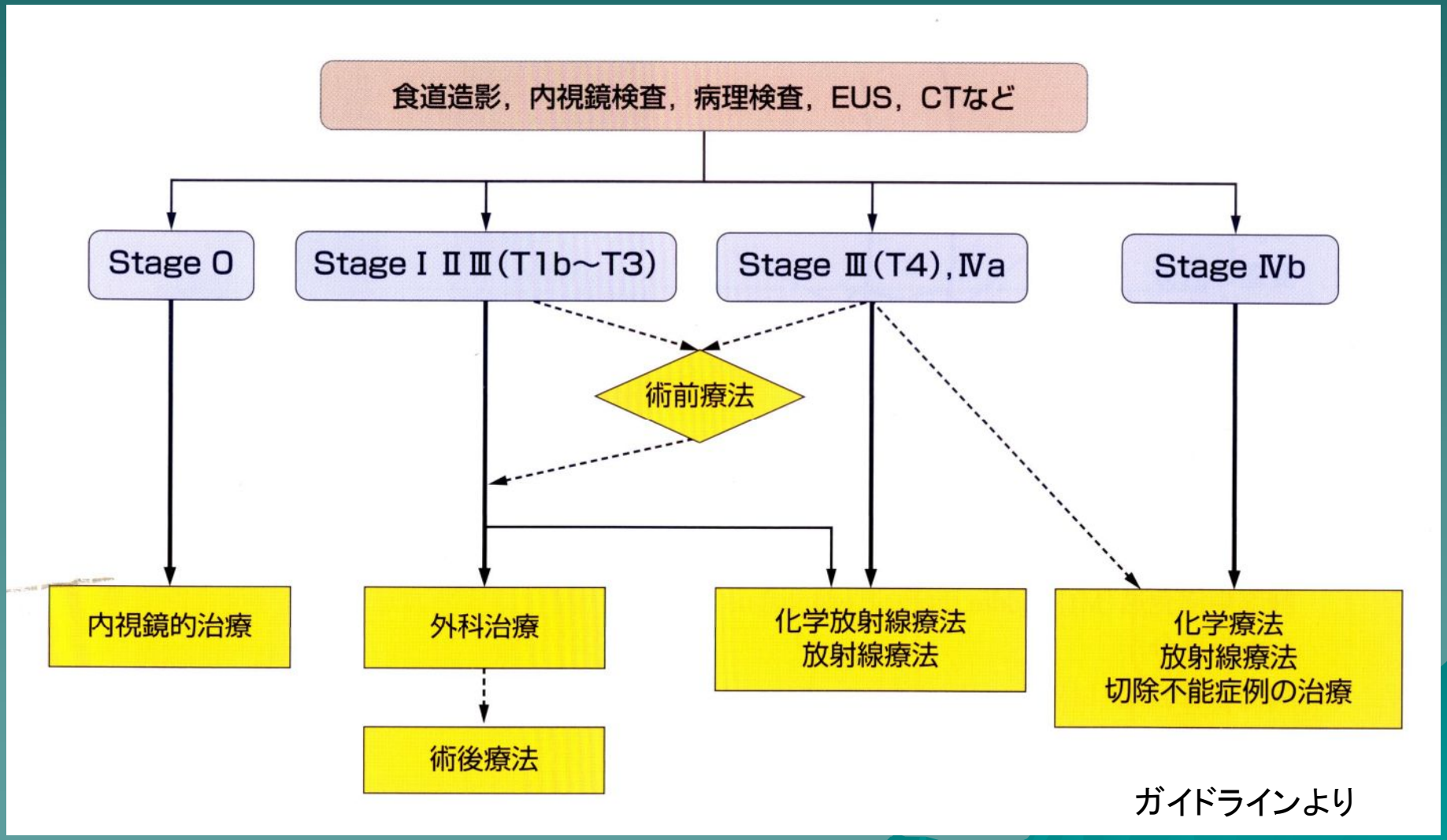
食道癌の外科治療

当院の症例を中心として

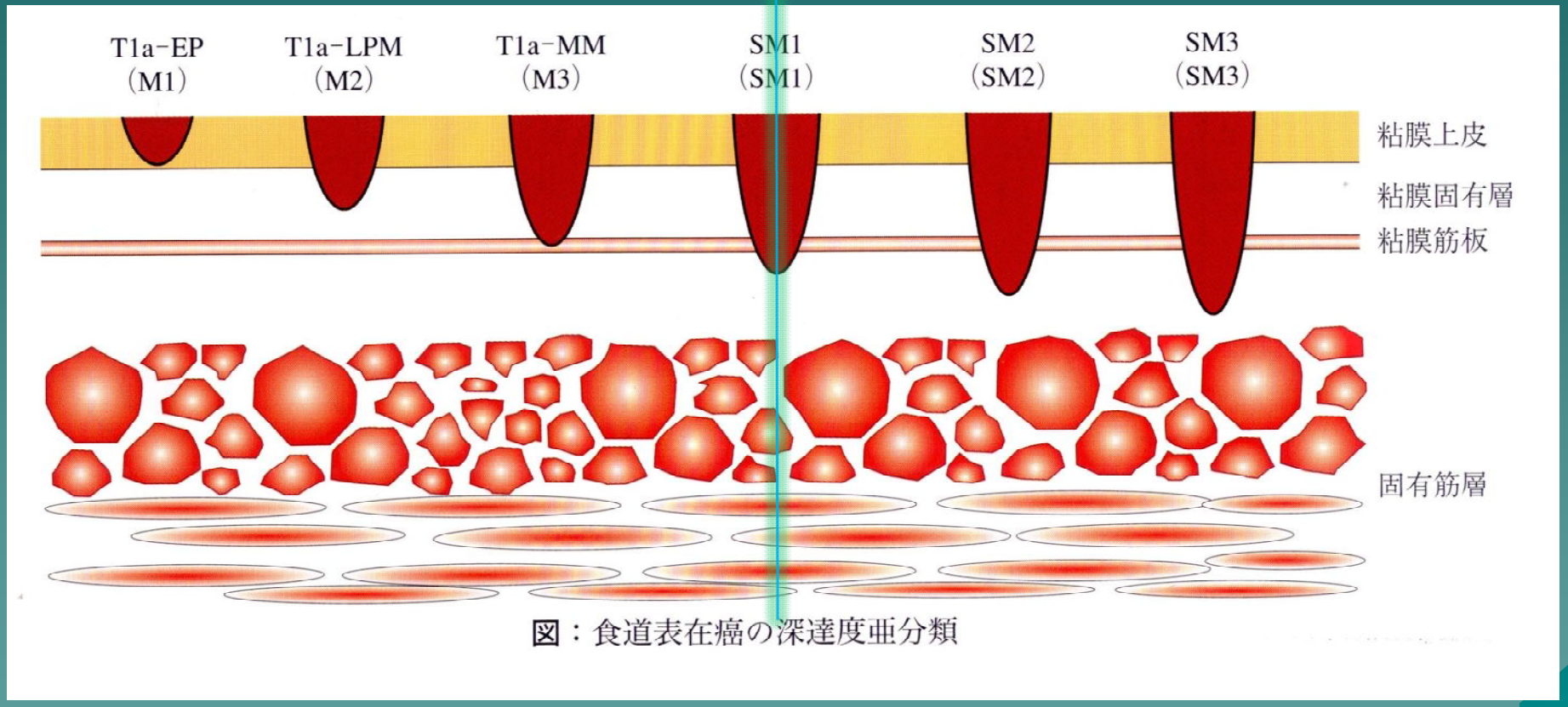
外科　　川真田　修

食道癌治療アルゴリズム



ガイドラインより

食道表在癌



図：食道表在癌の深達度亜分類

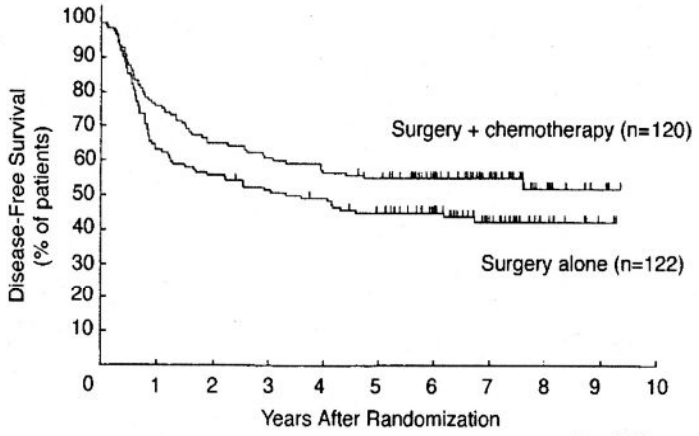
内視鏡的粘膜切除術

根治的化学放射線療法

手術

(胸腔鏡手術)

術後補助療法 (JCOG9204)



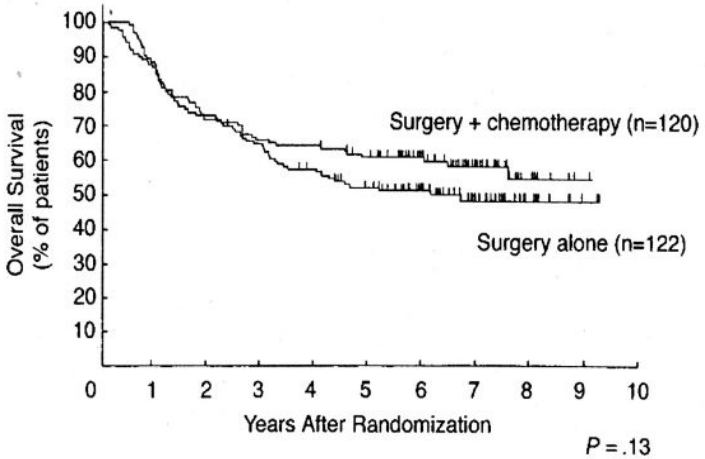
No. at Risk

Surgery + chemotherapy	120	91	78	73	68	64	48	30	10
Surgery alone	122	77	68	62	58	51	39	22	8

$P = .037$

Fig 1. Disease-free survival curves of all registered patients. The 5-year disease-free survival was 45% in patients with surgery alone and 55% in patients with surgery plus chemotherapy ($P = .037$).

無再発生存



No. at Risk

Surgery + chemotherapy	120	105	86	79	77	70	52	30	10
Surgery alone	122	108	89	78	67	57	43	24	9

$P = .13$

Fig 3. Overall survival curves of all registered patients. The 5-year overall survival was 52% in patients with surgery alone and 61% in patients with surgery plus chemotherapy ($P = .13$).

