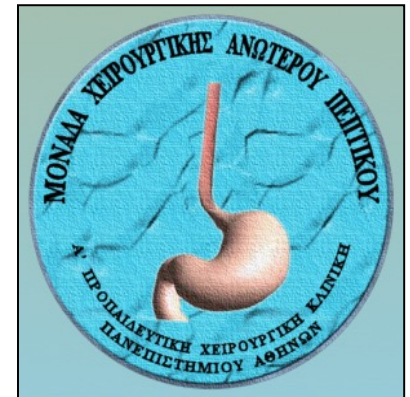




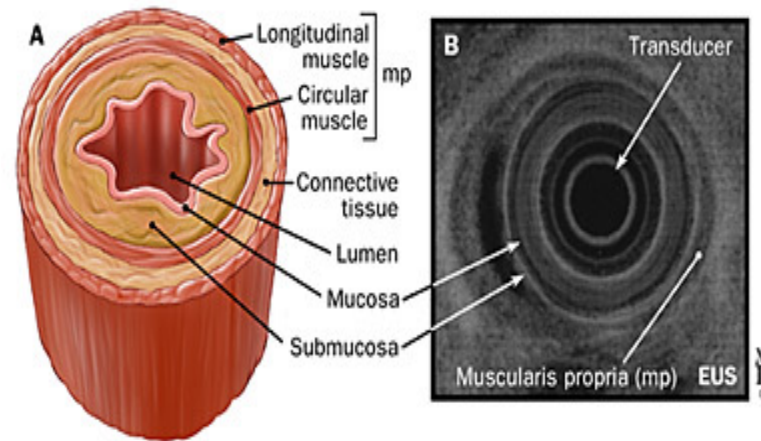
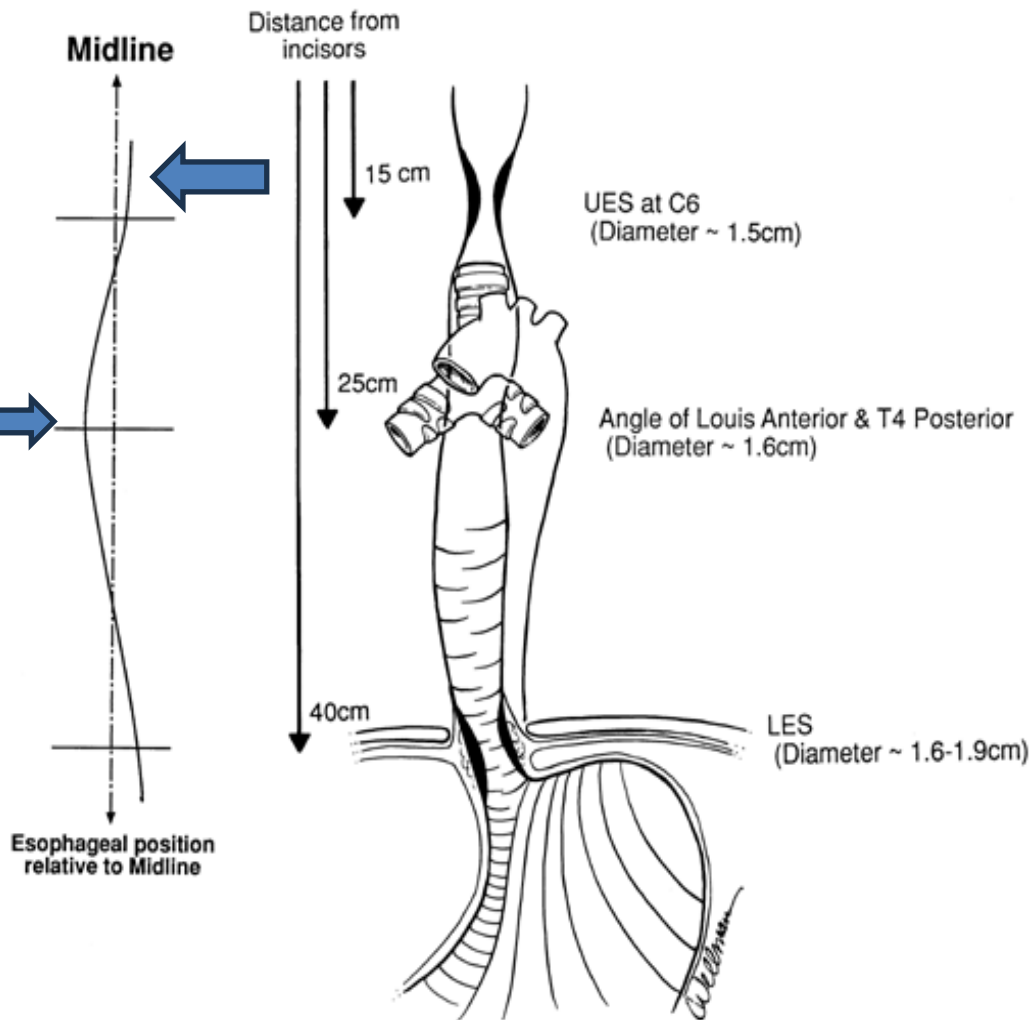
# ΧΕΙΡΟΥΡΓΙΚΕΣ ΠΑΘΗΣΕΙΣ ΟΙΣΟΦΑΓΟΥ- ΔΙΑΦΡΑΓΜΑΤΟΣ

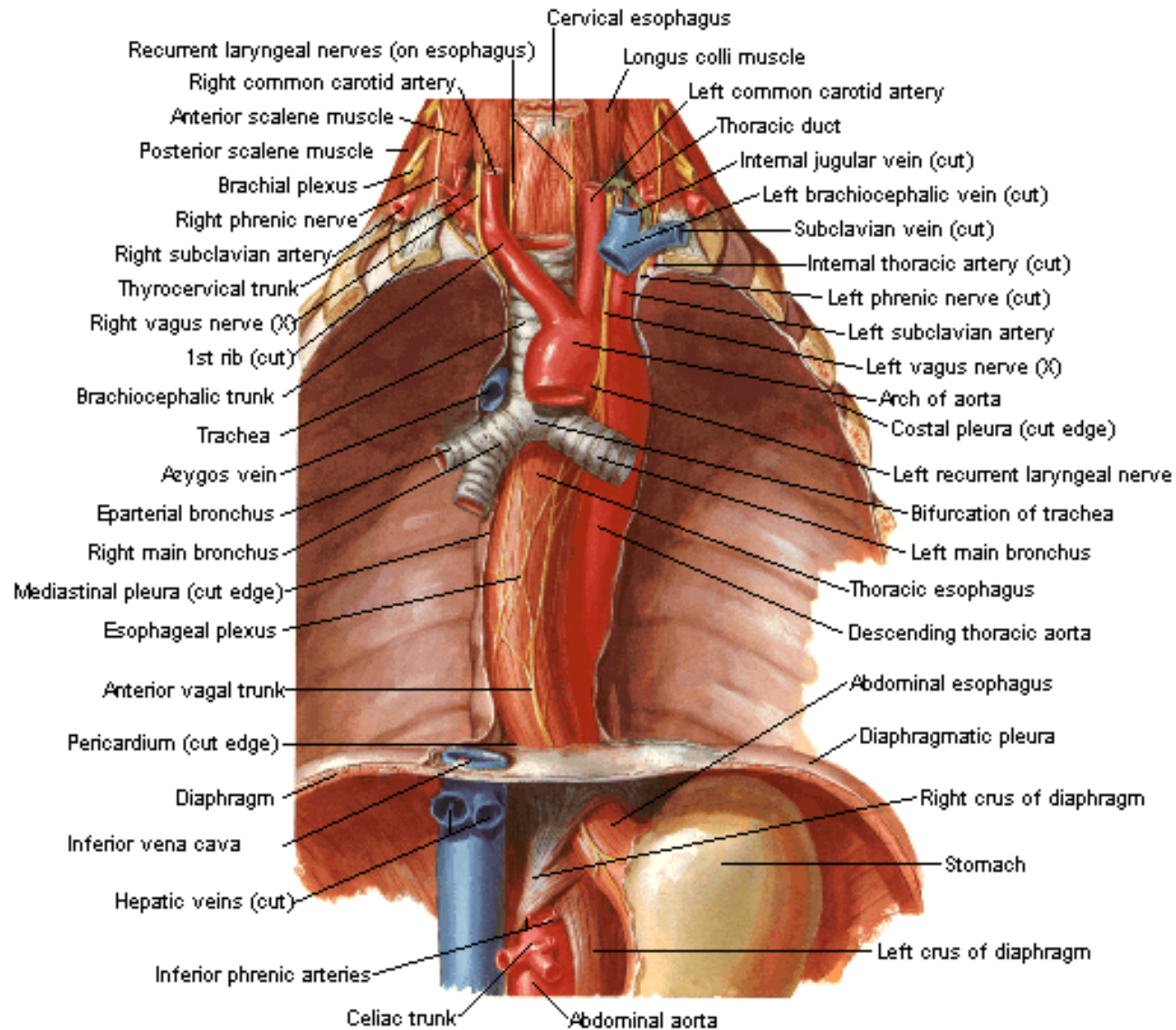
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*Μονάδα Χειρουργικής Ανωτέρου Πεπτικού  
Α Προπαιδευτική Χειρουργική Κλινική Πανεπιστημίου  
Αθηνών*

