XXIV Reunión SVC

ABORDAJE ENDOSCÓPICO CÁNCER ESÓFAGO

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CMI ESOFÁGICA

Toracotomía

Recuperación – estancia

HIPOTESIS

Complicaciones pulmonares

+

- Desarrollo de las habilidades en cirugía laparoscópica
- Adelantos tecnológicos

CIRUGÍA MÍNIMAMENTE INVASIVA

CMI Esofágica

- DePaula -1995

Laparoscopic transhiatal esophagectomy with esophagogastroplasty.Surg Laparosc Endosc. 1995 Feb;5(1):1-5.

Cushieri – 1992

Cuschieri A, Shimi S, Banting S. Endoscopic oesophagectomy through a right thoracoscopic approach. J R Coll Surg Edinb 1992;37:7–11.

Sadanaga -1994

Sadanaga N, Kuwano H, Watanabe M, Ikebe M, Mori M, Maekawa S, et al. Laparoscopy-assisted surgery: a new technique for tran-shiatal esophageal dissection. Am J Surg 1994;168:355–7.

CMI Esofágica

- TTE
  - Toracoscopia/ Laparoscopia
  - Toracoscopia/ laparotomía
  - Anastomosis cervical / intratorácica
  - “Hand assisted”

- THE
  - Laparoscopia
  - Anastomosis cervical
  - “Hand-assisted”