全生存

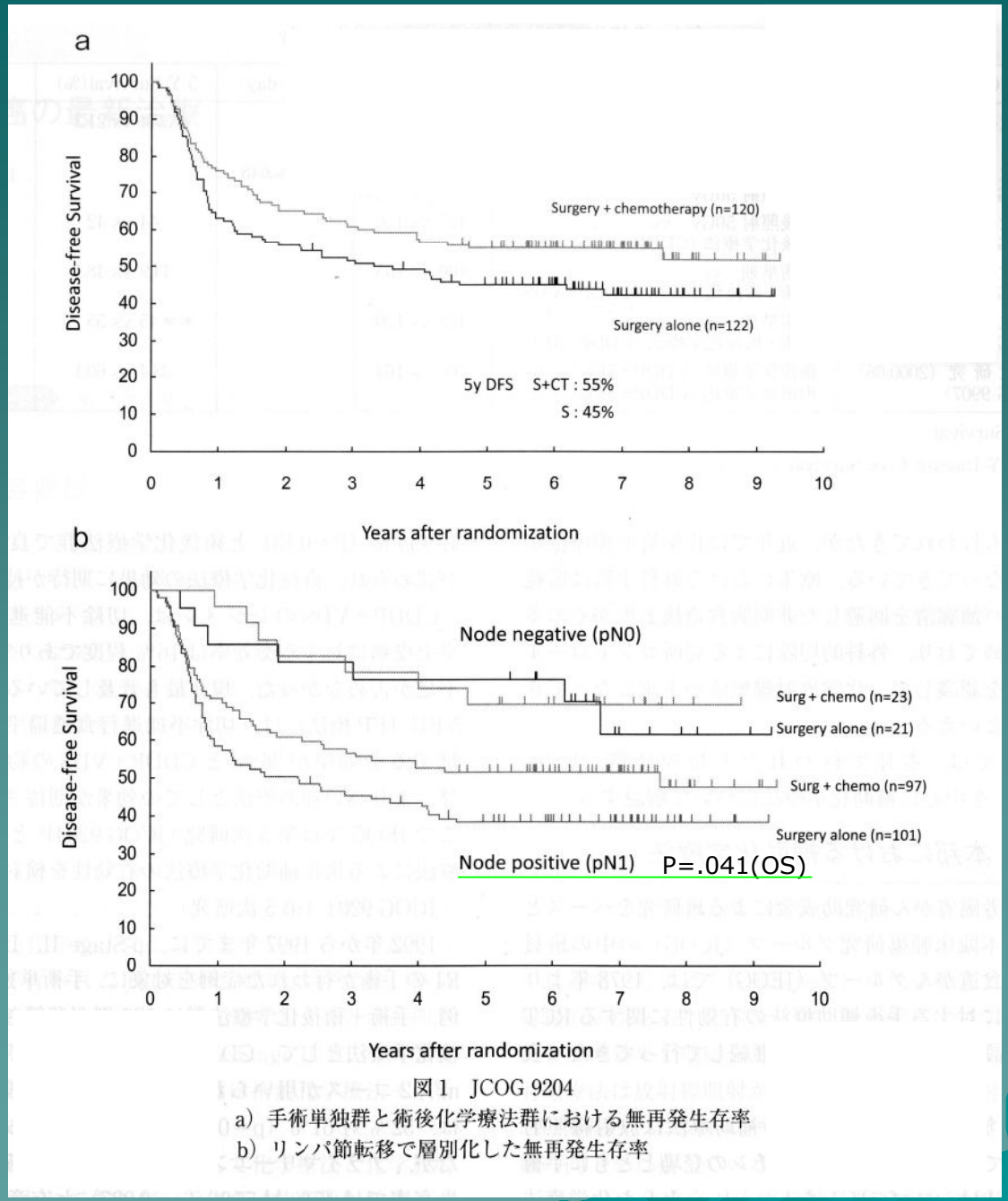
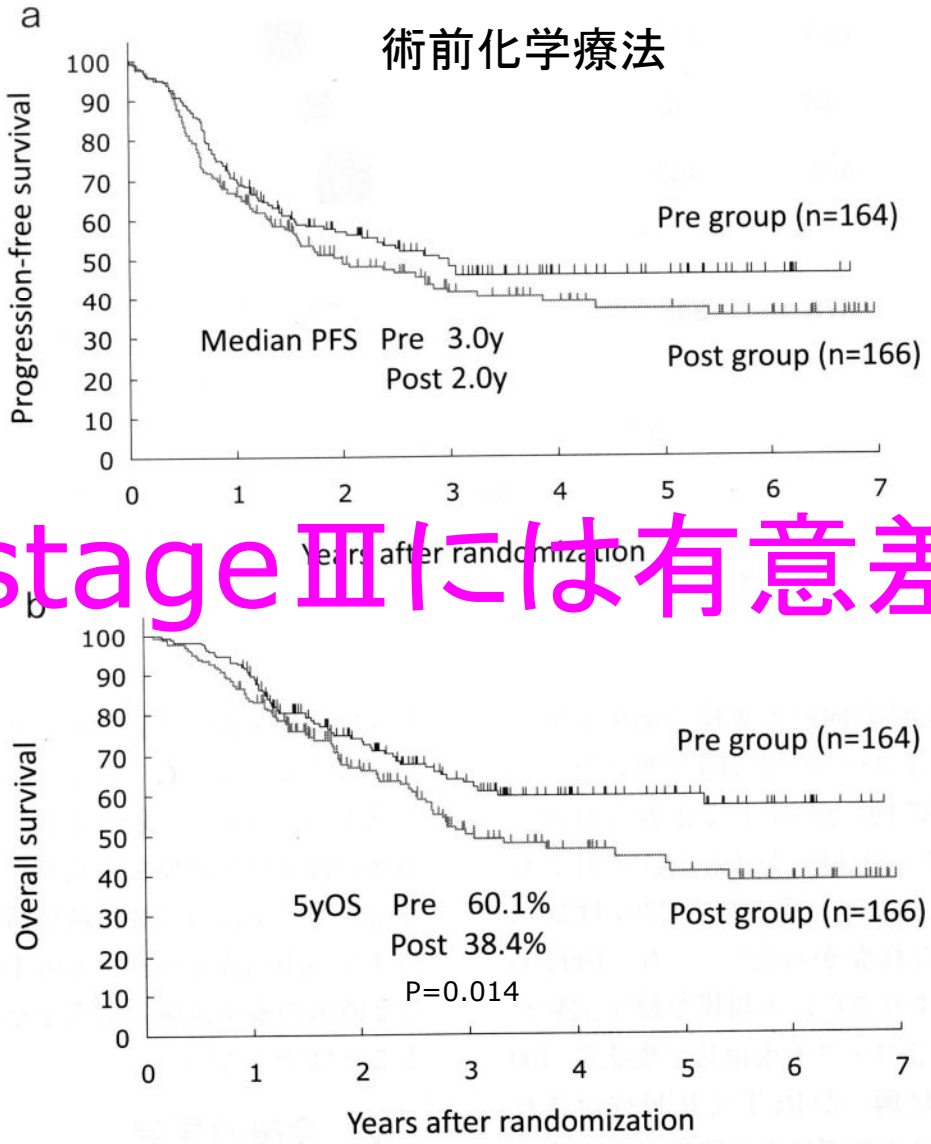


図1 JCOG 9204
a）手術単独群と術後化学療法群における無再発生存率
b）リンパ節転移で層別化した無再発生存率



T3･stageⅢには有意差なし

図2 JCOG 9907

a）術後化学療法群と術前化学療法群における無増悪生存率

b）全生存率

術前治療のトピックス

DCF療法

(ドセタキセル＋シスプラチン＋5-FU)

抗癌剤＋同時性放射線療法

N Engl J Med 2012;366:2074-84.

Median overall survival was 49.4 months in the chemoradiotherapy–surgery group versus 24.0 months in the surgery group. Overall survival was significantlybetter in the chemoradiotherapy–surgery group (hazard ratio, 0.657; 95%confidence interval, 0.495 to 0.871; P = 0.003).

CRTのメタアナリシス

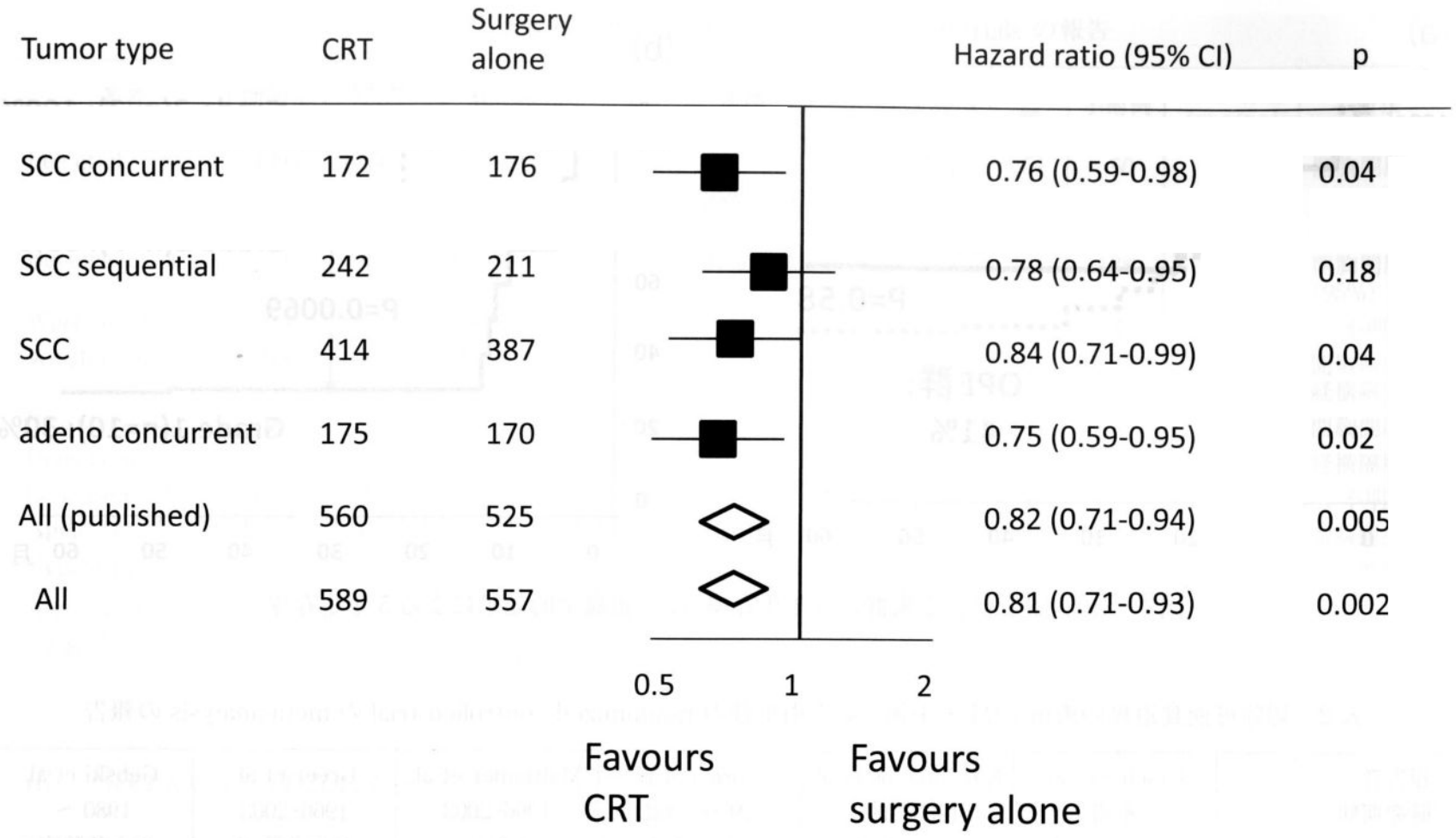
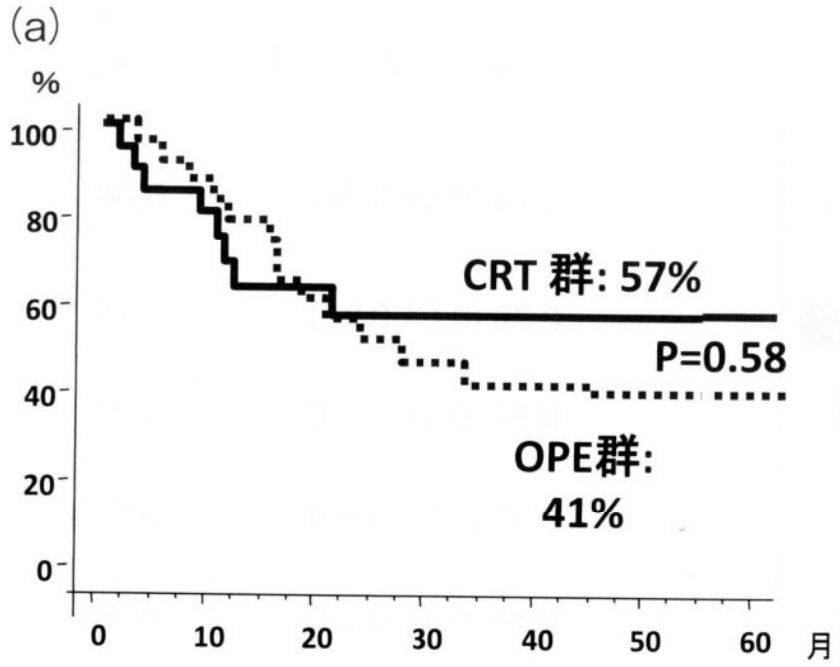