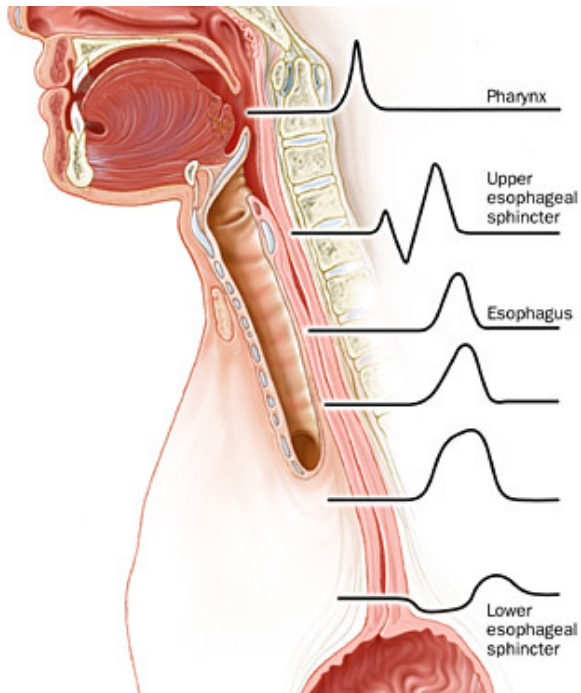
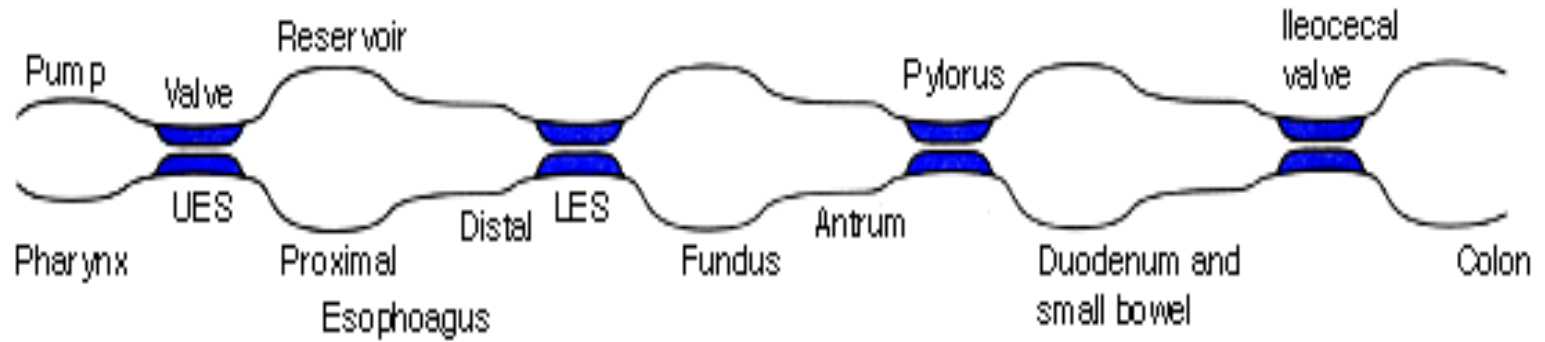


# ANATOMY

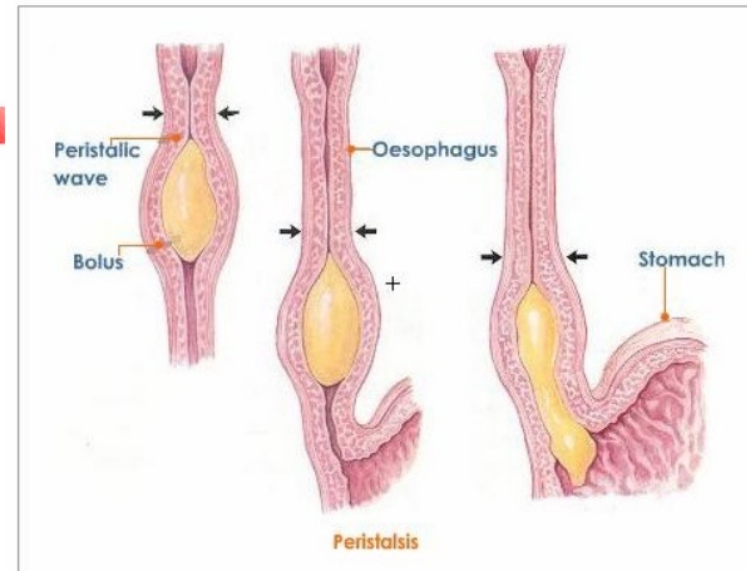




# ΦΥΣΙΟΛΟΓΙΑ



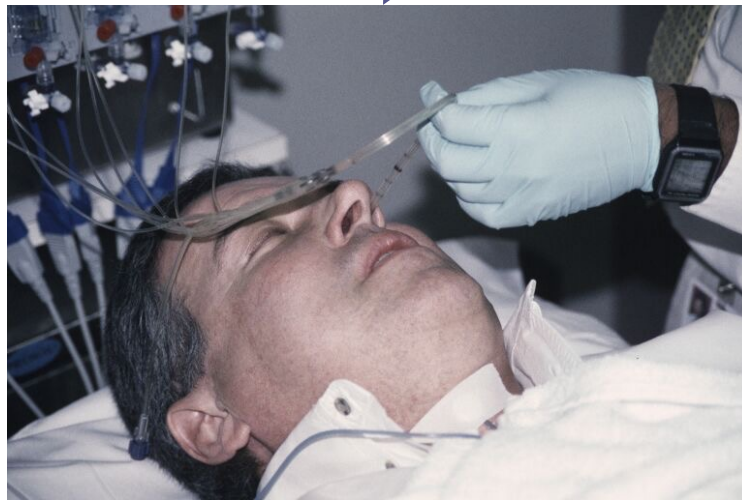
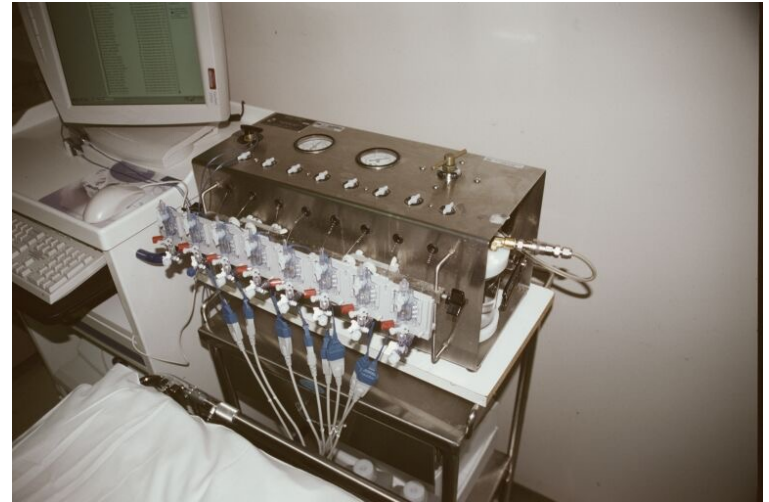
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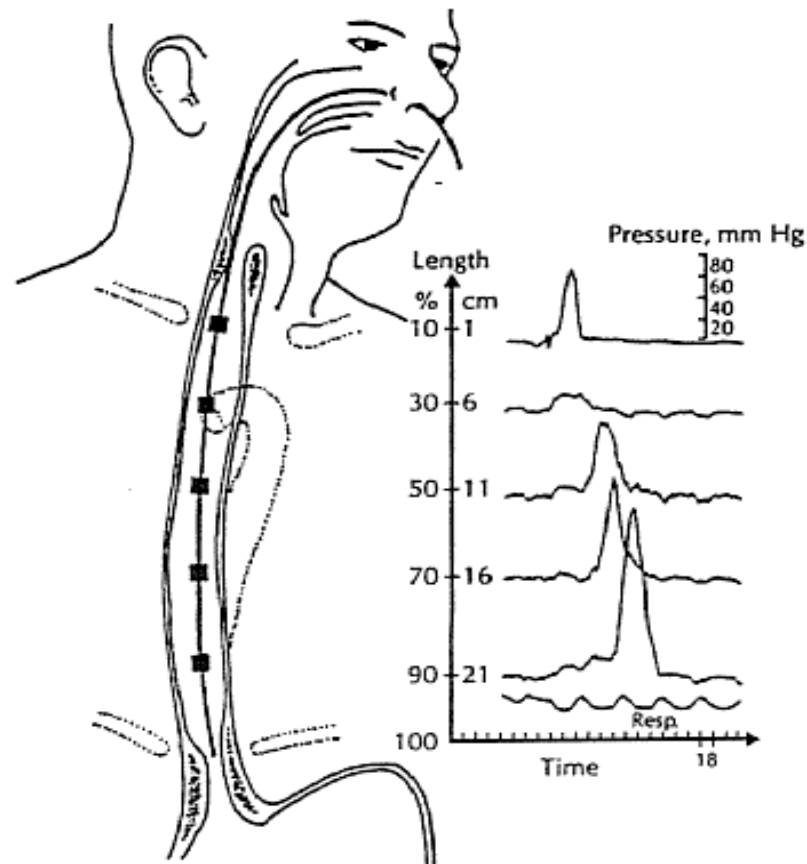
# Μανομετρία Οισοφάγου