- *Mediastinoscopia*

TTE

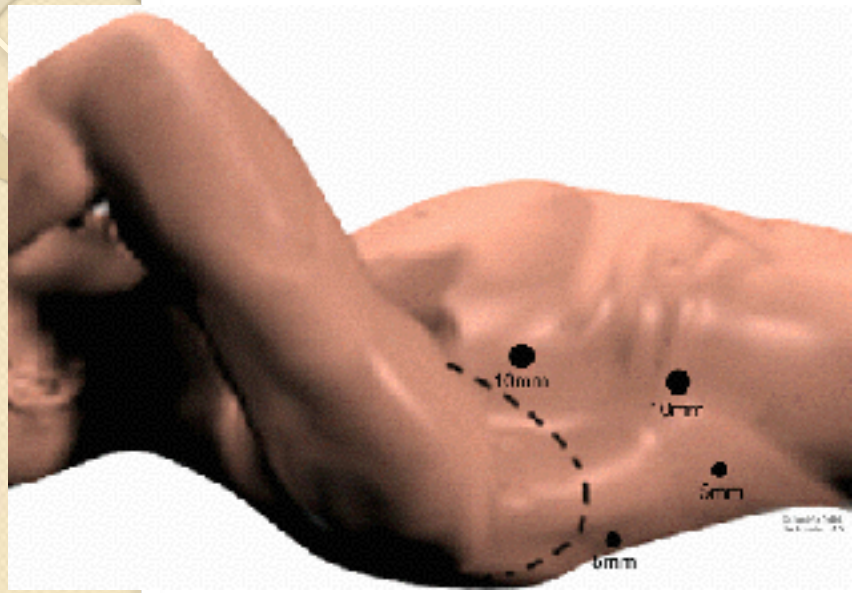
TORACOSCOPIA

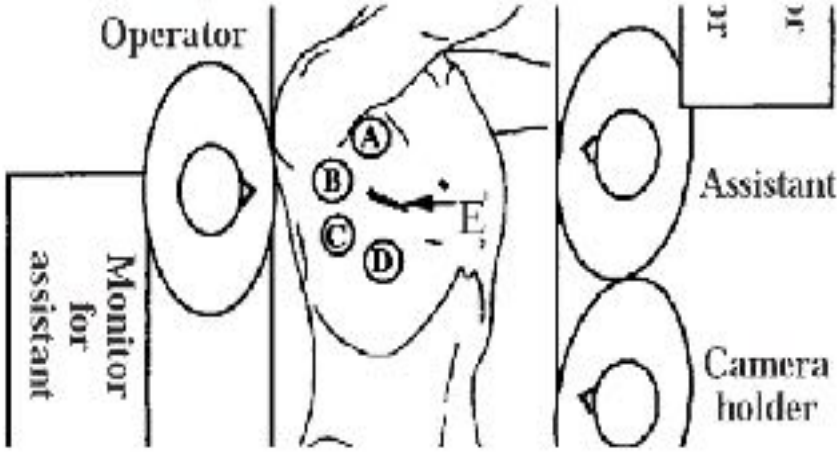
LAPAROSCOPIA

LAPAROTOMIA

TOTAL MIE

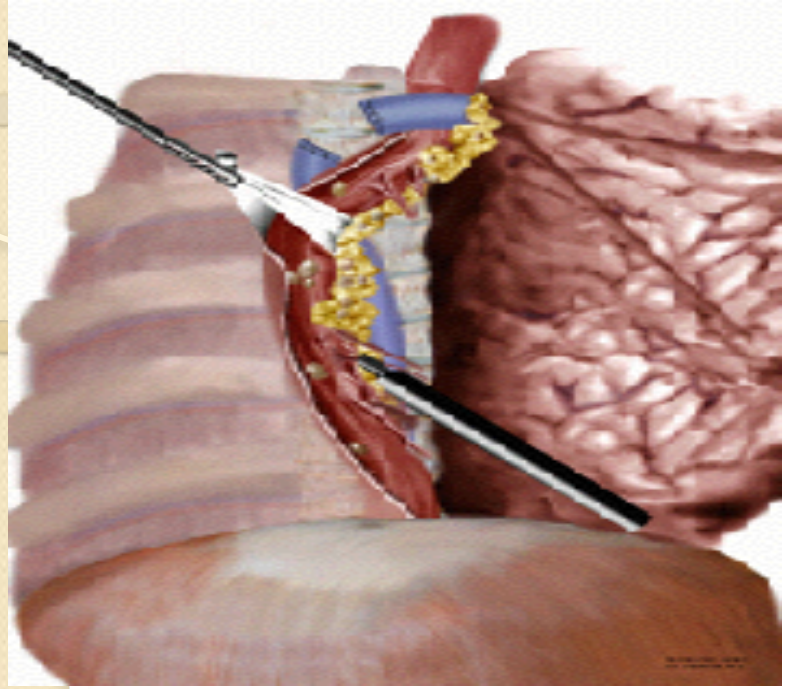
TTE





- Decúbito lateral izquierdo / Prono
- 4 trócares:
  - 10 mm LMA -7º EIC
  - 10 mm LMA -3º EIC
  - 5 mm LPA – 7º EIC
  - 5 mm LPA – 5º EIC

TTE



TTE

- Disección caudo-craneal
- Referencia del esófago con cinta
- Ligadura y sección de la vena ázigos
- Linfadenectomía del territorio subcarinal
- Drenaje torácico

TTE

- ***Ventajas***
  - Control sobre la hemorragia
  - Posibilidad mejor linfadenectomía

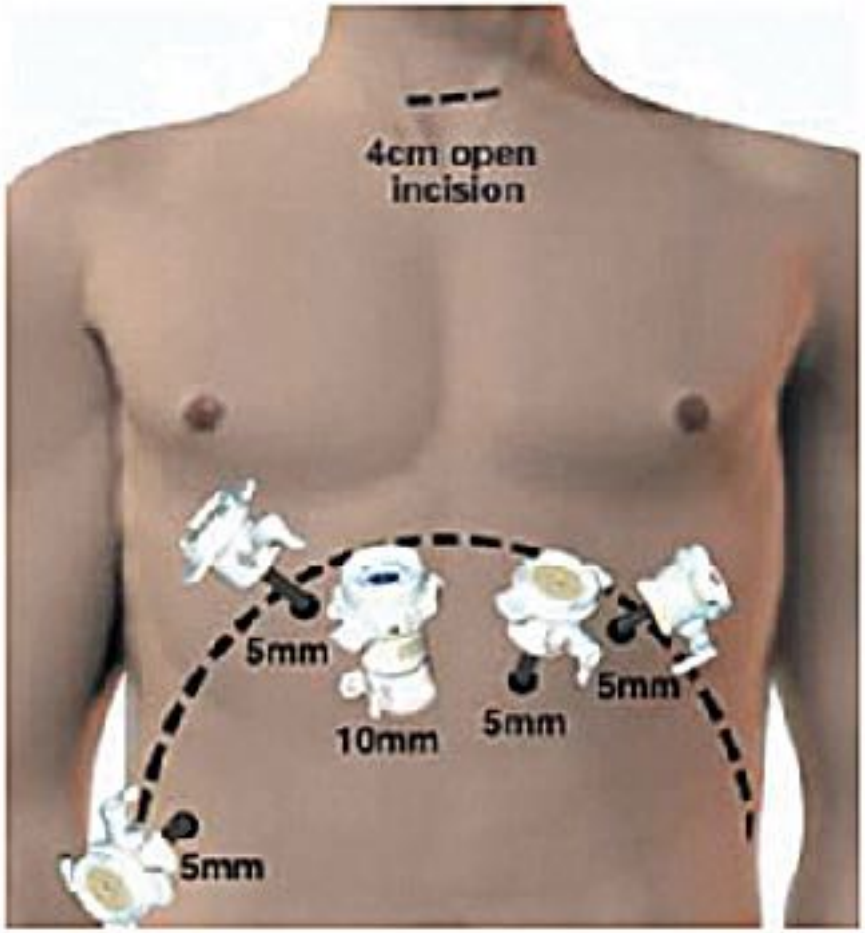
- ***Inconvenientes***
  - Ventilación unipulmonar
  - Acceso a 2 cavidades
  - ¿Complicaciones respiratorias?