図2　組織型と照射法による術前 CRT＋手術 vs. 手術単独の meta-analysis の結果
文献5）より引用，一部改変

食道癌化学放射線療法



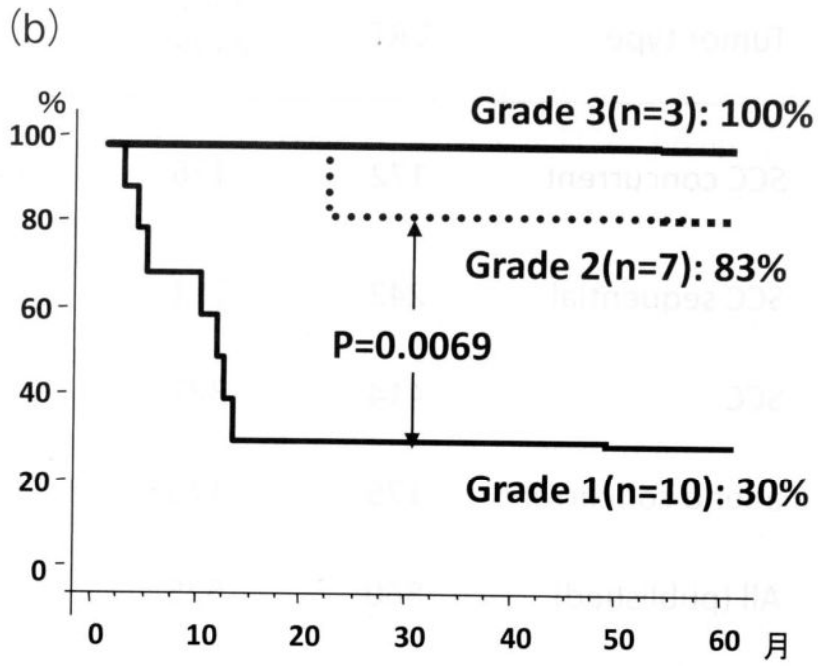
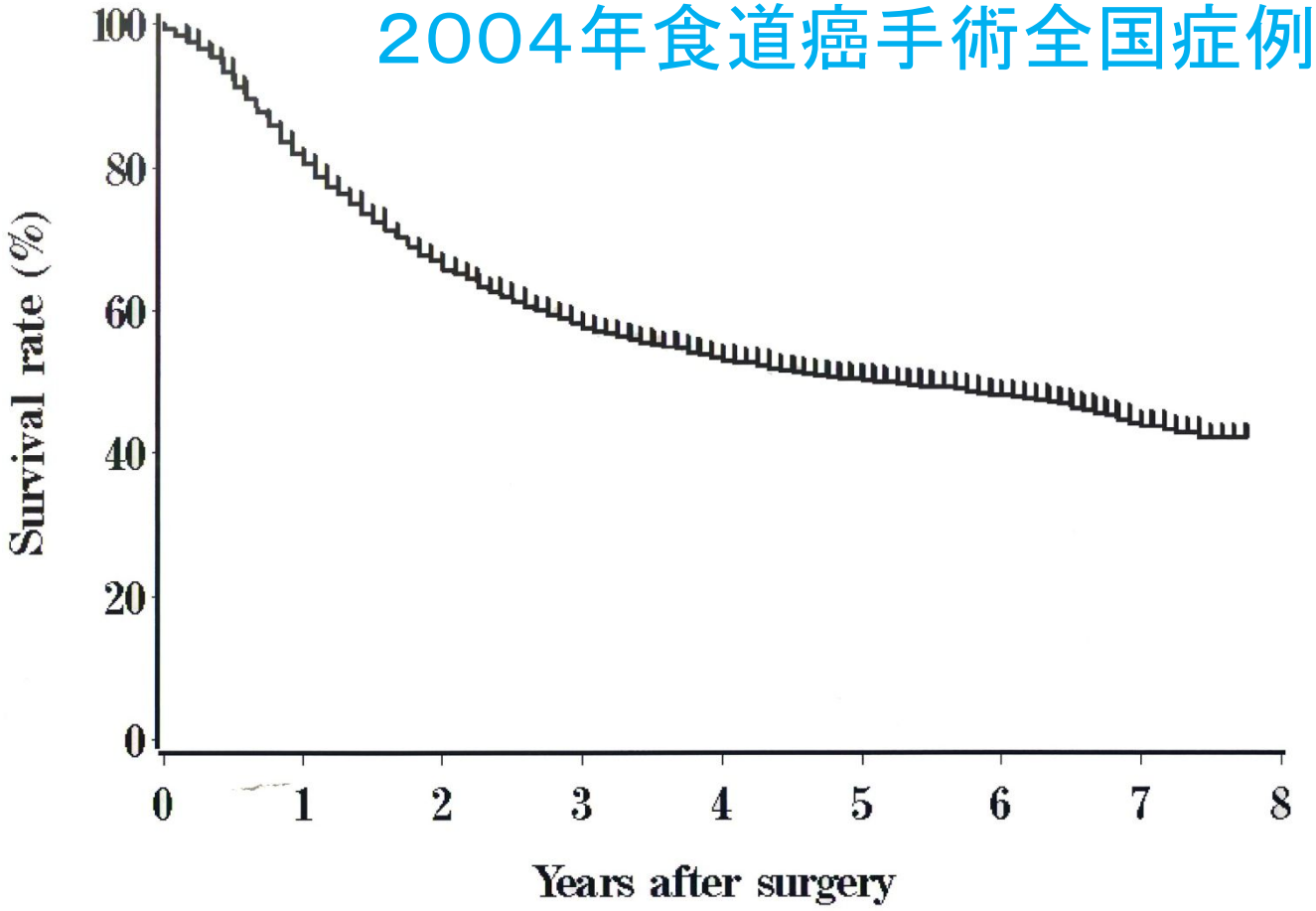


図1　(a) CRT 群と手術群の5年生存率 (b) 組織学的効果による5年生存率

2004年食道癌手術全国症例



当院5年生存率:45.8%

	Years after surgery							
	1	2	3	4	5	6	7	8
Esophagectomy	80.7%	66.1%	57.7%	53.1%	50.2%	48.1%	43.8%	42.0%

対　象　症　例

2002年から2013年まで当科で切除した
食道扁平上皮癌21例

男性：18例
女性：　3例

その他
類基底細胞癌　　1例

年齢：48-78歳（平均：67歳）

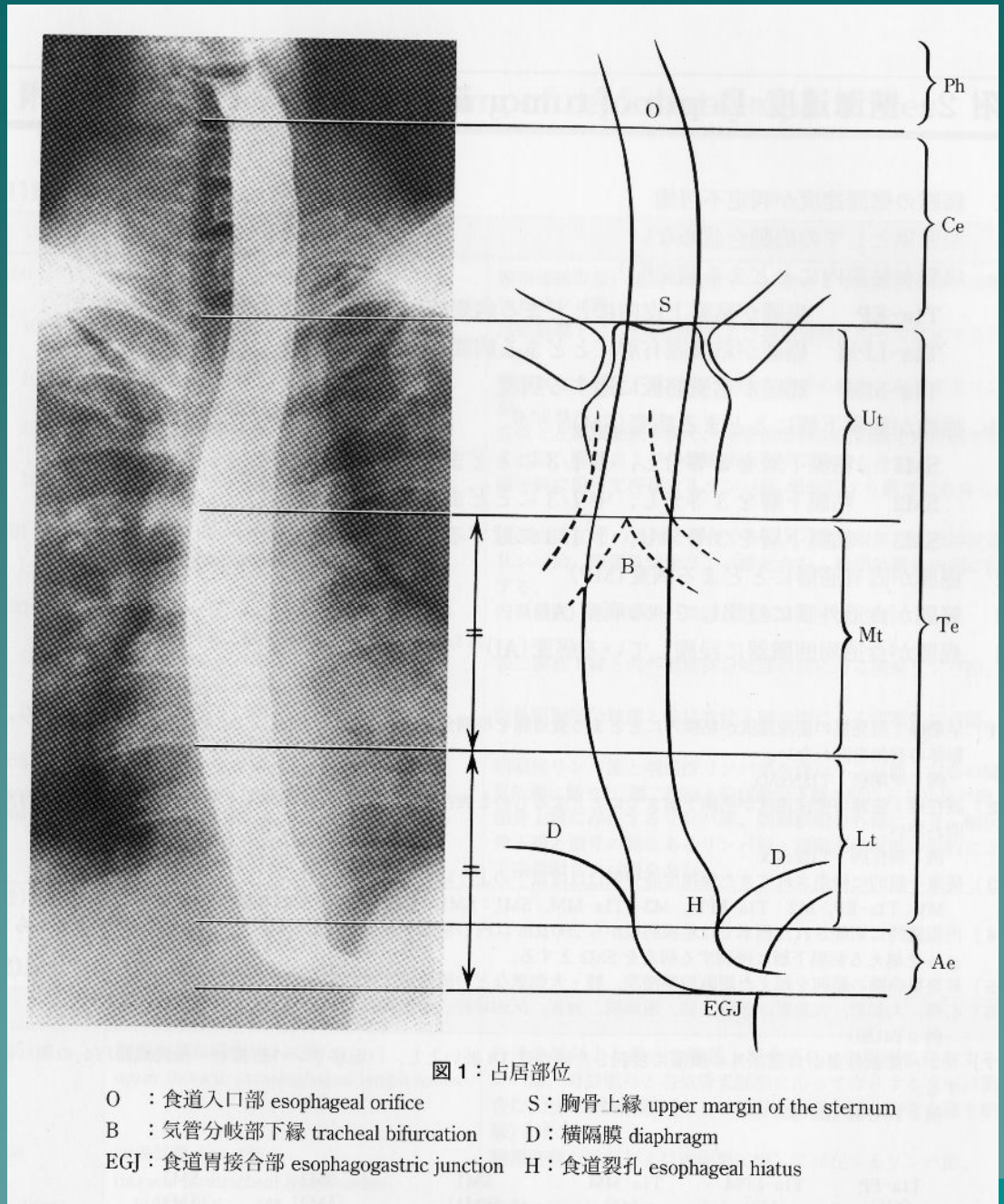
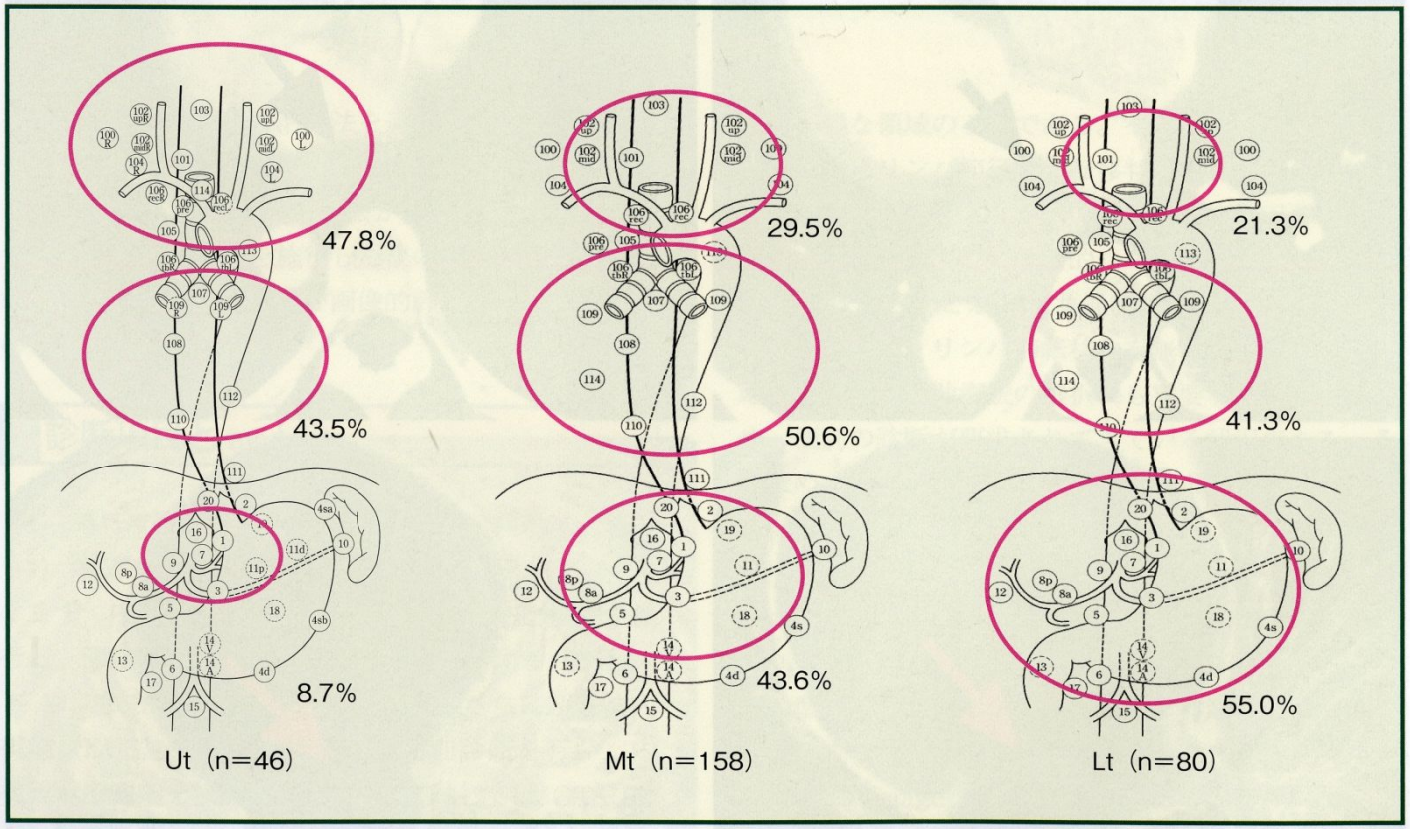