- ✓ **ΣΥΜΒΑΤΙΚΗ**
- ✓ **ΥΨΗΛΗΣ ΑΝΑΛΥΣΗΣ (HRM)**

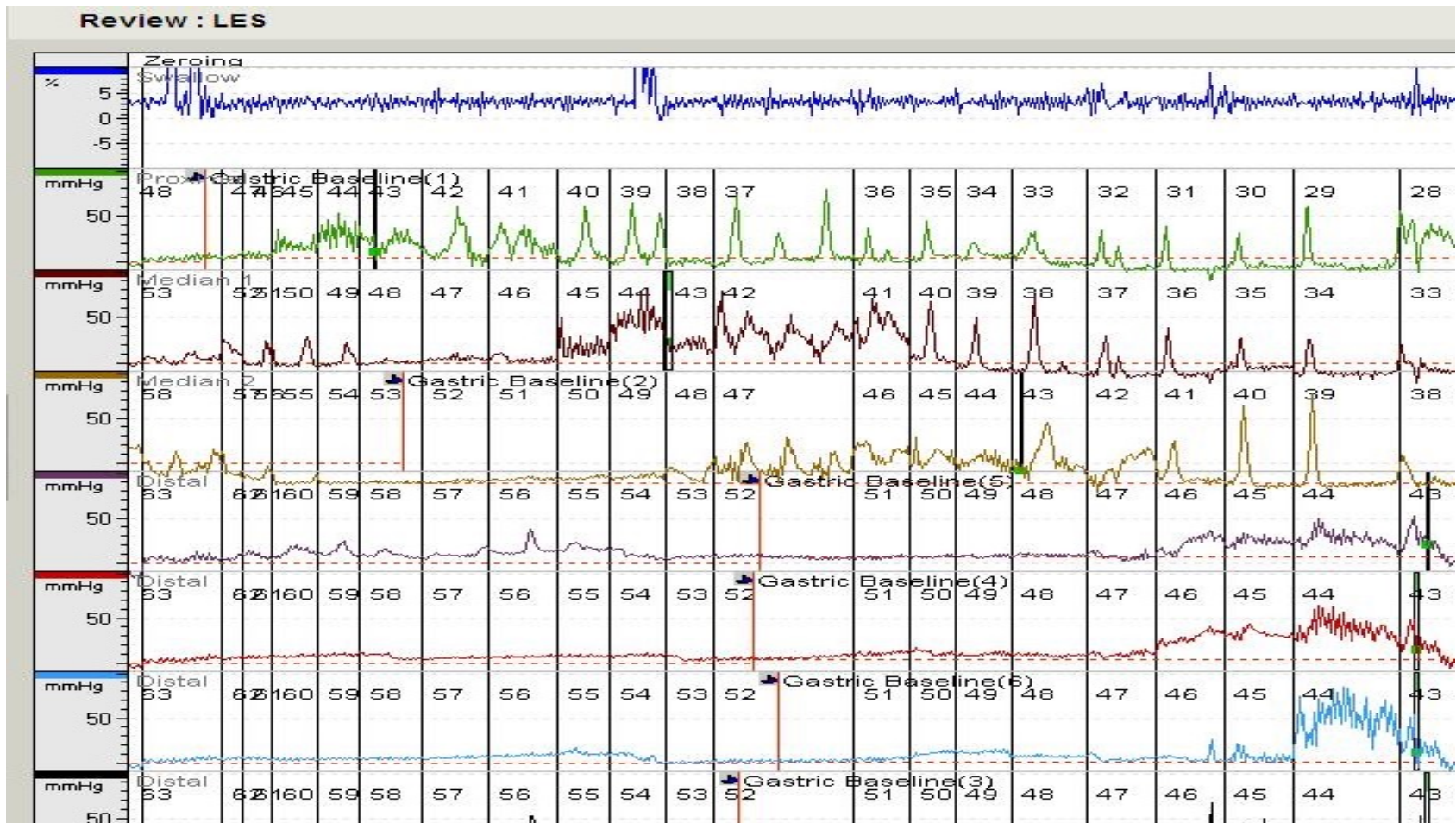
# ΣΥΜΒΑΤΙΚΗ



# ΜΑΝΟΜΕΤΡΙΚΟ ΠΡΟΦΙΛ-ΕΡΜΗΝΕΙΑ

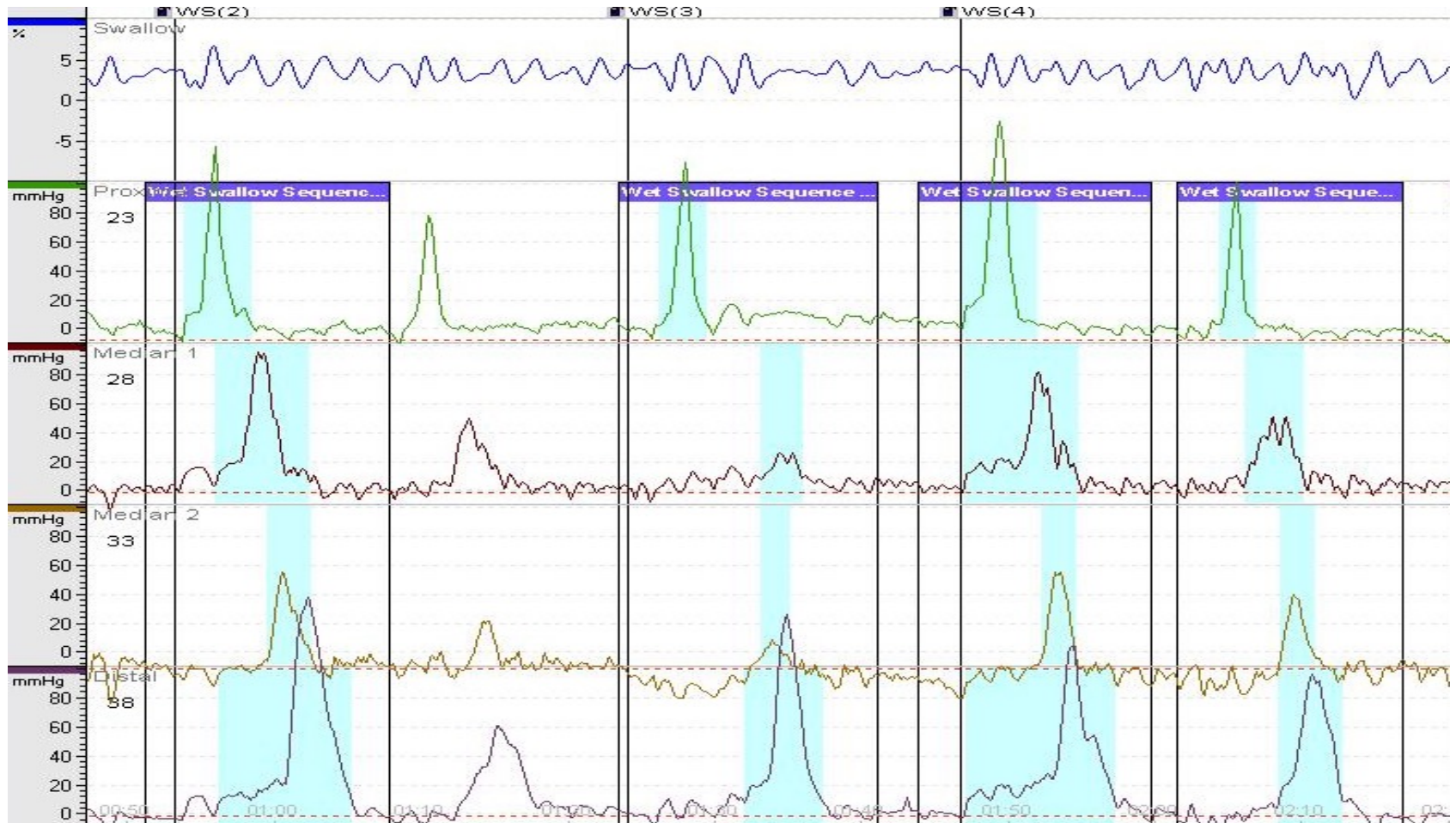


# ΚΟΣ ΣΕ ΗΡΕΜΙΑ





# ΣΩΜΑ ΟΙΣΟΦΑΓΟΥ



# ΥΨΗΛΗΣ ΑΝΑΛΥΣΗΣ ΜΑΝΟΜΕΤΡΙΑ (HRM)

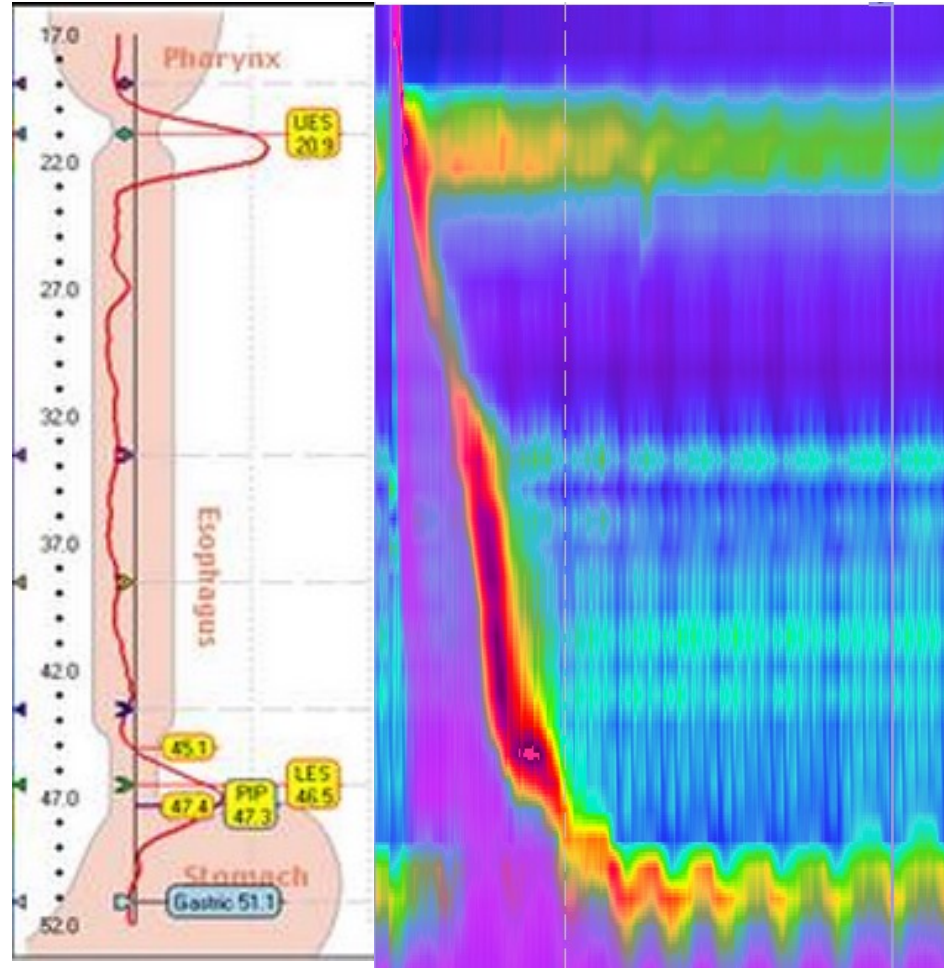


# ΚΑΘΗΤΗΡΑΣ

.36 κανάλια (1 εκ)