INDICACIONES:

- No cirugía torácica previa (Relativa)
- No tumores T4
- Capacidad de soportar ventilación selectiva
- No comorbilidades importantes (cirrosis,etc..)

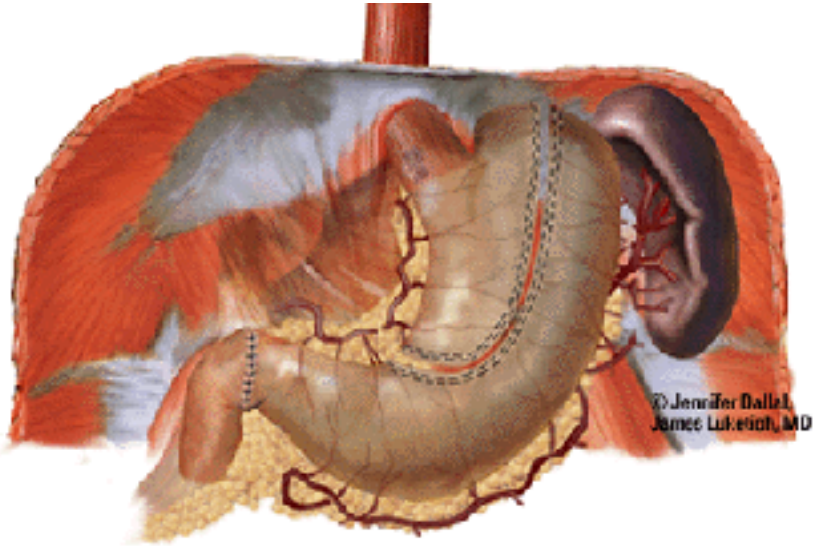
Tiempo abdominal - THE

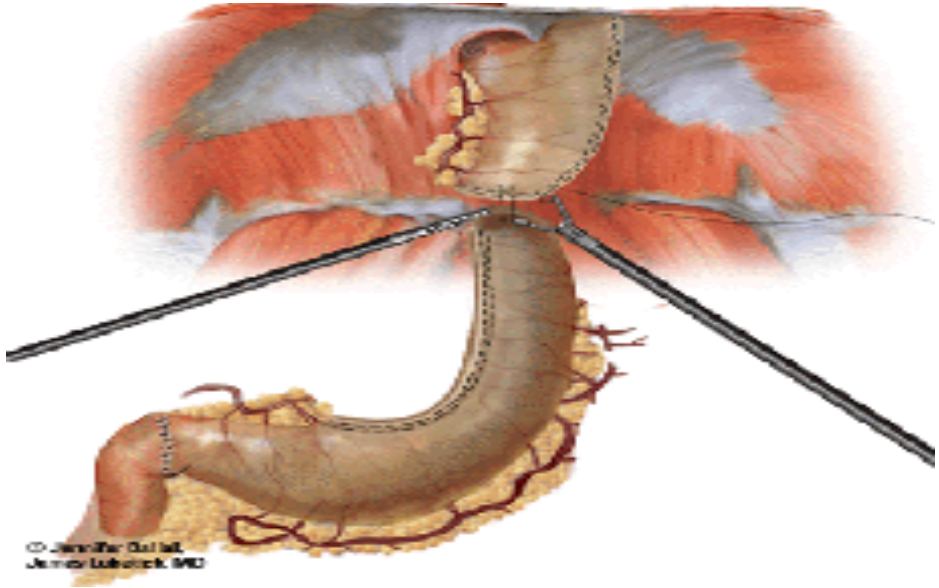
- Decúbito supino
- 5 trócares (Fig)
- Disección hiato
  - Valorar resecabilidad
  - NO si TTE



Tiempo abdominal -THE

- Disección y esqueletización
- Plastia Akiyama con Endo-GIA Universal
- No piloroplastia
- Extracción pieza vía abdominal
- Ascenso plastia - bolsa y tutor