図 1：占居部位

O　：食道入口部 esophageal orifice
S：胸骨上縁 upper margin of the sternum
B　：気管分岐部下縁 tracheal bifurcation
D：横隔膜 diaphragm
EGJ：食道胃接合部 esophagogastric junction
H：食道裂孔 esophageal hiatus

リンパ節郭清
2領域郭清・3領域郭清



〔『食道癌取扱い規約（第10版）』より引用・改変〕

図5　主腫瘍部位別リンパ節転移分布（切除284例）
3領域における転移頻度の認識が必要である。

腫瘍存在部位

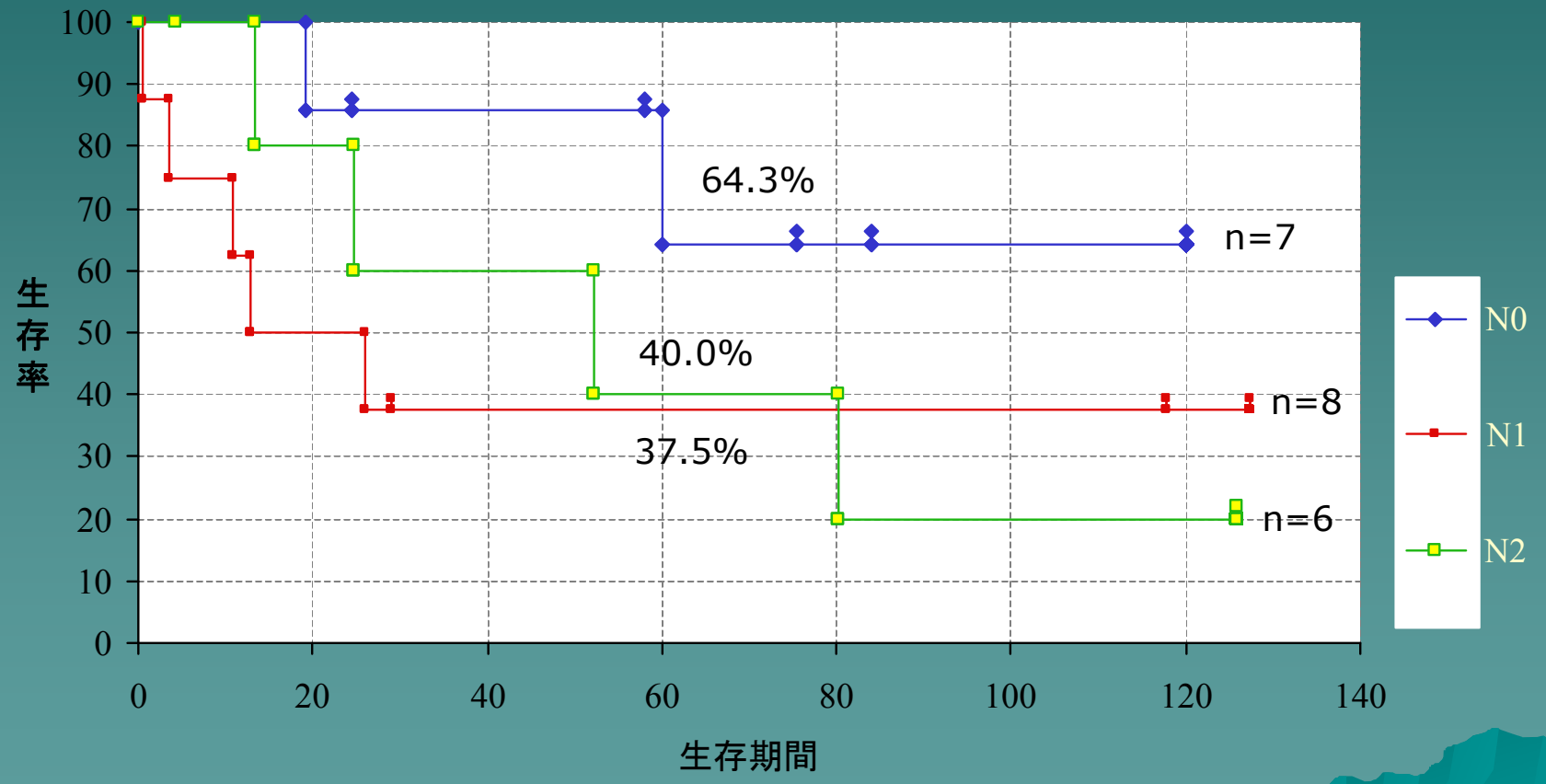
Ce	2例
Ut	1例
Mt	10例
Lt	8例
Ae	0例

郭清範囲

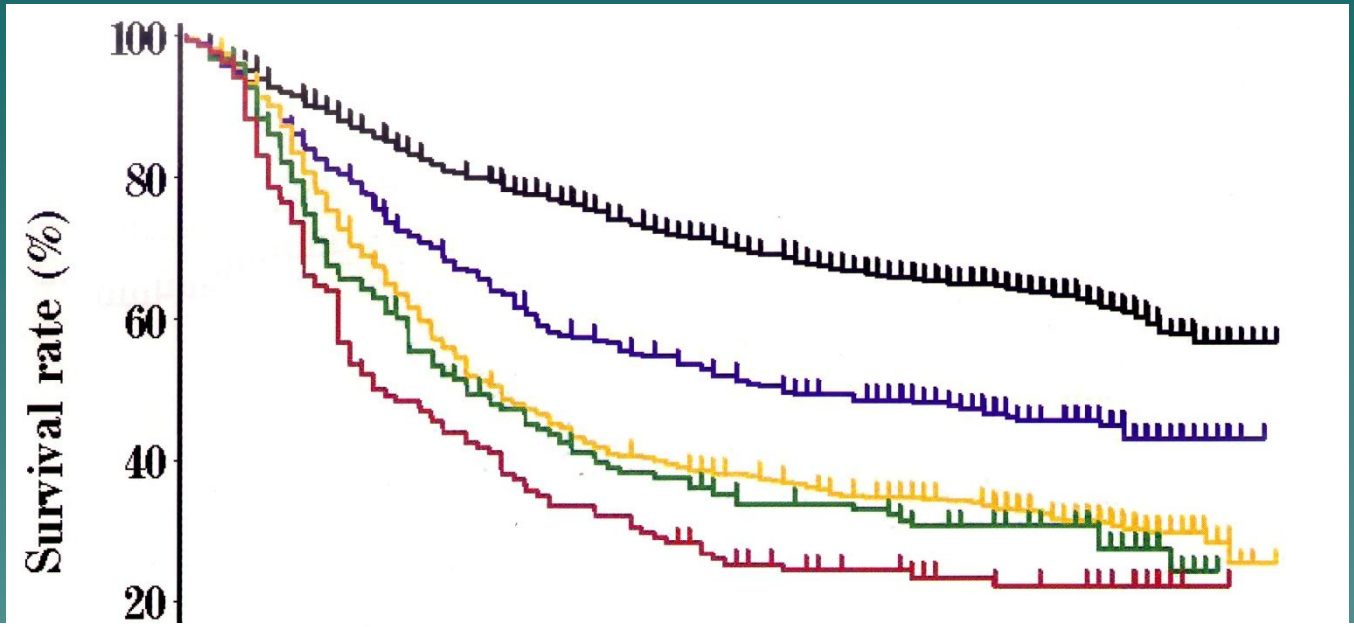
2領域	15例
3領域	6例

n0	7例
n1～3	8例
n4以上	6例

リンパ節転移別生存曲線



リンパ節転移別予後曲線 (2004年)