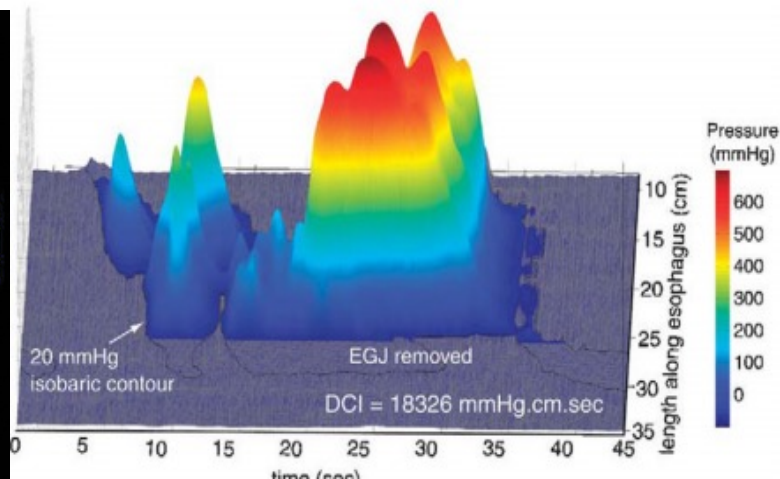
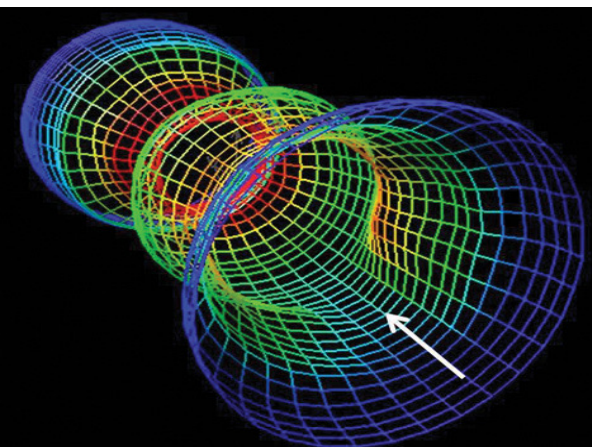


.Ταυτόχρονη καταγραφή  
φάρυγγα-οισοφάγου

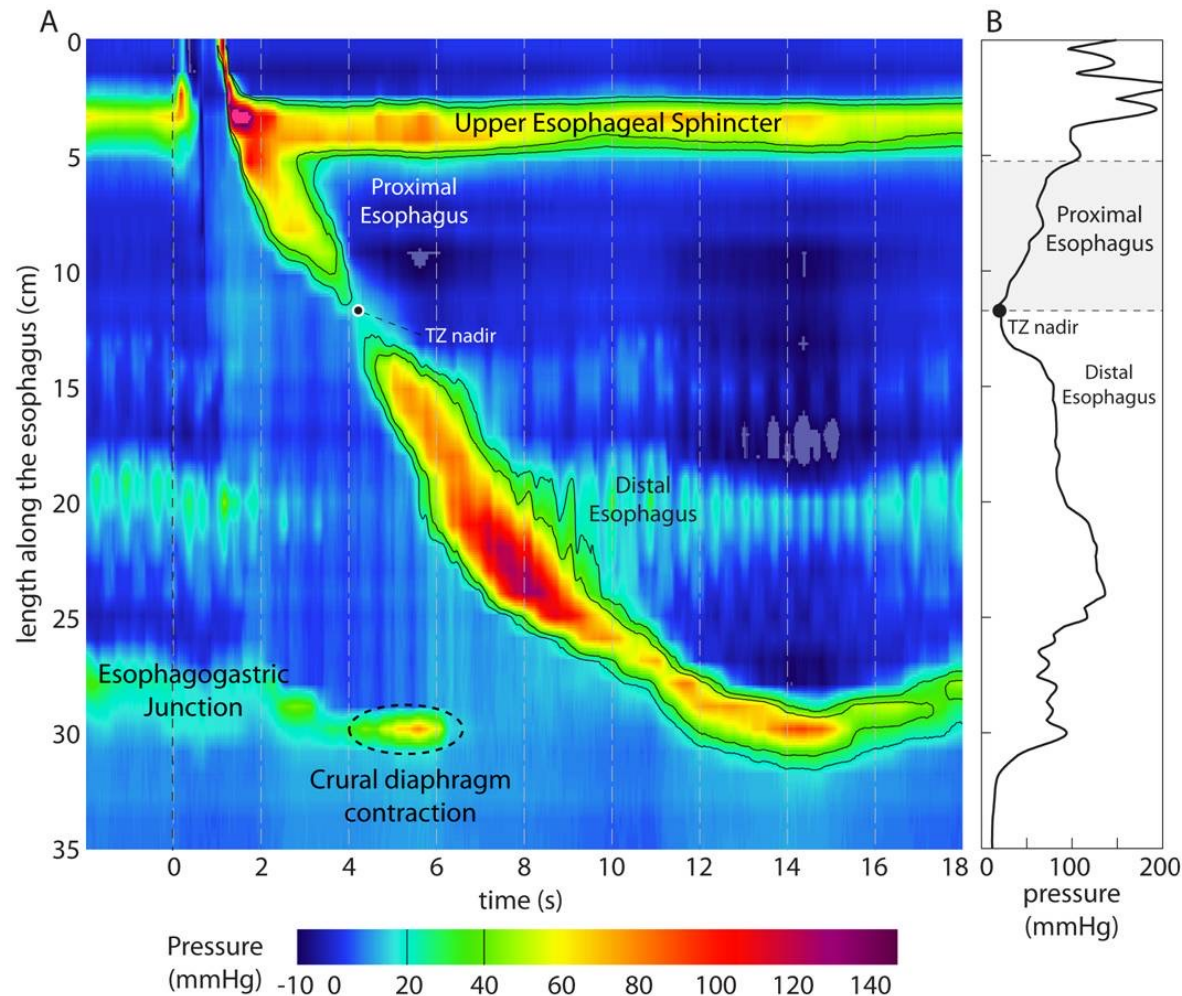


# ΧΑΡΑΚΤΗΡΙΣΤΙΚΑ

- .5-8'
- .Χωρίς μετακίνηση
- .10 καταπώσεις
- .Συνδυασμός με εμπεδησιομετρία/3D



# ΥΨΗΛΗΣ ΑΝΑΛΥΣΗΣ ΜΑΝΟΜΕΤΡΙΑ (HRM)



# ΔΙΑΤΑΡΑΧΕΣ ΚΙΝΗΤΙΚΟΤΗΤΑΣ

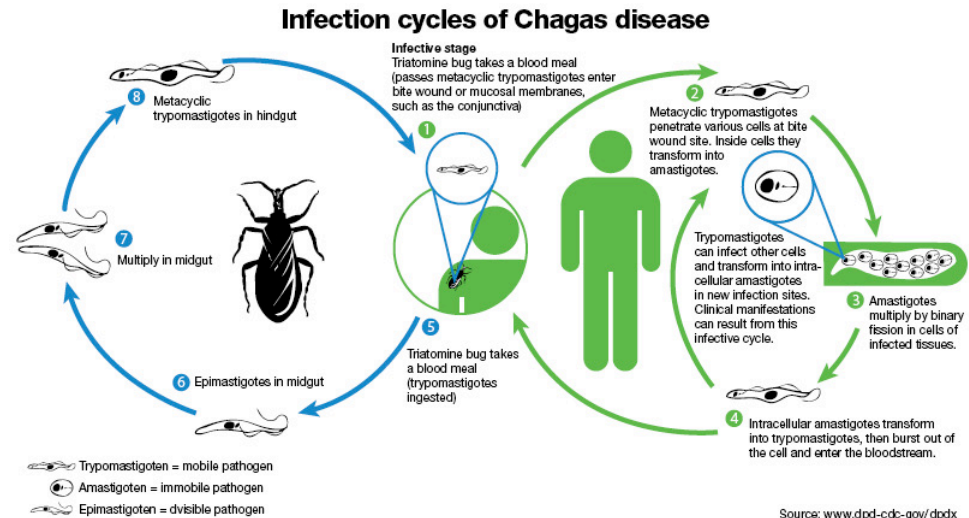
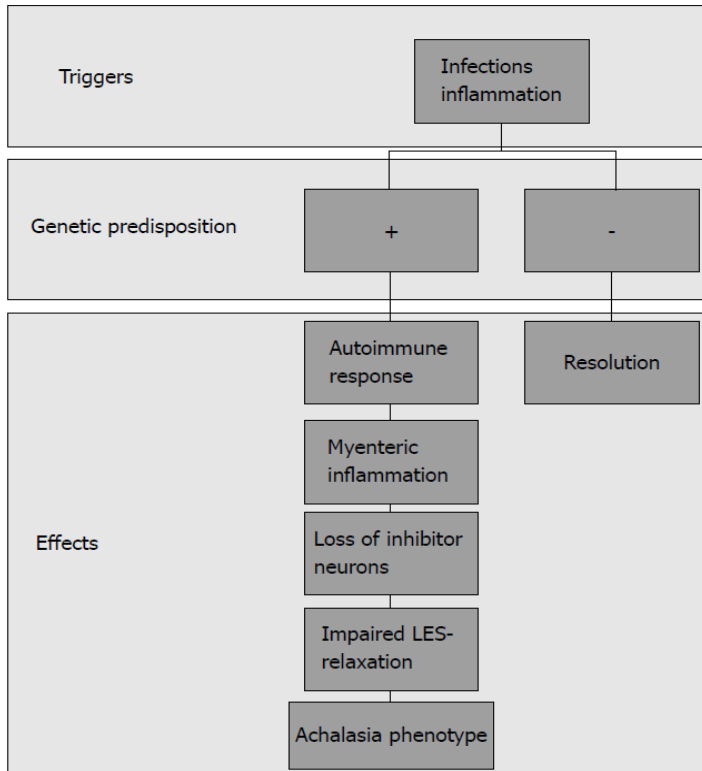
## ΑΧΑΛΑΣΙΑ

- Νευρομυϊκή νόσος
- Προσβάλλει τον ΚΟΣ: **ΧΑΛΑΣΗ!!**
- Το σώμα παρουσιάζει προοδευτικά έκπτωση της λειτουργίας και ταυτόχρονες συστολές
- Σπάνια: 1/100.000
- Κύριο σύμπτωμα: παράδοξη **δυσφαγία**