Anastomosis

- Cervical:
  - T-L
  - T-T
- Intratorácica:
  - Se invierten tiempos torácico y abdominal
  - Doble grapado

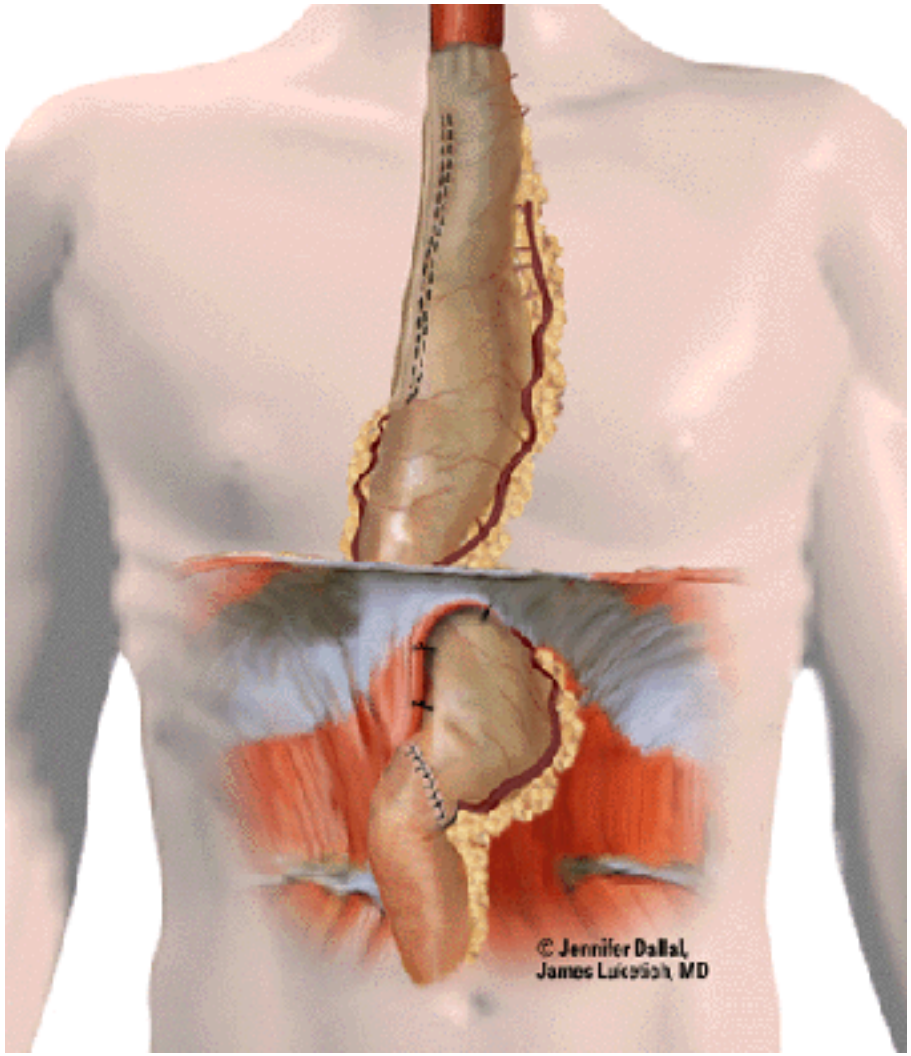
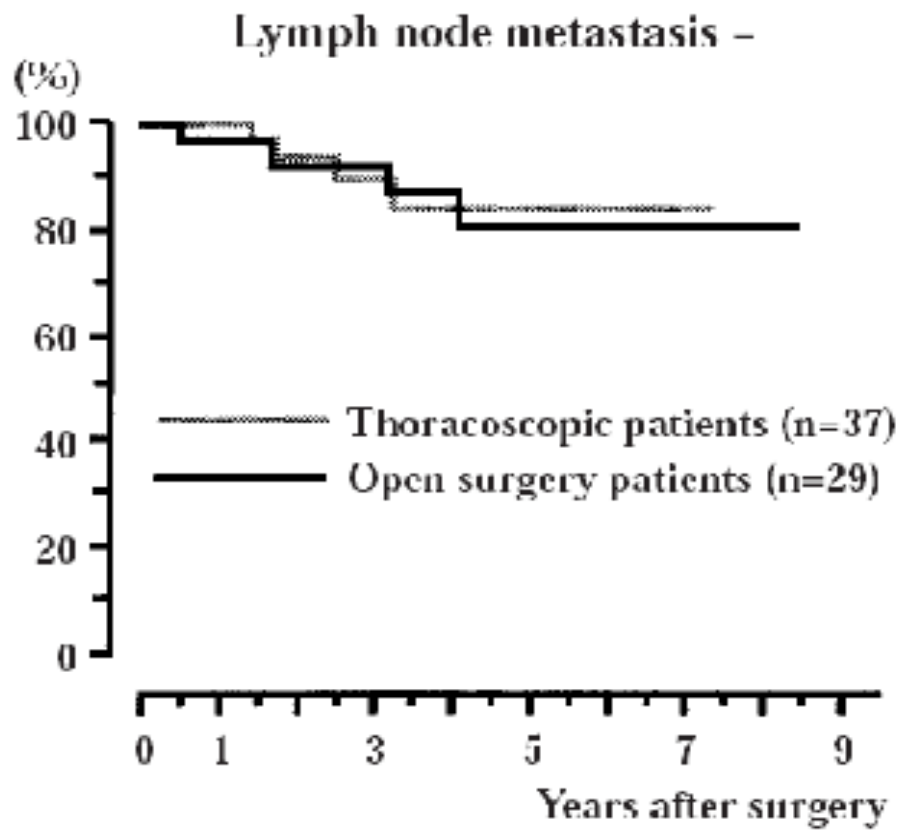
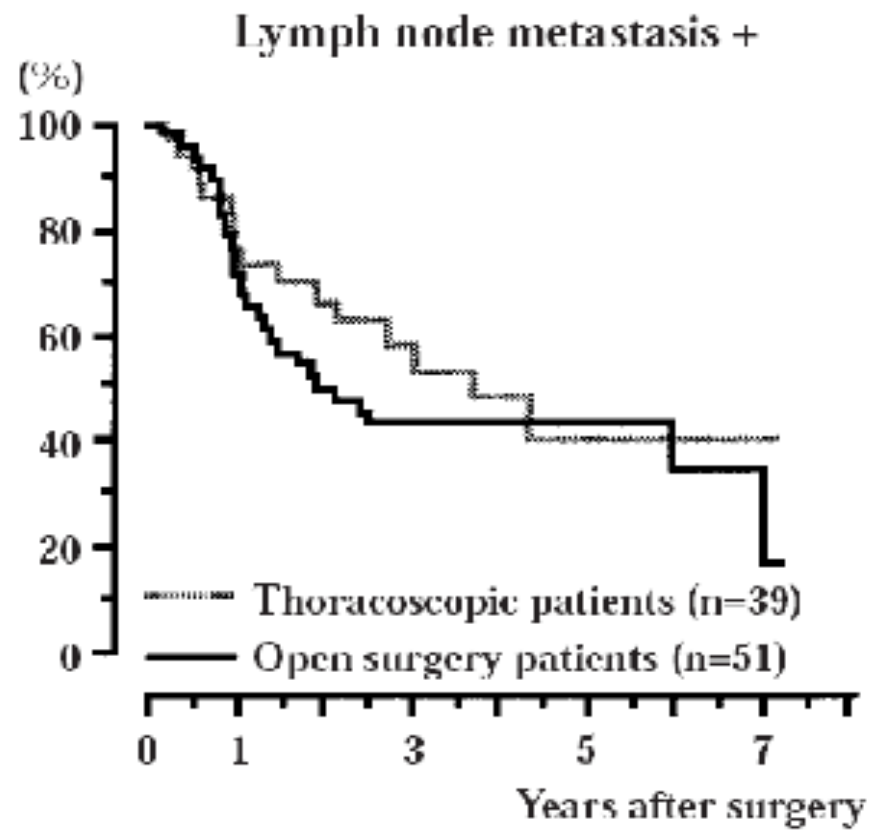