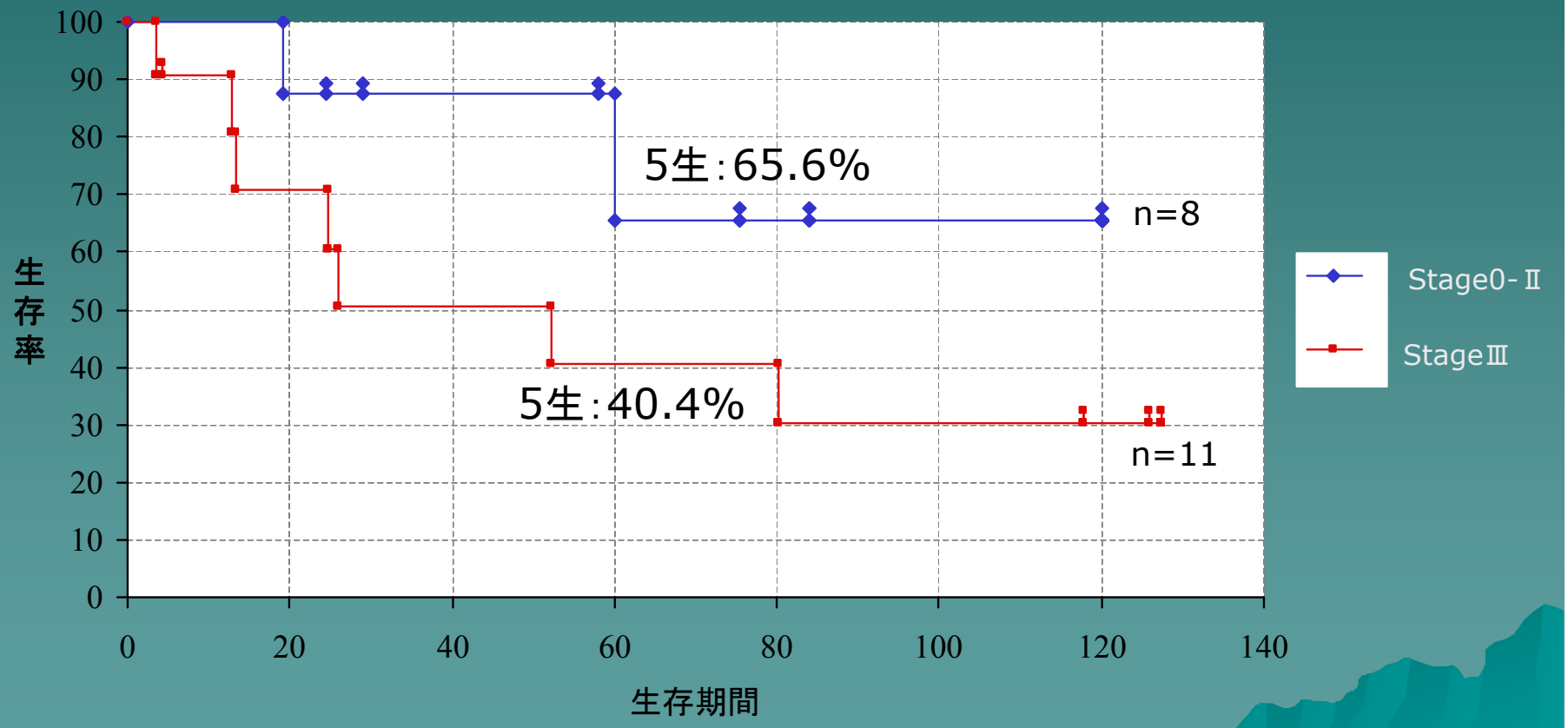


	Years after surgery							
	1	2	3	4	5	6	7	8
pN0	89.2%	80.1%	74.3%	69.5%	65.9%	63.9%	57.8%	56.6%
pN1	81.5%	67.2%	56.6%	50.9%	48.6%	45.6%	43.0%	43.0%
pN2	75.2%	52.5%	41.0%	37.7%	34.8%	33.0%	29.9%	25.3%
pN3	68.3%	50.8%	38.9%	33.9%	32.3%	30.7%	24.1%	24.1%
pN4	64.0%	42.5%	32.1%	25.2%	24.3%	22.2%	22.2%	22.2%

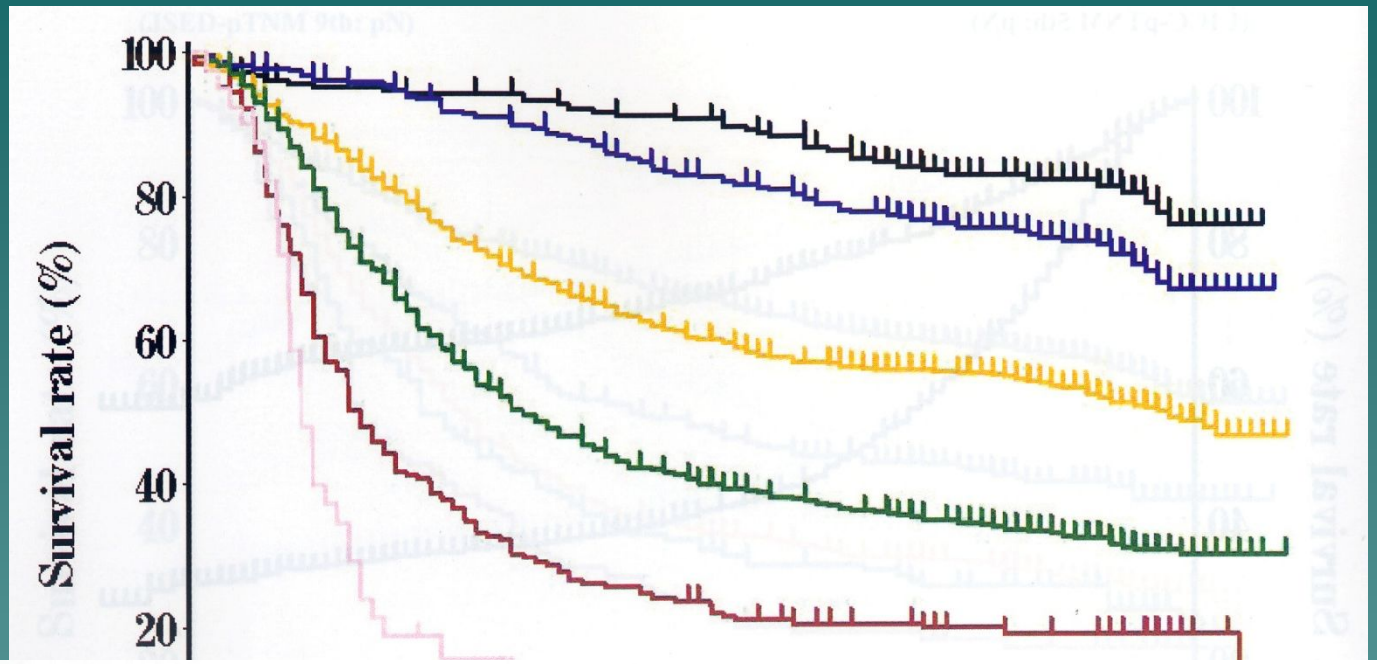
pstage別症例数

stage	0	1例
	Ⅰ	1例
	Ⅱ	6例
	Ⅲ	11例
	Ⅳa	2例
	Ⅳb	0例

病期別生存曲線


100
90
80
70
60
50
40
30
20
10
0
生存率
0
20
40
60
80
100
120
140
生存期間
5生:65.6%
n=8
5生:40.4%
n=11
Stage0-Ⅱ
StageⅢ

病理病期別生存曲線 (2004年)



	Years after surgery							
	1	2	3	4	5	6	7	8
pStage 0	95.2%	94.2%	91.2%	88.7%	83.9%	82.0%	75.7%	75.7%
pStage I	96.1%	91.1%	85.7%	81.2%	76.8%	73.9%	66.6%	66.6%
pStage II	86.5%	72.4%	63.5%	57.7%	55.6%	53.9%	48.4%	46.4%
pStage III	75.6%	54.3%	43.0%	38.5%	35.4%	33.1%	29.9%	29.9%
pStage IVa	55.9%	33.6%	25.5%	20.8%	20.2%	18.8%	18.8%	9.4%
pStage IVb	34.6%	15.5%	9.3%	6.2%	6.2%	6.2%	0.0%	-

Short and Long-Term Outcomes After Esophagectomy for Cancer in Elderly Patients

Luis F. Tapias, MD, Ashok Muniappan, MD, Cameron D. Wright, MD, Henning A. Gaissert, MD, John C. Wain, MD, Christopher R. Morse, MD, Dean M. Donahue, MD, Douglas J. Mathisen, MD, and Michael Lanuti, MD

Division of Thoracic Surgery, Massachusetts General Hospital, Boston, Massachusetts

Background. As worldwide life expectancy rises, the number of candidates for surgical treatment of esophageal cancer over 70 years will increase. This study aims to examine outcomes after esophagectomy in elderly patients.

Methods. This study is a retrospective review of 474 patients undergoing esophagectomy for cancer during 2002 to 2011. A total of 334 (70.5%) patients were less than 70 years old (group A), 124 (26.2%) 70 to 79 years (group B), and 16 (3.4%) 80 years or greater (group C). We analyzed the effect of age on outcome variables including overall and disease specific survival.

Results. Major morbidity was observed to occur in 115 (35.6%) patients of group A, 58 (47.9%) of group B, and 10 (62.5%) of group C ($p = 0.010$). Mortality, both 30-day and 90-day was observed in 2 (0.6%) and 7 (2.2%) of group A, 4 (3.2%) and 7 (6.1%) of group B, and 1 (6.3%) and 2 (14.3%) of group C, respectively ($p = 0.032$ and $p = 0.013$). Anastomotic leak was observed in 16 (4.8%) patients of group A, 6 (4.8%) of group B, and 0 (0%) of group C ($p = 0.685$). Anastomotic stricture (defined by the need for ≥ 2 dilations) was observed in 76 (22.8%) of group A, 13 (10.5%) of group B, and 1 (6.3%) of group C ($p = 0.005$). Five-year overall and disease specific survival was 64.8% and 72.4% for group A, 41.7% and 53.4% for group B, 49.2% and 49.2% for group C patients ($p = 0.0006$), respectively.

Conclusions. Esophagectomy should be carefully considered in patients 70 to 79 years old and can be justified with low mortality. Outcomes in octogenarians are worse suggesting esophagectomy be considered on a case by case basis. Stricture rate is inversely associated to age.

(Ann Thorac Surg 2013;95:1741–8)

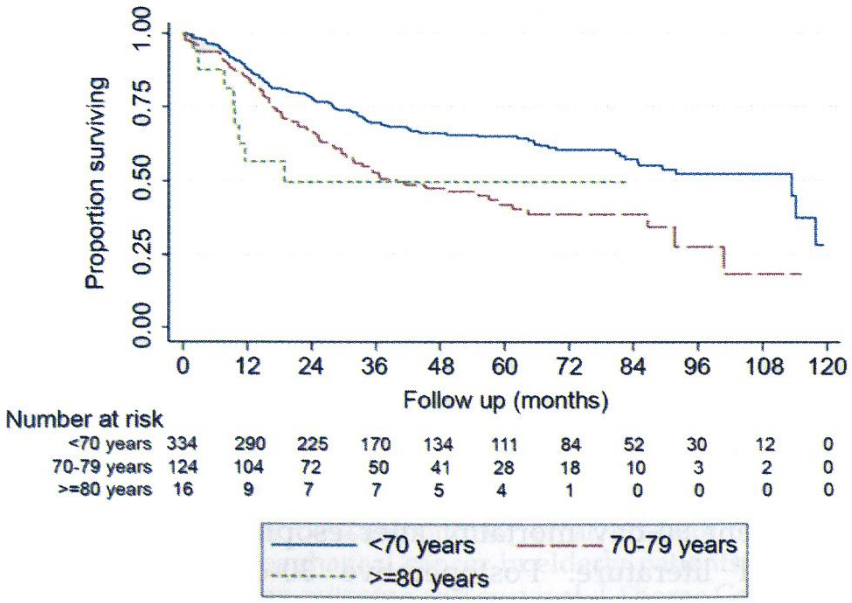


Fig 1. Kaplan-Meier curve for overall survival after esophagectomy stratified by age group.