# ΑΧΑΛΑΣΙΑ-ΑΙΤΙΑ

## Genetic contribution to motility disorders of the upper gastrointestinal tract

Giovanni Sarnelli, Alessandra D'Alessandro, Marcella Pesce, Iliaria Palumbo, Rosario Cuomo



Source: [www.dpd-cdc.gov/dpdx](http://www.dpd-cdc.gov/dpdx)

# ΑΧΑΛΑΣΙΑ - Διάγνωση

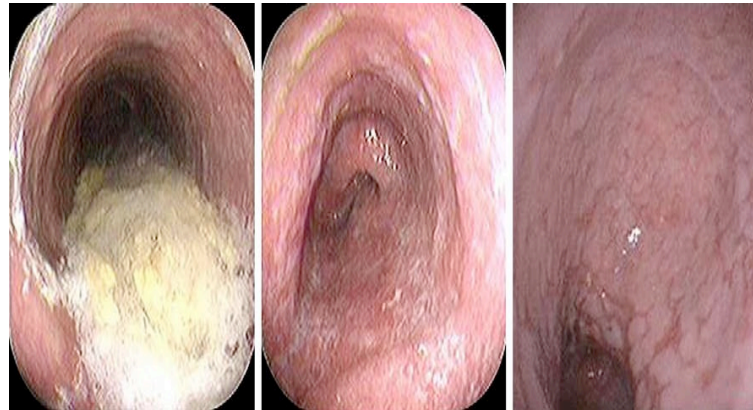


**SAGES**

Society of American Gastrointestinal and Endoscopic Surgeons

<http://www.sagescms.org>

**Recommendation:** Patients with suspected achalasia should undergo a barium esophagram, an upper endoscopy, and esophageal manometry to confirm the diagnosis (+++, strong).

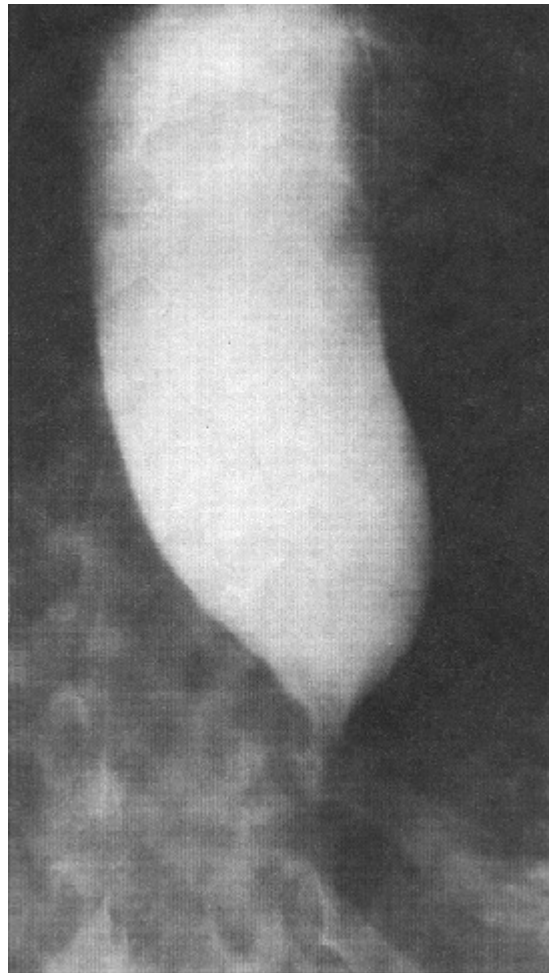


Ενδοσκόπηση & ανάστροφη απεικόνιση θόλου

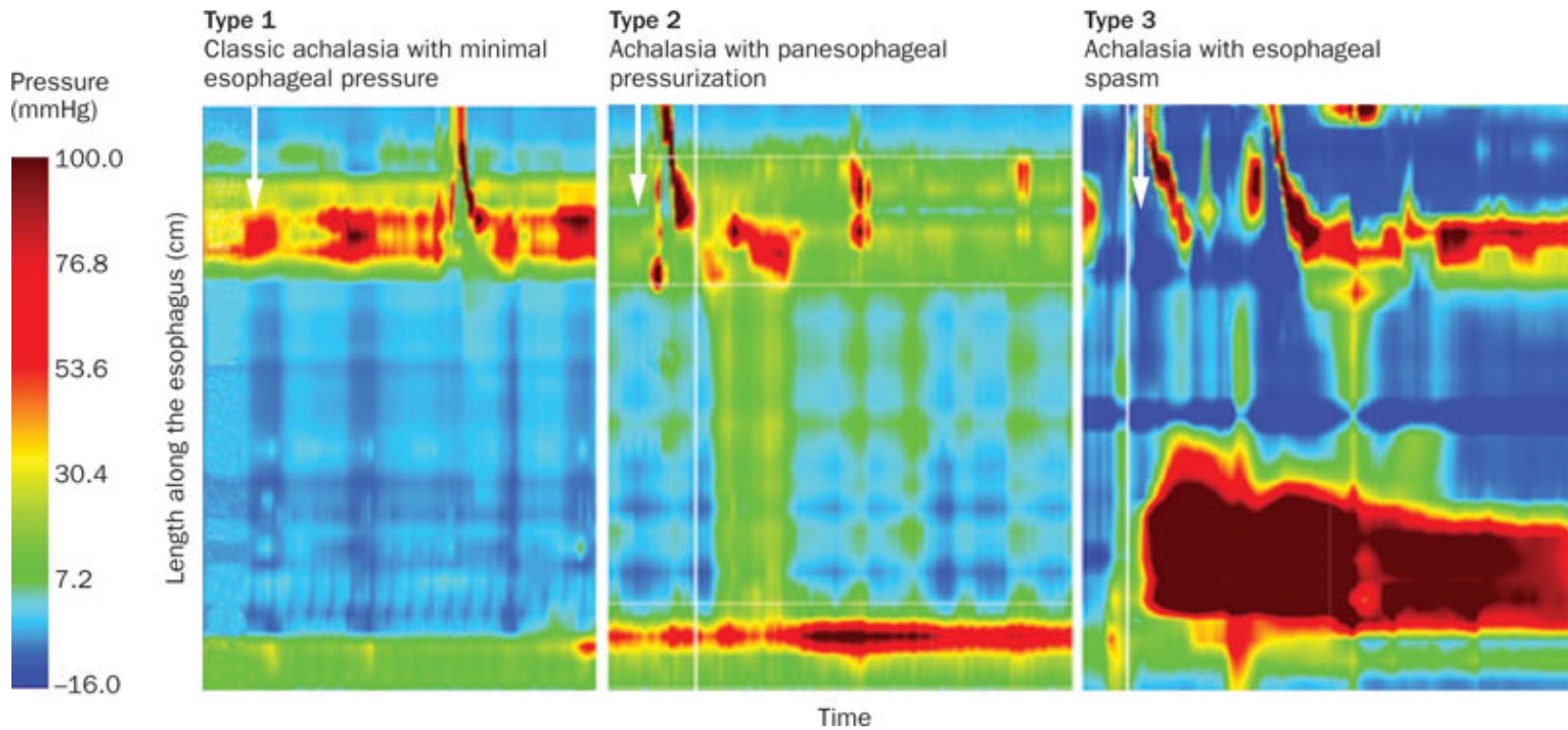


# ΑΧΑΛΑΣΙΑ-ΔΙΑΓΝΩΣΗ

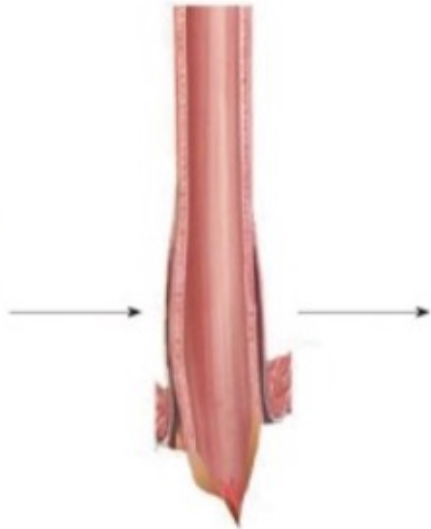
**ΒΑΡΙΟΥΧΟ  
ΓΕΥΜΑ**



# HRM

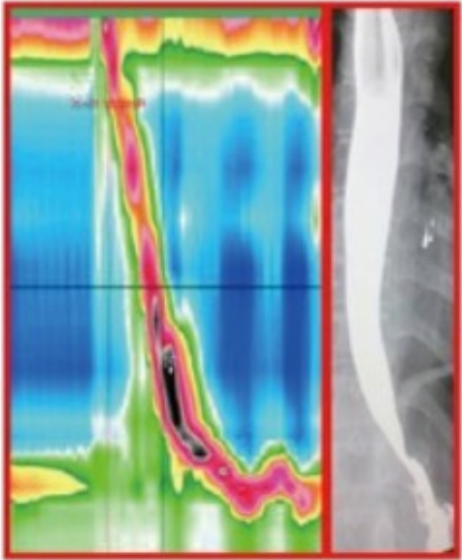


- ✓ ? Infections  
Measles, VZV, herpes virus
- ✓ Neurodegenerative process
- ✓ ? Autoimmune
- ✓ Anti-myenteric neuronal antibodies
- ✓ HLA-DQA1\*0101, DQB1\*0502 and DQB1\*0601
- ✓ Genetic susceptibility