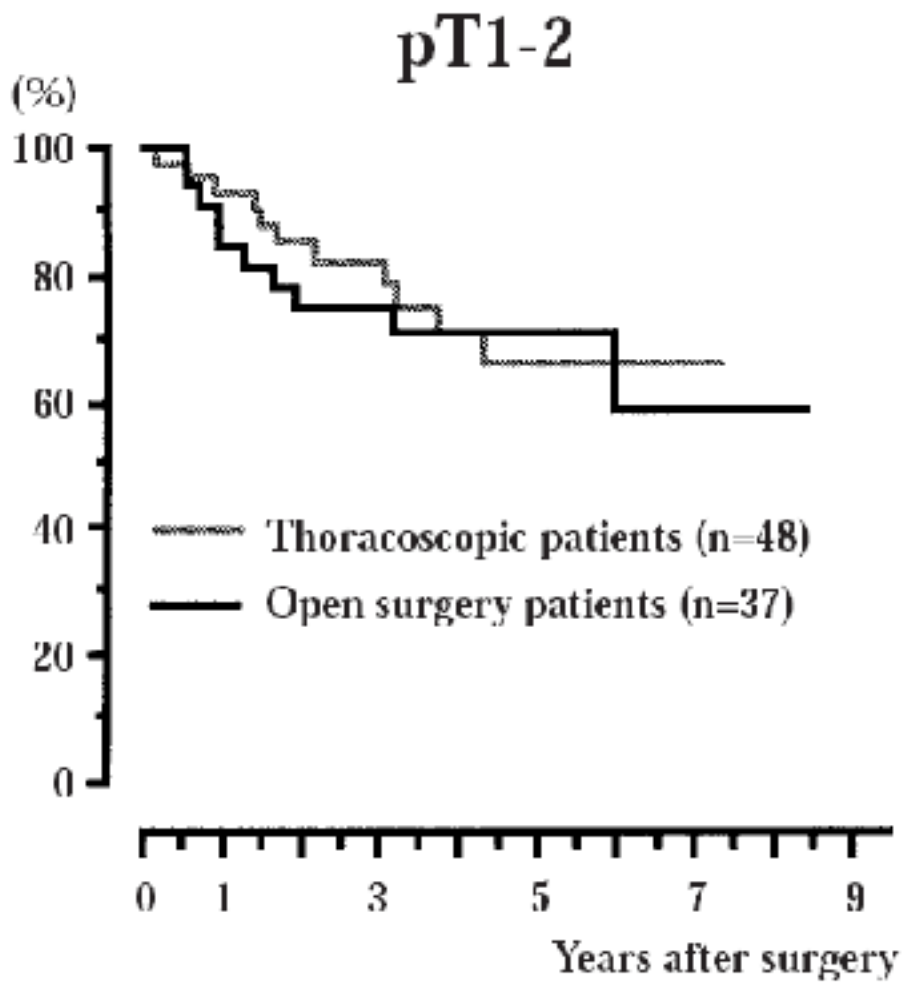
Table 2. Thoracoscopic esophagectomy; literary review of lymph node dissection