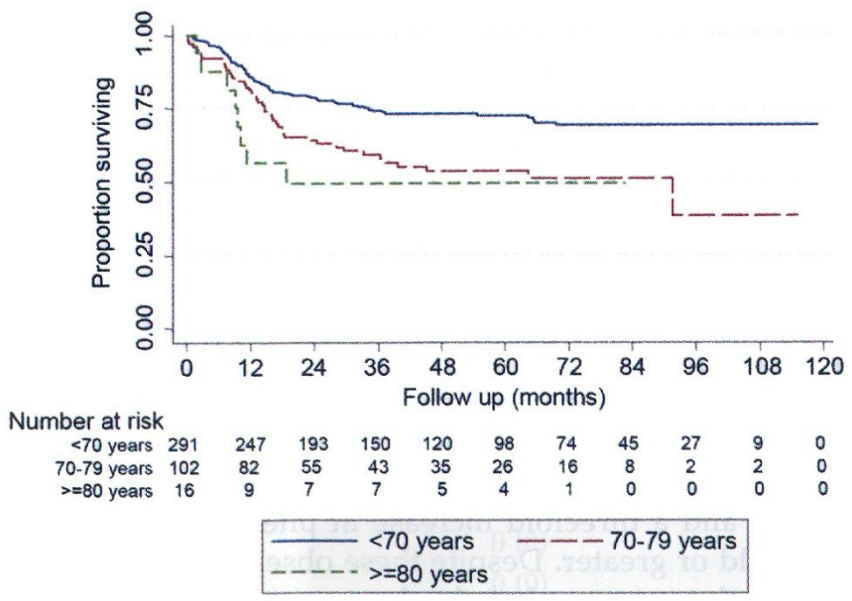
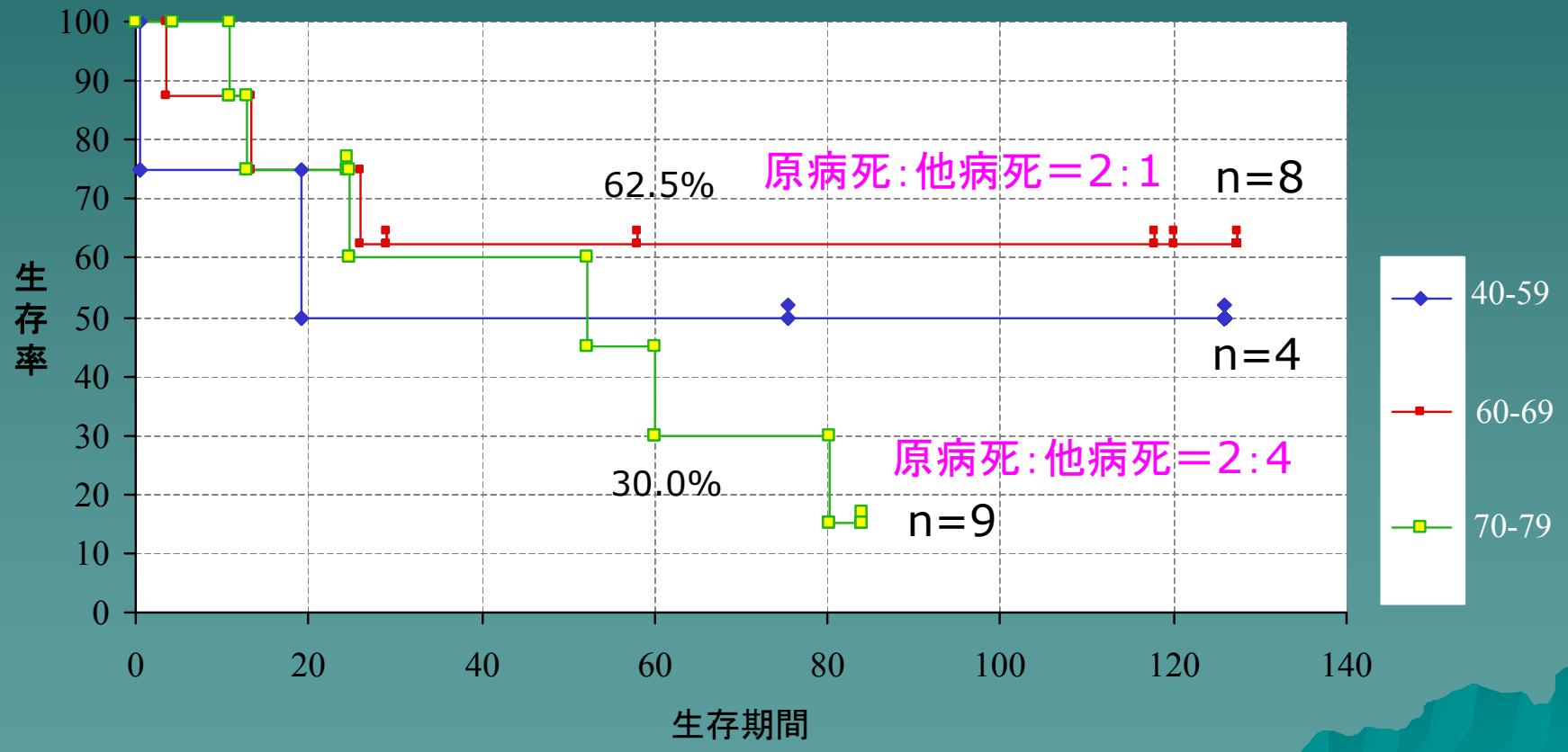


Fig 2. Kaplan-Meier curve for cancer-specific survival after esophagectomy stratified by age group.

年齢別生存曲線


100
90
80
70
60
50
40
30
20
10
0
生存率
0
20
40
60
80
100
120
140
生存期間
62.5%
原病死:他病死＝2:1
n=8
n=4
30.0%
原病死:他病死＝2:4
n=9
40-59
60-69
70-79

食道切除再建

再建臓器

胃	18例
大腸	3例
小腸	0例

再建経路

後縦隔	16例
胸骨後	1例
胸骨前	4例

術前化学放射線療法：5例

根治的化学放射線療法：2例

合併症

縫合不全	3例(内1例気管壊死併発)
膿胸	2例(内1例敗血症に移行)
敗血症	1例(在院死)
気管壊死	2例(1例術死)
胃管穿孔	1例(膿胸に移行)

左半回神経麻痺　　2例

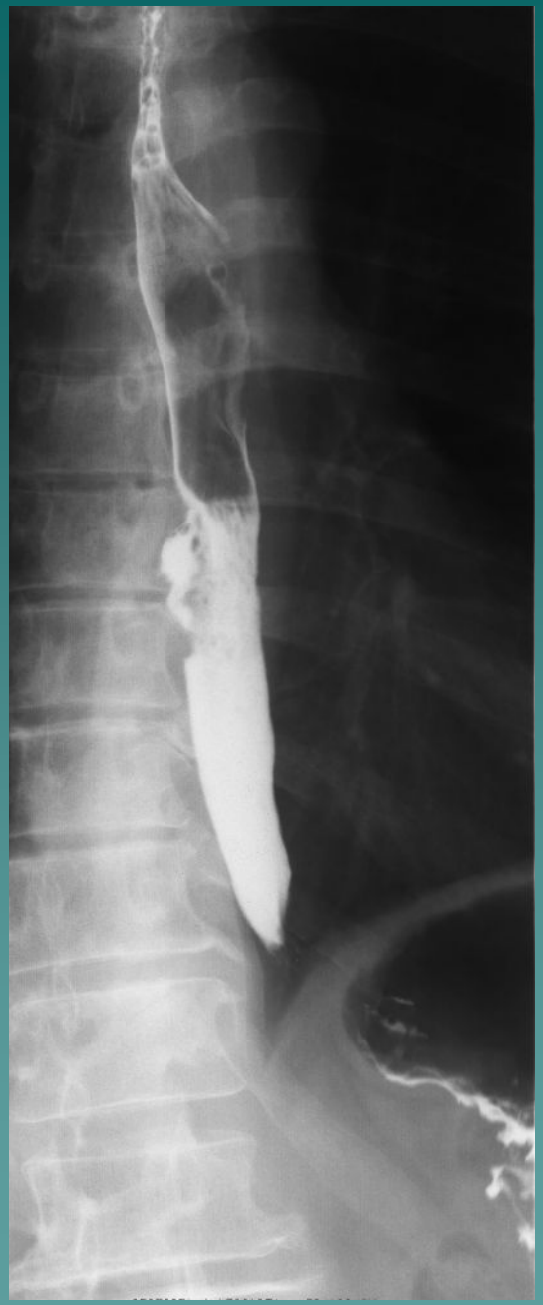
再　発

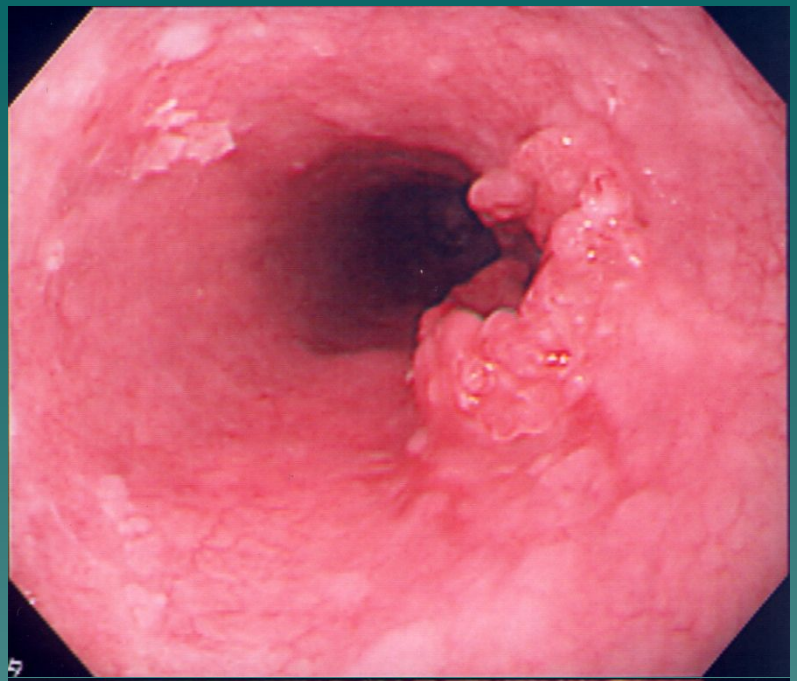
頚部リンパ節、肺	1例(無再発生存)
腹部リンパ節	1例(無再発生存)
多発肝転移	1例(原病死)
肺転移	2例(1例原病死)
骨転移	1例(原病死)
左鼠径部リンパ節	1例(原病死)
局所再発	1例(原病死)

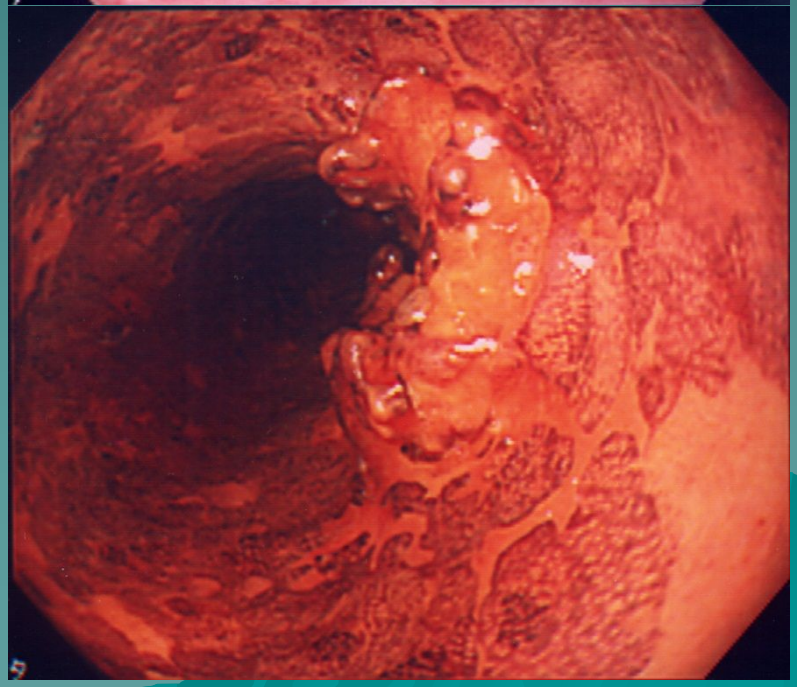
原病死：5例、他病死：6例(1例術死、1例院内死)