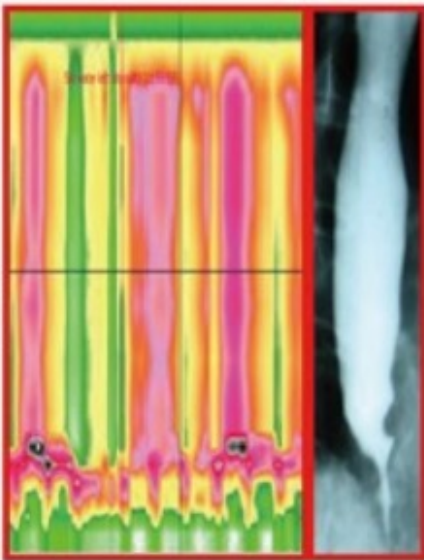


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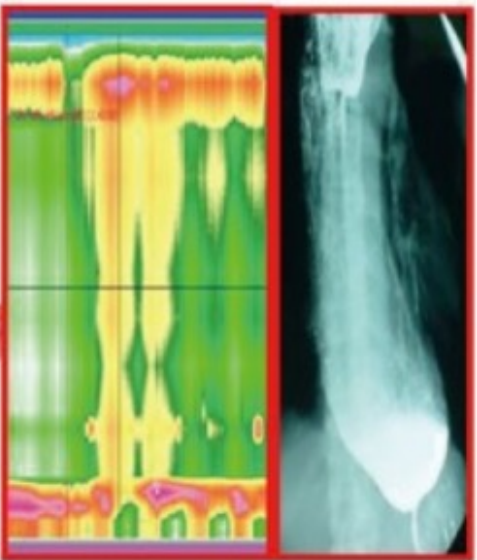
    graph TD
      A[Myenteric plexus inflammation/  
neurodegenerative process] --> B[Loss of inhibitory ganglion cells in  
myenteric plexus]
      B --> C[↓ Inhibitory neurotransmitter (NO)]
      C --> D[++]
      D --> E[Intact cholinergic transmission]
      E --> F[Imbalance of NO/cholinergic  
neurotransmitter ( ↓ Ach/ ↓ NO)]
      F --> G[Achalasia cardia]
  
```



A



B

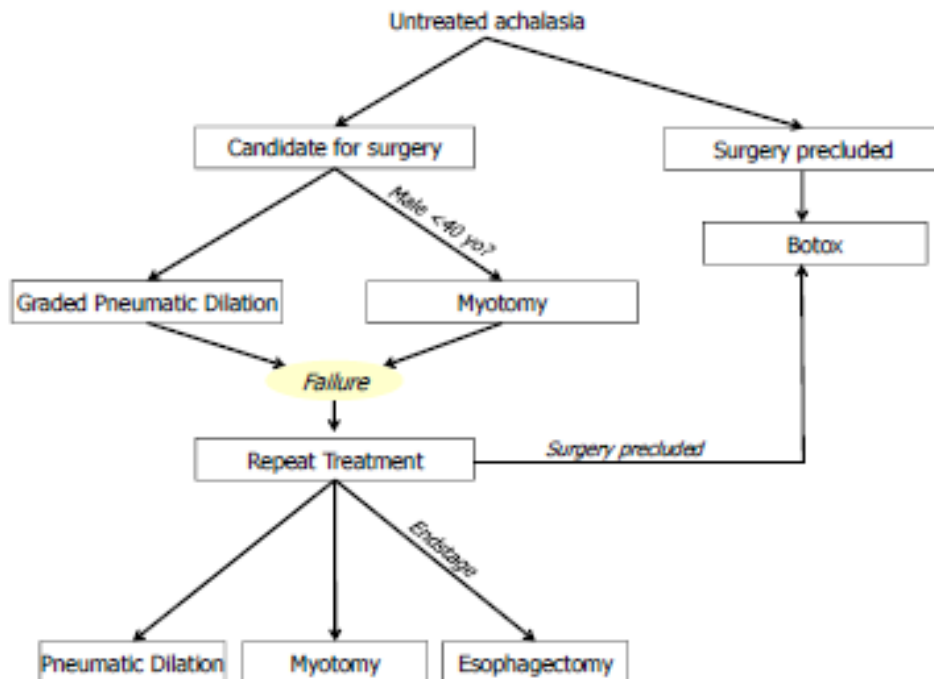


C

● NANC (NO)      ○ Ach

# ΘΕΡΑΠΕΙΑ ΑΧΑΛΑΣΙΑΣ

- Αναστ. Ασβεστίου
- Ενδοσκοπική (Διαστολές, Bottox, ΡΟΕΜ)
- Χειρουργική (Μυοτομή)



- Μείωση πίεσης ΚΟΣ
- Πρόληψη ΓΟΠ

# Treating Achalasia

## From Whalebone to Laparoscope

Anita E. Spiess, MD; Peter J. Kahrilas, MD

**Conclusions.**—Both pneumatic dilation and surgical myotomy are effective therapies for achalasia; laparoscopic Heller myotomy is emerging as the optimal surgical therapy.

*JAMA.* 1998;280:638-642

Results Obtained With Endoscopic Botulinum Toxin Injection in the Treatment of Achalasia

Author (Reference No.)	Year	Design	n	Botulinum Toxin (Units)	Follow-up (mo)	Decrease LESP (%)	Symptom Improvement* (% of Patients)				Received Treatment After EBTI n (%)		
							<1 mo	3 mo	6 mo	>12 mo	Repeat EBTI	Dilation	Myotomy
Pasricha <sup>13</sup>	1996	PC	31	80	29	45	90	55	55	—	26 (84)	3 (10)	1 (3)
Fishman <sup>14</sup>	1996	PC	60	100	10	—	70	—	—	36	16 (27)	2 (3)	1 (2)
Cuilliere <sup>48</sup>	1997	PC	55	80	6	31	75	69	53	—	19 (35)	—	—
Gordon <sup>49</sup>	1997	PC	16	80	7	—	75	56	44	—	4 (25)	1 (6)	1 (6)
Wehrmann <sup>50</sup>	1999	PC	20	100	24	—	80	—	—	10	14 (70)	1 (5)	1 (5)
Kolbasnik <sup>51</sup>	1999	PC	30	80	21	—	—	77	57	39	14 (47)	3 (10)	1 (3)
D'Onofrio <sup>52</sup>	2002	PC	37	100	22	30	84	—	—	51	14 (38)	—	—
Neubrand <sup>53</sup>	2002	RC	25	25	30	31	64	—	—	39	14 (56)	1 (4)	1 (4)
Martinek <sup>54</sup>	2003	PC	41	100	26	35	93	83	—	55	10 (24)	1 (2)	4 (10)
							Mean (Range)						
Total			315		18 (6–30)	34.0 (30–45)	78.7 (64–93)	70 (55–83)	53.3 (44–57)	40.6 (10–55)	131 (46.6)	12 (3.8)	10 (3.2)

Results Obtained With Endoscopic Balloon Dilatation in the Treatment of Achalasia

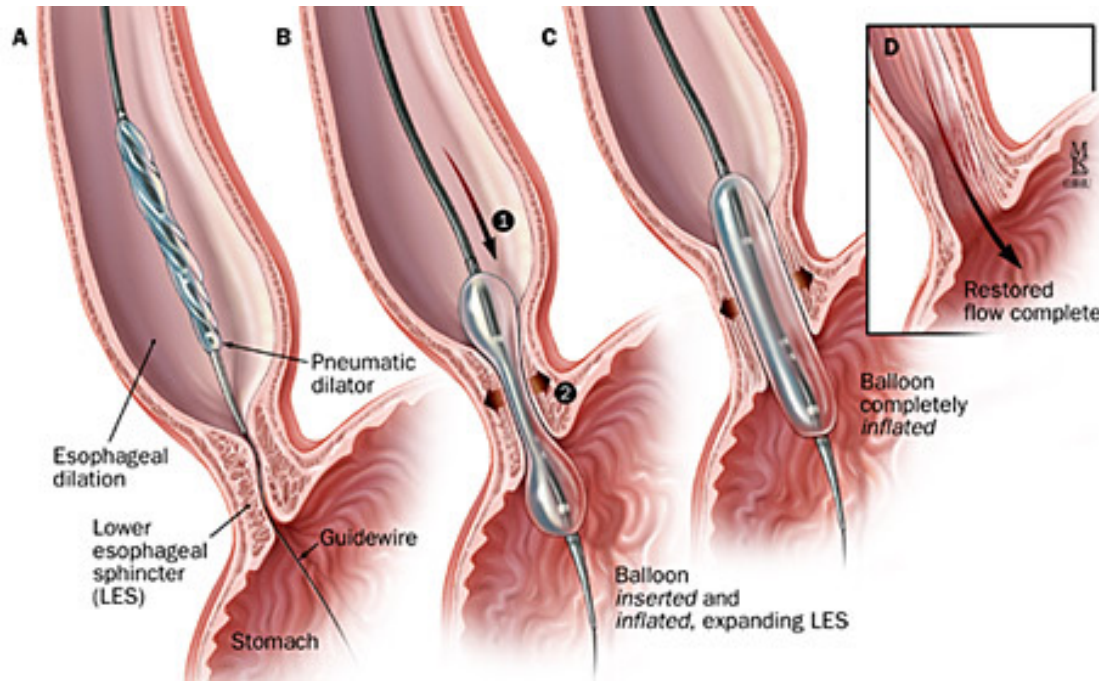
Author	Year	Design	n	Dilator Size (cm)	Duration of Dilatation (s)	Pressure During Dilatation (psi)	Follow-up (mo)	Decrease LES P (%)	Symptom Improvement* (% of Patients)				Received Treatment After Dilatation		
									≤1 mo	6 mo	12 mo	>36 mo	Dilatation n (%)	Myotomy n (%)	Perforation n (%)
Gelfand <sup>55</sup>	1989	PC	24	3.0, 3.5	30	7	6	64	—	81	—	—	2 (8)	1 (4)	0 (0)