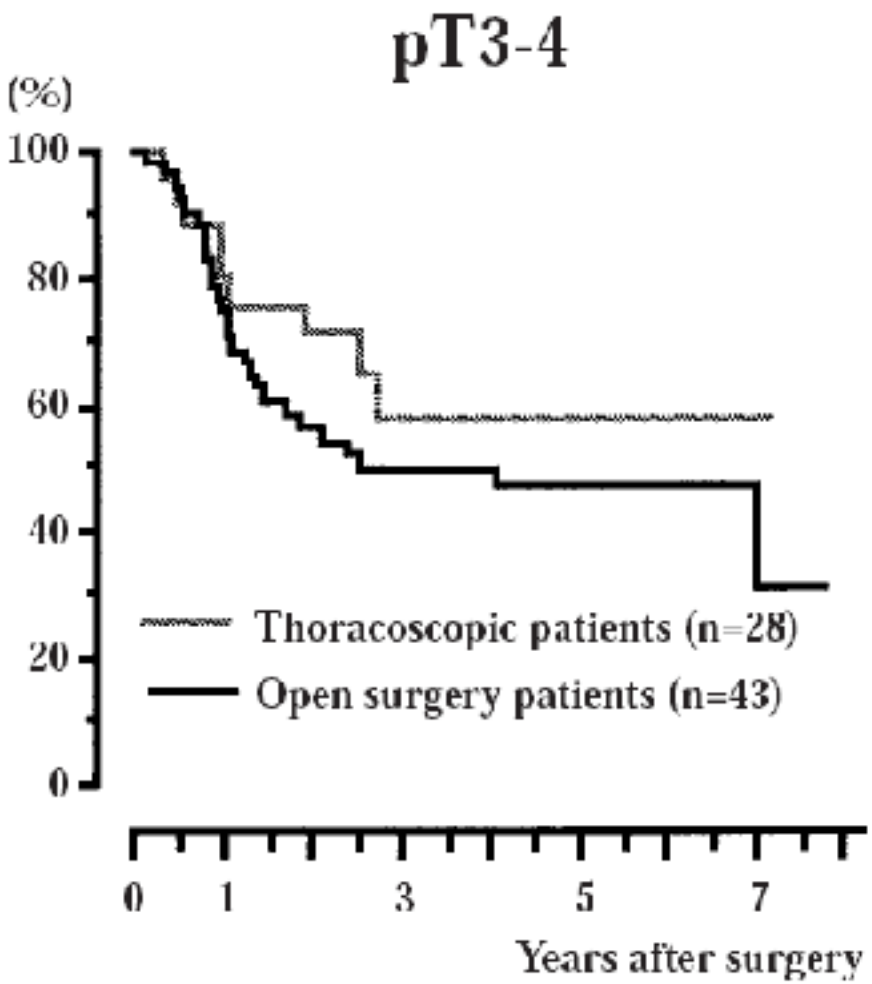
Author	Collard 1993[13]	McAnena 1994[24]	Mitchell 1994[25]	Robertson 1996[26]	Dexter 1996[14]	Akaishi 1996[10]	Peracchia 1997[18]	Law 1997[5]	Kawahara 1999[16]	Okushiba 2003[12]	Osugi 2003[23] All cases	Osugi 2003[23] After learning
N. patients	12	9	8	17	24	39	18	18	23	18	80	46
N. nodes retrieved	(12-51)	(9-26)	11	7	13	19.7	12	7	29	20.1	34	36
median (range)				(2-8)				(2-13)				
Blood loss (g)	?	>600	1,500	?	?	270	210	450	136	?	274	160
Mean time (min)	150-360	128	150	135	184	200	114	110	111	?	223	182