症　例

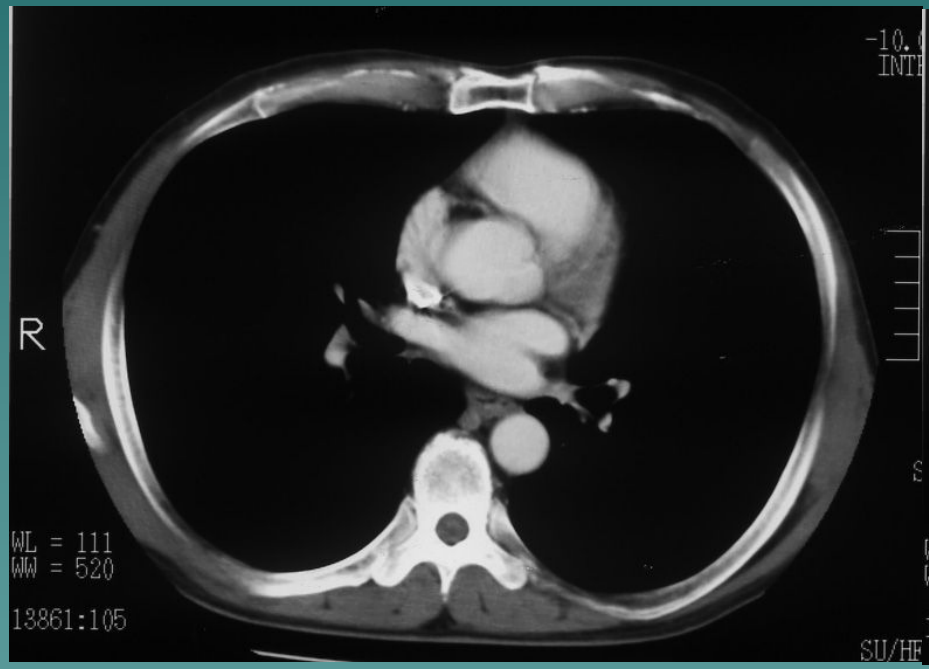
症例：60代、男性
主訴：つかえ感
現病歴：つかえ感自覚4ヶ月後当院内科受診し胃カメラ施行、食道癌と診断され手術目的で当科紹介。同月手術、術後イレウスとなり再手術施行、術後6週間で退院。その後外来通院していたが術後9ヶ月目に右鎖骨上リンパ節腫大認めCTでリンパ節再発と診断、CDDP+5-FU同時性放射線(short T 46GY)＋(右鎖骨上Boost 16GY)施行した。術後2年目に左肺S6に空洞性病変出現、CTで経過観察としたが1年後のCTで充実性病変となり腫瘍径も3倍になったため肺転移として左S6区域切除術施行。その後外来通院しているが術後10年7か月無再発生存中である。