Barkin <sup>56</sup>	1990	RC	50	3.0, 3.5, 4.0	68	18	15	—	90	—	90	—	0 (0)	2 (4)	4 (8)
Kadakia <sup>57</sup>	1993	PC	29	3.0	60	8.8	48	67	—	—	—	62	11 (38)	2 (7)	0 (0)
Wehrmann <sup>21</sup>	1995	PC	40	3.0, 3.5	240	7	29	42	87	—	—	70	12 (30)	2 (5)	1 (3)
Lambroza <sup>58</sup>	1995	RC	27	3.0, 3.5, 4.0	90	15	21	—	—	—	63	—	3 (11)	0 (0)	0 (0)
Khan <sup>59</sup>	1998	PC	81	3.0	6, 60	10	6	—	—	97	—	—	2 (3)	0 (0)	0 (0)
Sabharwal <sup>60</sup>	2002	RC	76	2.0, 3.0, 4.0	60	—	29	—	97	—	54	—	24 (32)	3 (4)	0 (0)
Mikadi <sup>61</sup>	2004	PC	262	3.5, 3.0	10, 30	10	54	—	—	—	—	60	77 (29)	17 (6)	3 (1)
Guardino <sup>37</sup>	2004	RC	96	3.0	45	9.5	7	—	—	51	—	—	33 (34)	—	2 (2)
Dobmachi <sup>62</sup>	2004	PC	43	3.0	60	15	28	75	56	61	38	—	18 (42)	3 (7)	1 (2)
Chan <sup>63</sup>	2004	RC	66	3.0, 3.5, 4.0	120	9	55	—	—	79	—	—	13 (20)	2 (3)	3 (5)
Ghoshal <sup>64</sup>	2004	RC	126	3.0	90	11	15	39	—	—	71	—	37 (29)	6 (5)	1 (1)
Boztas <sup>65</sup>	2005	RC	50	3.0, 3.5, 4.0	60	—	32	55	83	—	67	—	10 (20)	5 (10)	0 (0)
Katsinelos <sup>10</sup>	2005	RC	39	3.0, 3.5, 4.0	93	—	111	72	—	—	—	33	28 (72)	6 (15)	2 (5)
Rai <sup>18</sup>	2005	PC	56	3.5	120	10	6	—	96	—	89	—	4 (7)	0 (0)	0 (0)
Mean (Range)															
Total			1065		73 (6–240)	10.9 (7–18)	30.8 (6–111)	59.1 (39–75)	84.8 (56–97)	73.8 (51–97)	68.2 (38–90)	58.4 (33–70)	274 (25)	49 (5)	17 (1.6)

## Results Obtained With Laparoscopic Myotomy in the Treatment of Achalasia

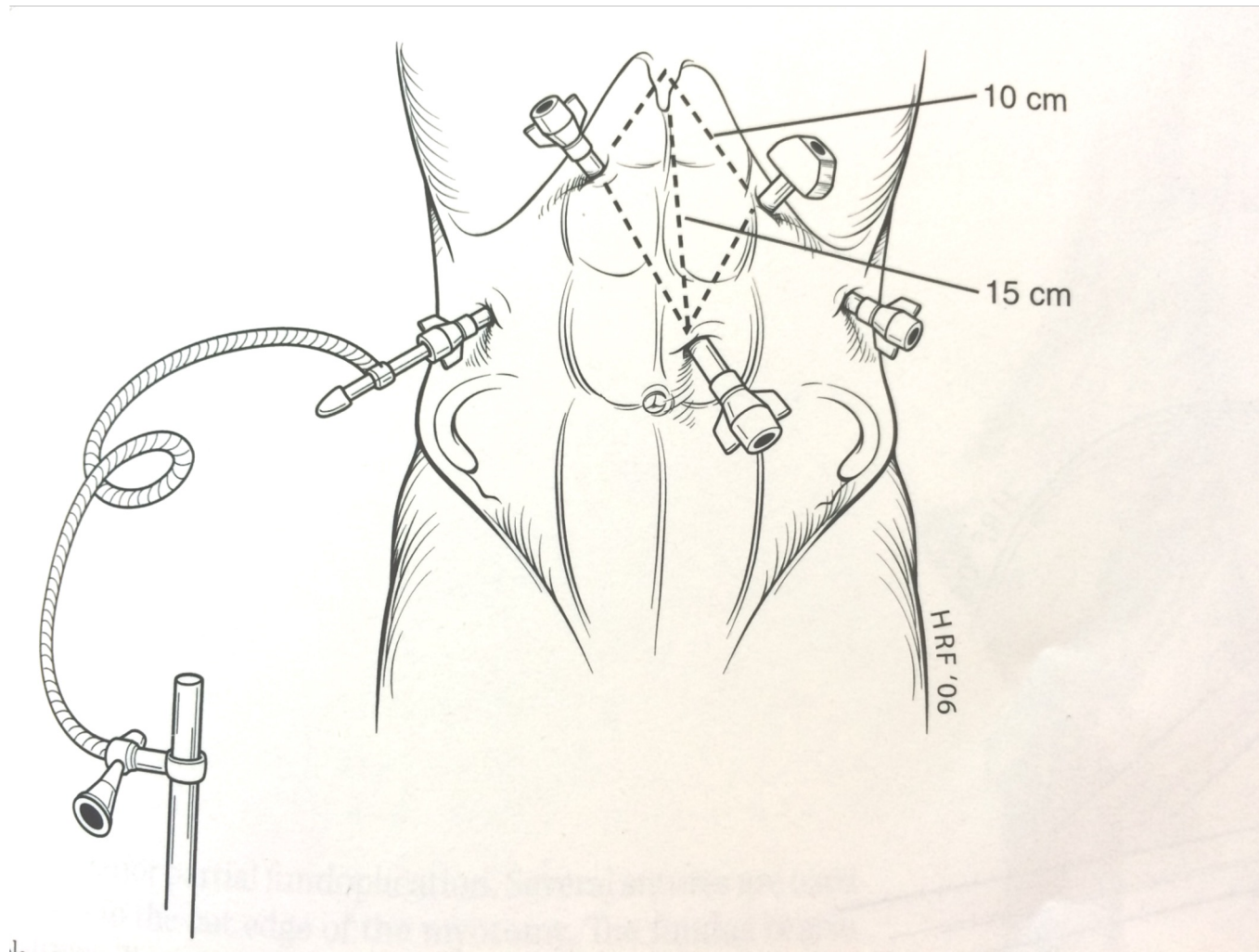
Author	Year	Design	N	All	Follow-up (mo)	N With ARP	N Without ARP	Symptom Improvement			Evidence of GER		
								All N (%)	With ARP (%)	Without ARP (%)	All n/N* (%)	With ARP n/N* (%)	Without ARP (%)
Mitchell <sup>109</sup>	1995	PC	14	12	14	0	14 (100)	14 (100)	—	1/14 (7)	1/14 (7)	—	
Delgado <sup>110</sup>	1996	RC	12	—	12	0	10 (83)	10 (83)	—	—	—	—	
Raiser <sup>111</sup>	1996	RC	35	26	35	0	28 (80)	28 (80)	—	0/18 (0)†	0/18 (0)	—	
Collard <sup>112</sup>	1996	RC	12	14.4	12	0	10 (83)	10 (83)	—	0/6 (0)†	0/6 (0)	—	
Anselmino <sup>113</sup>	1997	PC	43	12	43	—	39 (91)	39 (91)	—	2/35 (6)†	2/35 (6)	—	
Hunter <sup>45</sup>	1997	Hunter	40	12	39	1	36 (90)	35 (90)	—	2/40 (5)	2/39 (5)	—	
Vogt <sup>114</sup>	1997	PC	20	12	18	2	18 (90)	—	—	3/20 (15)	2/18 (11)	1/2 (50)	
Morino <sup>32</sup>	1997	PC	21	29	21	0	21 (100)	21 (100)	—	1/17 (6)†	1/17 (6)	—	
Kumar <sup>115</sup>	1998	PC	19	27	0	19	17 (89)	—	17 (89)	5/15 (33)	—	5/15 (33)	
Richards <sup>116</sup>	1999	PC	16	8.3	0	16	14 (88)	—	14 (88)	3/14 (21)†	—	3/14 (21)	
Stewart <sup>103</sup>	1999	RC	63	17	55	8	56 (89)	—	—	5/46 (11)	—	—	
Patti <sup>102</sup>	1999	RC	133	23	133	—	124 (93)	124 (93)	—	6/36 (17)†	6/35 (17)	—	