Osugi et al.






pT1-2
(%)
100
80
60
40
20
0
Thoracoscopic patients (n=48)
Open surgery patients (n=37)
0
1
3
5
7
9
Years after surgery


pT3-4
(%)
100
80
60
40
20
0
Thoracoscopic patients (n=28)
Open surgery patients (n=43)
0
1
3
5
7
Years after surgery

Comparison of the Outcomes Between Open and Minimally Invasive Esophagectomy

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Ian Martin, MBBS, FRACS,* and Justin M. Thomas, BcHSc**

Ann Surg 2007;245: 232–240

TABLE 2. Operative Data

	Open (n = 114)	Thoracoscopic-Assisted (n = 309)	Total MIE (n = 23)	P
Blood loss chest (mL)	225 (0–500)	100 (0–1100)	200 (10–500)	0.01*
Blood loss total (mL)	600 (0–3000)	400 (0–1500)	300 (15–1000)	0.017†
Time chest (min)	120 (60–346)	90 (30–240)	90 (55–120)	0.01*
Time total (min)	300 (150–480)	285 (165–540)	330 (270–540)	0.01‡
LOS ICU (hr)	23 (11–600)	24 (4–888)	19 (13–312)	0.03‡
LOS* (days)	14 (8–44)	13 (8–123)	11 (7–49)	0.03§
Epidural (days)	4 (1–8)	4 (0–8)	4 (1–5)	NS
Transfusion (no. of patients)	42 (36.8%)	84 (27%)	3 (13%)	0.02§
Complication: total	76 (66.7%)	193 (62%)	14 (61%)	NS
Hemorrhage	6 (5.3%)	9 (3%)	0	NS
Respiratory infection	35 (27.8%)	80 (26%)	7 (30%)	NS
Mild (ward)	26	65	6	
Severe (ICU)	9	15	1	
Vocal cord palsy	0	8 (2.6%)	0	NS
Chyle leak	7 (6.1%)	16 (5%)	1 (4%)	NS
Anastomotic leak	10 (8.7%)	17 (5.5%)	1 (4%)	NS
Gastric necrosis	2 (1.7%)	4 (1.3%)	1 (4%)	NS
Pleural effusion	9 (8%)	18 (5.8%)	1 (4%)	NS
Cardiac				
Arrhythmias	21 (18.4%)	49 (16%)	6 (26%)	NS
Infarction	3 (2.6%)	5 (1.6%)	0	NS
Other: miscellaneous	2 (18.4%)	50 (16%)	4 (17%)	NS
In-hospital /30-day mortality	3 (2.6%)	7 (2.3%)	0	NS
Stricture	7 (6.1%)	69 (21.6%)	9 (36%)	0.01*
Median dilations	2 (1–3)	3 (1–29)	2 (1–6)	NS

Values are median (range). LOS, length of hospital stay.
*Significant difference between Thoracoscopic-Assisted and Open and the Thoracoscopic-Assisted and Total MIE groups.
†Significant difference between the Open and Thoracoscopic-Assisted and the Open and Total MIE groups.
‡Significant difference between Total MIE and Open and the Total MIE and Thoracoscopic-Assisted groups.
§Significant difference between all three groups.