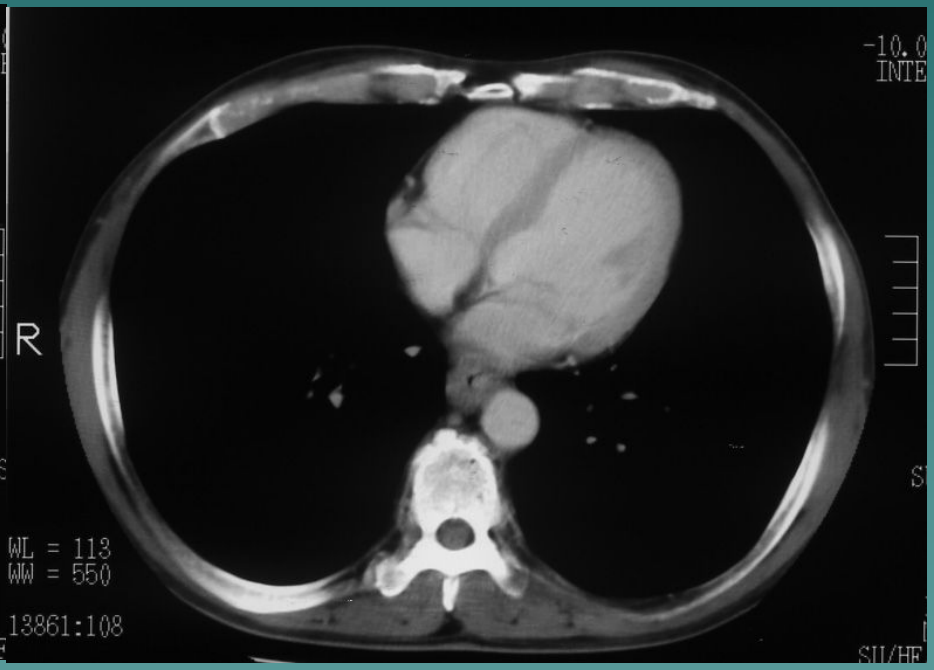


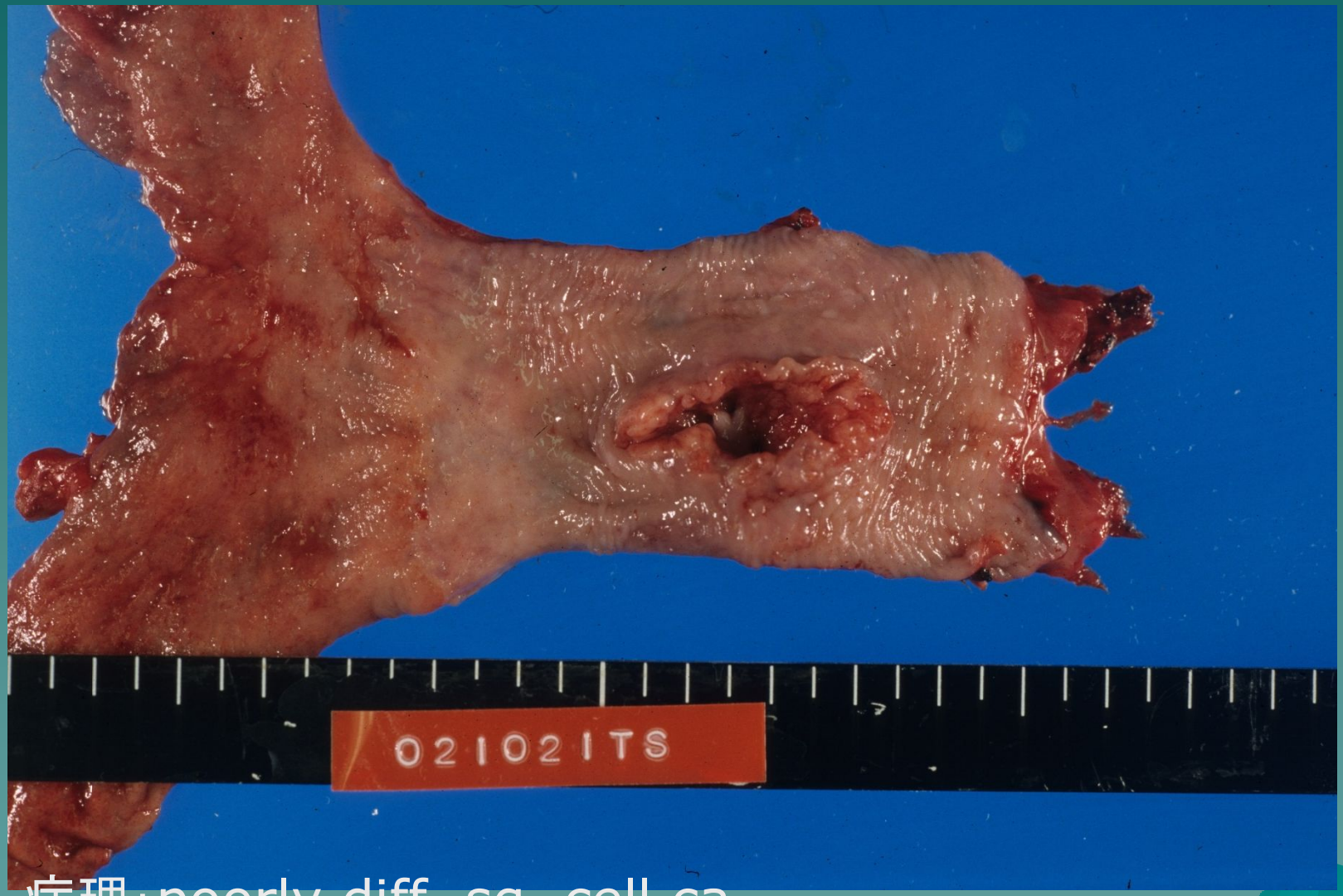




術前胸部CT

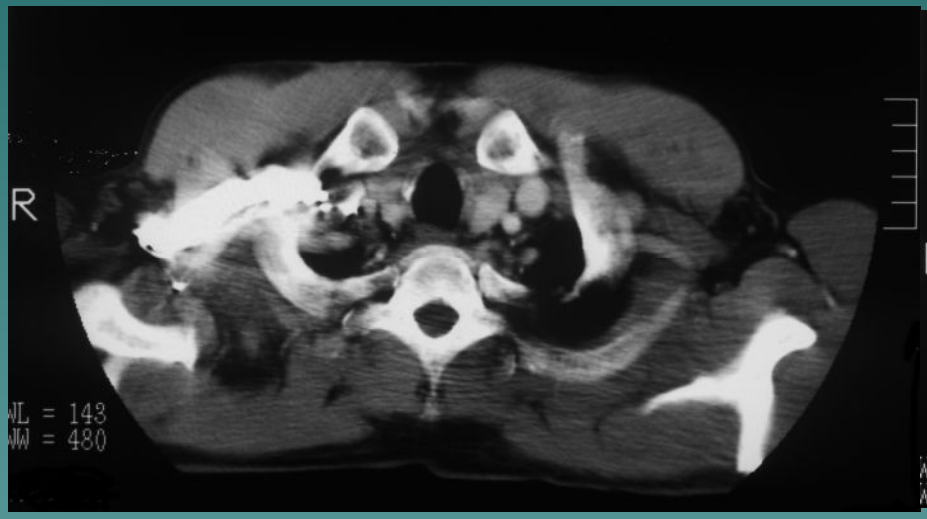


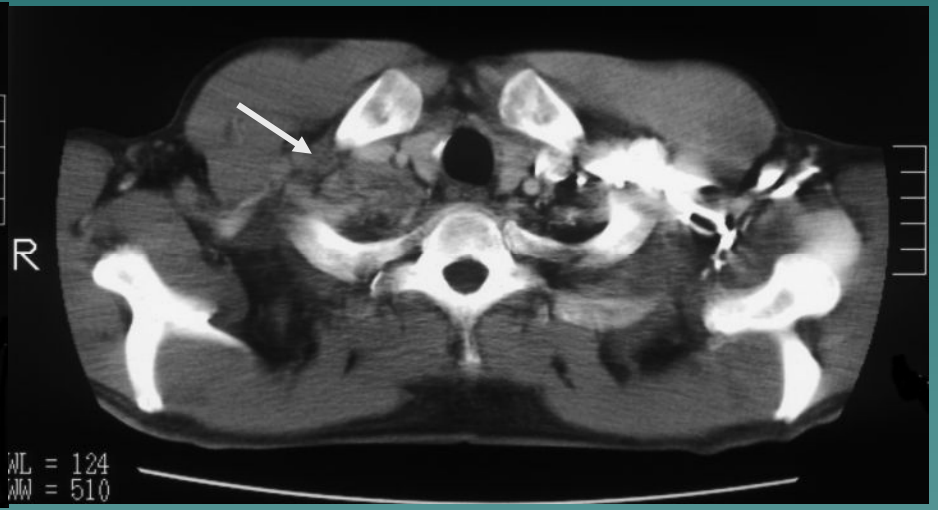




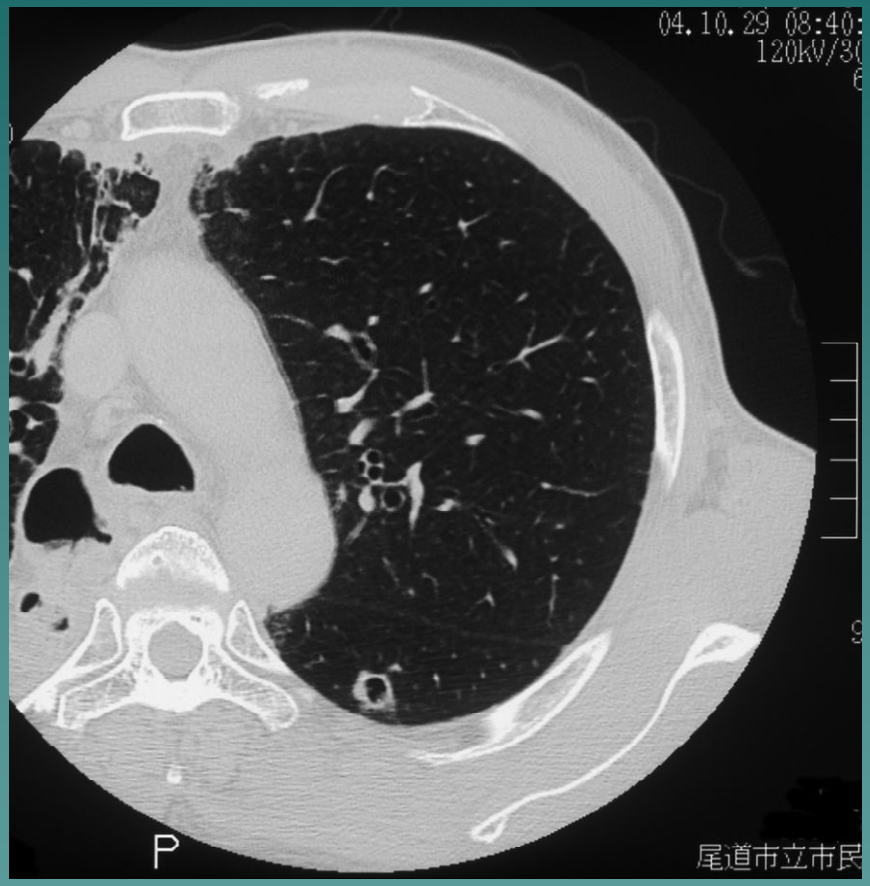
病理：poorly diff. sq. cell ca.
ad, n1(#110 1/9), ly1, v0 T3N1M0 stageⅢ

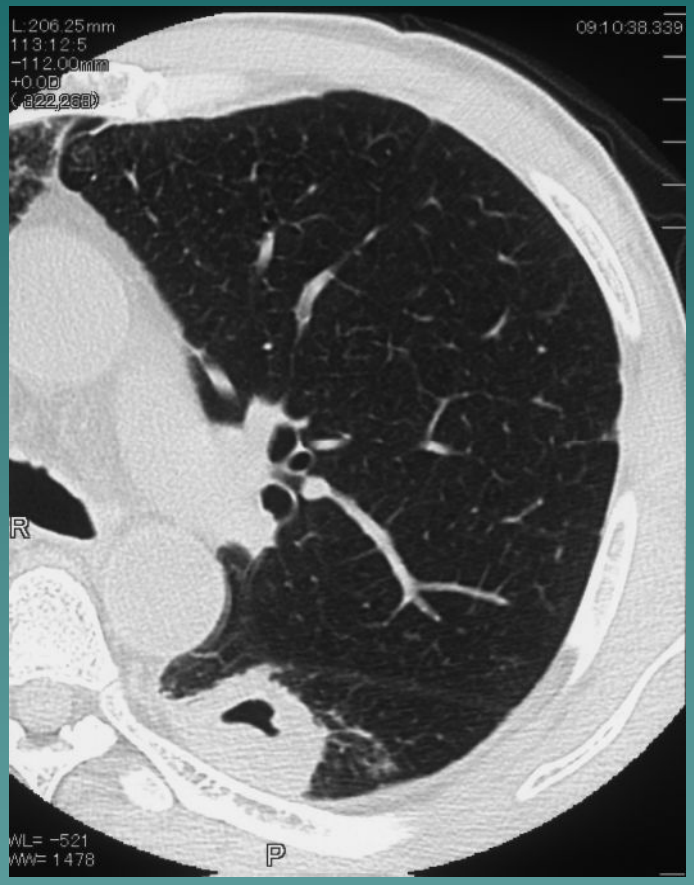
頚部リンパ節再発





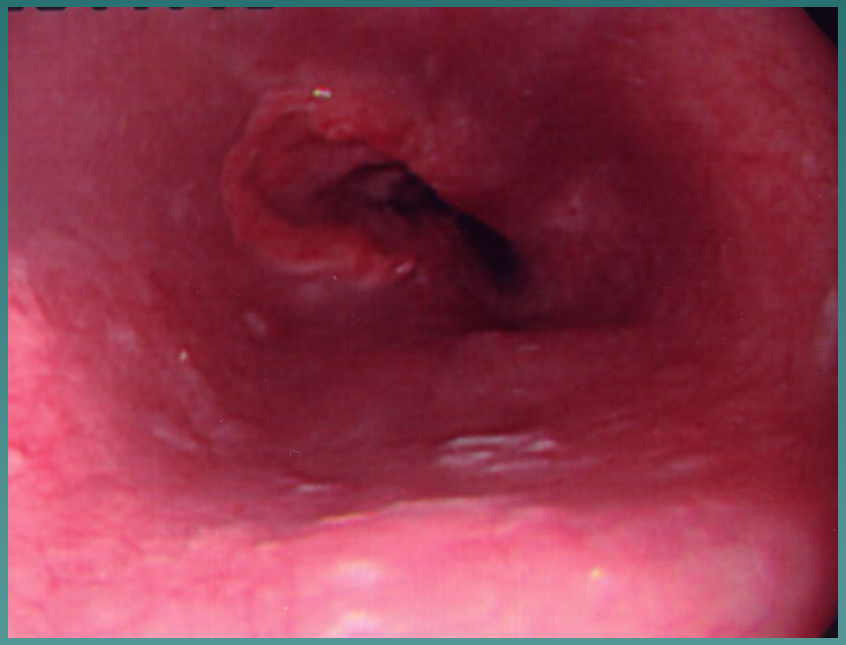
肺転移

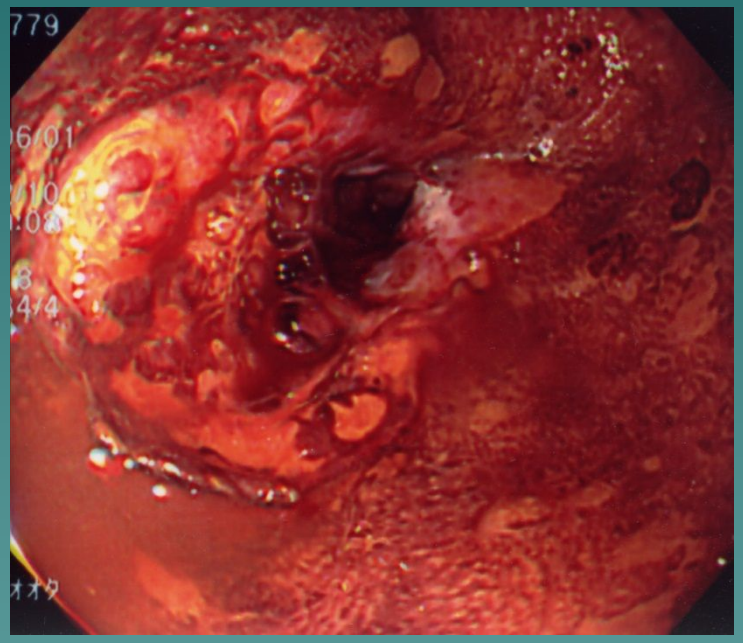

04.10.29 08:40:
120kV/3(
P
尾道市立市民


L:206.25mm
113:12.5
-112.00mm
+0.0D
(822,288)
09:10:38.339
R
WL= -521
WW= 1478
P

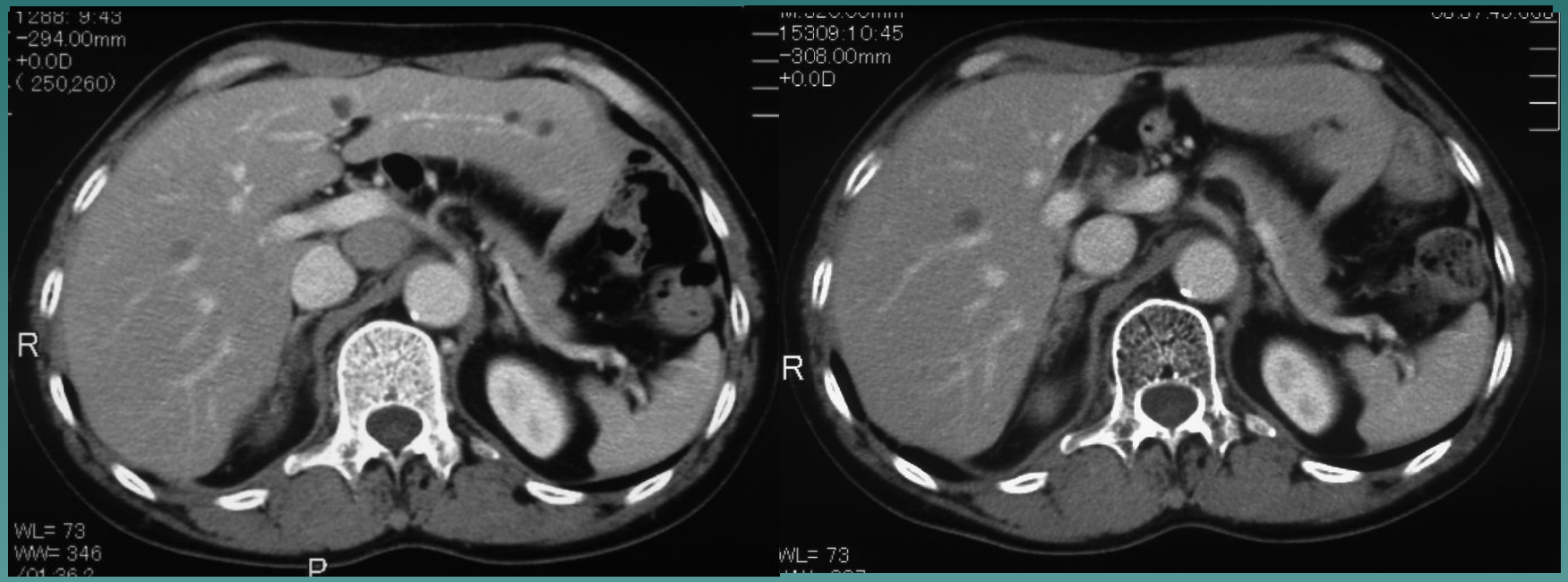
症　例

症例：50代、男性
主訴：嘔吐
現病歴：嘔吐自覚し近医受診、近医での食道透視で食道癌を疑われ当科紹介。当科胃カメラで食道癌と診断。手術施行。術後3年目のCTで腹部リンパ節再発と診断されCDDP+5-FU　同時性放射線照射46GY施行。その後10年4か月無再発生存中。





病理：mod. diff. sq. cell ca. Ad n2(#1 3/3 #2 1/4 #7 1/1 #110 1/3 #112 1/1), ly3, v1　T3N3(2b)M0 stageⅢ


−294.00mm
+0.0D
(250,260)
R
WL= 73
WW= 346
P
15309:10:45
−308.00mm
+0.0D
R
WL= 73

まとめ

1.当院食道癌切除症例は、全国症例と比較しやや病期の進行した症例が多かった

2.70歳以上の症例は他病死をコントロールすることが重要であると思われた

3.食道癌切除後再発症例にも集学的治療を行うことにより長期生存が期待できると思われた