Comparison of Minimally Invasive Esophagectomy With Transthoracic and Transhiatal Esophagectomy

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ARCH SURG/VOL 135, AUG 2000

Table 3. Postoperative Complications in Patients Undergoing TM/LE, TT, and THE*

Complication	TM/LE (n = 18)	TT (n = 16)	THE (n = 20)
Gastrointestinal bleeding	0	1 (6)	0
Anastomotic leaks	2 (11)	2 (12)	2 (10)
Gastric conduit ischemia	0	1 (6)	0
Pulmonary embolism	1 (6)	0	1 (5)
Respiratory failure	2 (11)	3 (19)	3 (15)
Delayed gastric emptying	1 (6)	0	0
Chylous ascites	0	0	1 (5)
Hoarseness	0	0	4 (20)
Intra-abdominal abscess	0	1 (6)	0
Tracheal-gastric fistula	1 (6)	0	0

Table 2. Comparison of Operative Results for TM/LE, TT, and THE*

	TM/LE (n = 18)	TT (n = 16)	THE (n = 20)
Operative time, min	364 ± 73†	437 ± 65	391 ± 144
Blood loss, mL	297 ± 233†	1046 ± 792	1142 ± 785
Intraoperative transfusion, U	0.3 ± 0.7†	1.8 ± 2.2	2.9 ± 3.1
ICU stay, d	6.1 ± 11.3†	9.9 ± 16.9	11.1 ± 15.7
Hospital stay, d	11.3 ± 14.2†	23.0 ± 22.9	22.3 ± 16.1
No. of nodes removed	10.8 ± 8.4	6.3 ± 6.0	6.9 ± 5.4

**Data are given as mean ± SD. TM/LE indicates combined thoracoscopic and laparoscopic esophagectomy; TT, transthoracic esophagectomy; THE, blunt transhiatal esophagectomy; and ICU, intensive care unit.*

†P < .05, compared with TT and THE groups, by Mann-Whitney tests.

Thoracoscopic Esophagectomy for Intrathoracic Esophageal Cancer

Harushi Osugi, MD, Masashi Takemura, MD, Sigeru Lee, MD, Takayuki Nishikawa, MD, Kennichirou Fukuhara, MD, Hiroshi Iwasaki, MD, and Masayuki Higashino, MD

approach and number of experienced cases

Beneficial	222: Luketich,[28] 2003	162: Smithers,[8] 2001
	80: Osugi,[29] 2003	39: Akaishi,[10] 1996
Unclear	77: Luketich,[2] 2000	23: Kawahara,[16] 1999
	18: Okushiba,[12] 2003	13: Collard,[13] 1993
No benefit	29: Gossot,[4] 2000	24: Dexter,[14] 1996
	22: Law,[5] 1997	18: Peracchia,[18] 1997
	17: Robertson,[26] 1996	15: Gossot,[27] 1995
	9: McAnena,[24] 1994	8: Luketich,[40] 1998

Number of cases: author, year reported

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EXPERIENCIA UNIDAD

- 12 CASOS CON TORACOSCOPIA
  - 1 CASO CONVERSION POR LESIÓN ÁZIGOS
  - 1 CASO CONVERSION POR IRRESECABILIDAD
- DURACIÓN 380 min. NO DIFERENCIA CON TORACOTOMÍA

ESTADIOS CLÍNICOS

IIa 3

III 8

IVa 1 (adenopatías gástrica izquierda)

EXPERIENCIA UNIDAD

- TODOS ESOF. TOTAL + AKIYAMA + ANASTOMOSIS CERVICAL
- COMPLICACIONES
  - 2 NEUMONÍA CON DISTRESS
  - 1 DISTRESS SIN NEUMONÍA
  - 2 FISTULA ANASTOMOSIS CERVICAL
  - 7 ENFERMOS SIN COMPLICACIONES
- NO MORTALIDAD
- ESTADIOS PATOLÓGICOS
- 0 (remisión completa tras QT)= 1 caso
- IIa: 5 casos
- IIb: 5 casos
- 1 caso no resección por infiltración traqueal
- ***No diferencias en ganglios mediastínicos aislados***

CONCLUSIONES

- Abordaje seguro
- Similares resultados oncológicos
- Similares resultados – morbimortalidad
- Tendencia a disminuir complicaciones respiratorias ?
- Concentrar los casos en centros específicos.