Bloomston <sup>104</sup>	2000	RC	67	18	8	59	61 (91)	—	—	13/68 (19)	—	13/68 (19)	
Yamamura <sup>117</sup>	2000	RC	24	16.5	24	0	20 (95)	20 (95)	—	1/9 (11)†	1/9 (11)	—	
Zaninotto <sup>118</sup>	2000	PC	94	24	94	0	86 (91)	86 (91)	—	10/75 (13)†	10/75 (13)	—	
Bonavina <sup>119</sup>	2000	RC	92	28	92	—	80 (87)	80 (87)	—	2/26 (8)†	2/26 (8)	—	
Cade <sup>105</sup>	2000	RC	19	24	—	19	18 (95)	—	18 (95)	7/19 (37)	—	7/19 (37)	
Ackroyd <sup>120</sup>	2001	PC	82	24	82	—	82 (100)	82 (100)	—	1/68 (1)	1/68 (1)	—	
Wills <sup>121</sup>	2001	PC	62	38	62	—	49 (79)	49 (79)	—	2/62 (3)	2/62 (3)	—	
Pechlivanides <sup>122</sup>	2001	PC	29	12	29	—	26 (90)	26 (90)	—	2/20 (10)†	2/20 (10)	—	
Donahue <sup>123</sup>	2002	RC	81	45	81	—	69 (85)	69 (85)	—	—	—	—	
Oelschlager <sup>124</sup>	2003	PC	110	46	110	—	91 (83)	91 (83)	—	19/43 (44)†	19/43 (44)	—	
Douard <sup>86</sup>	2004	PC	52	50	52	—	48 (92)	48 (92)	—	6/52 (11)†	6/52 (11)	—	
Arain <sup>125</sup>	2004	RC	78	16	78	—	62 (97)	62 (97)	—	1/6 (17)†	1/6 (17)	—	
Perrone <sup>126</sup>	2004	PC	100	26	100	—	97 (97)	97 (97)	—	1/92 (1)	1/92 (1)	—	
Frantzides <sup>127</sup>	2004	RC	53	36	52	1	49 (92)	48 (92)	—	5/53 (9)	5/53 (9)	—	
Dempsey <sup>128</sup>	2004	RC	51	32.5	29	22	44 (86)	25 (86)	19 (86)	—	—	—	
Avtan <sup>129</sup>	2005	RC	15	42	—	15	13 (87)	—	13 (87)	1/9 (11)†	—	1/9 (11)	
Ramacciato <sup>130</sup>	2005	PC	32	12	17	15	31 (97)	16 (94)	15 (100)	4/32 (13)	1/17 (6)	3/15 (20)	
Rossetti <sup>131</sup>	2005	PC	195	83	195	—	179 (92)	179 (92)	—	0/15 (0)†	0/15 (0)	—	
Bonatti <sup>132</sup>	2005	RC	75	64	75	—	37 (84)	37 (84)	—	7/44 (15)	7/44 (15)	—	
Rosemurgy <sup>133</sup>	2005	PC	262	32	79	183	236 (90)	—	—	—	—	—	
Portale <sup>34</sup>	2005	RC	248	41	248	—	218 (88)	218 (88)	—	9/130 (7)†	9/130 (7)	—	
Deb <sup>134</sup>	2005	RC	211	64	198	13	148 (89)	—	—	56/167 (34)	—	—	
Khajanchee <sup>135</sup>	2005	PC	121	9	121	—	113 (93)	113 (93)	—	16/48 (33)†	16/48 (33)	—	
Burpee <sup>136</sup>	2005	PC	66	28	10	56	54 (87)	—	54 (87)	18/30 (60)†	—	18/30 (60)	
Smith <sup>36</sup>	2006	PC	209	21	206	3	173 (83)	—	—	4/209 (2)	4/206 (2)	—	
Katada <sup>137</sup>	2006	RC	30	12	30	—	24 (80)	24 (80)	—	3/25 (12)†	3/25 (12)	—	
Torquati <sup>138</sup>	2006	PC	200	42	53	147	170 (85)	—	—	12/43 (28)†‡	2/22 (9)	10/21 (48)	
<b>Mean (Range)</b>													
Total			3086	35.4 (8–83)	2507	579	89.3 (77–100)	90.3 (77–100)	89.9 (86–100)	14.9 (0–60)	8.8 (0–44)	31.5 (11–60)	

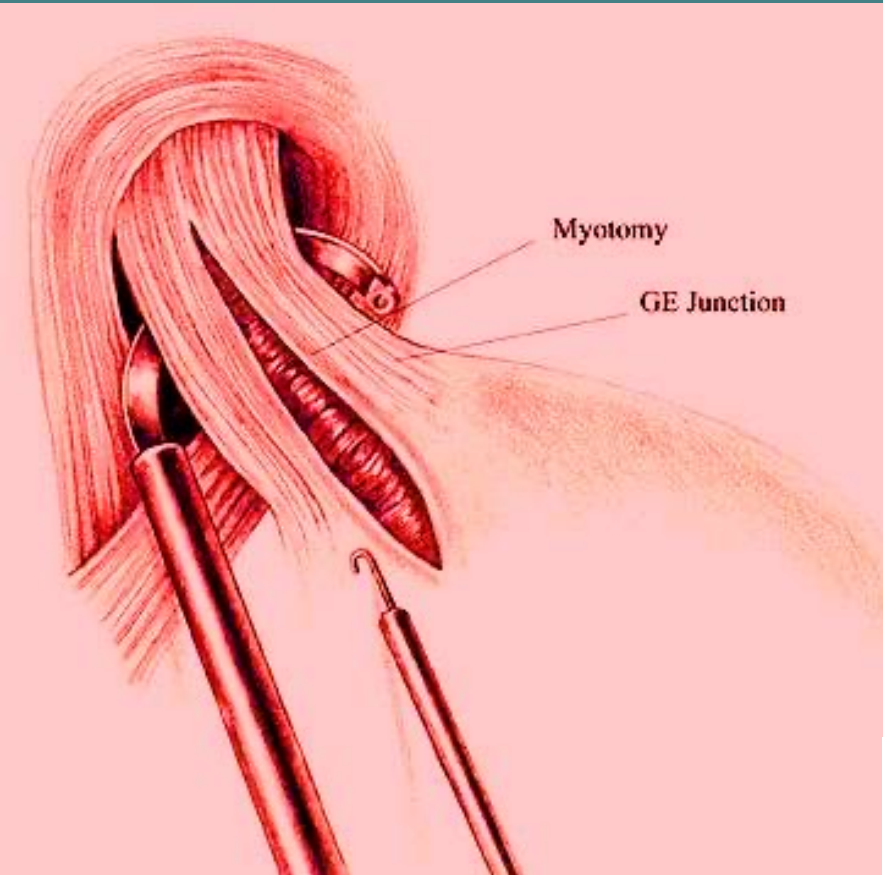


# ΕΝΔΟΣΚΟΠΙΚΕΣ ΔΙΑΣΤΟΛΕΣ

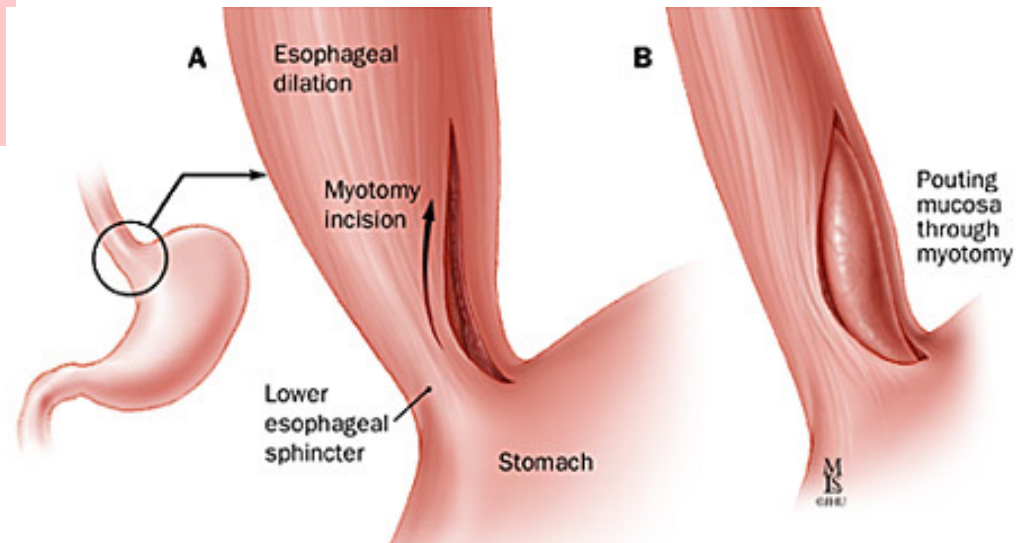


# ΛΑΠΑΡΟΣΚΟΠΙΚΗ ΑΝΤΙΜΕΤΩΠΙΣΗ

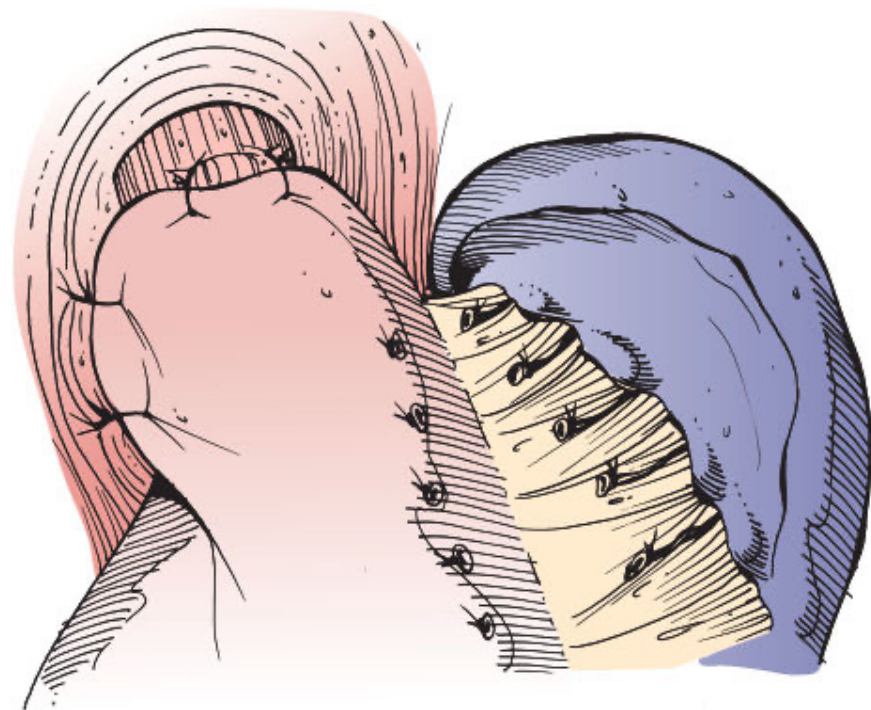
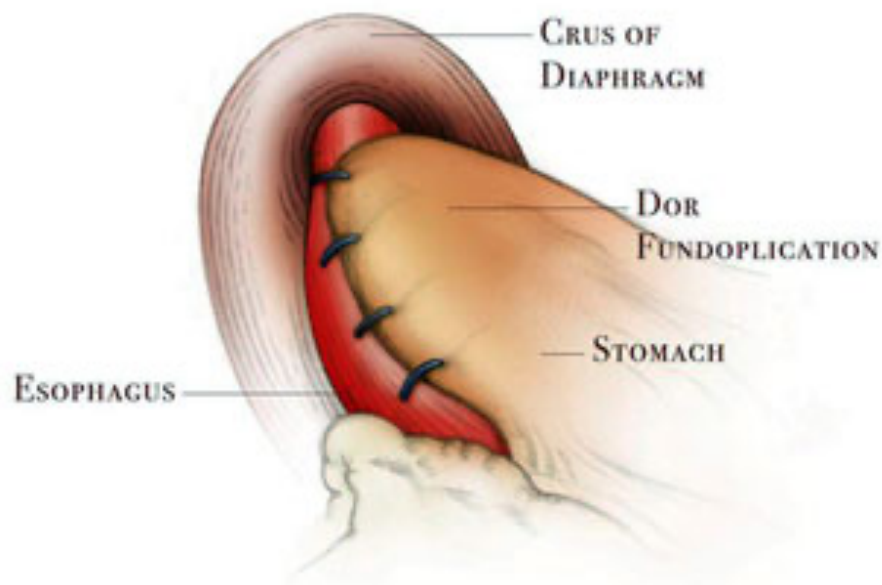




# MYOTOMY



# ΘΟΛΟΠΛΑΣΤΙΚΗ ΚΑΤΑ DOR



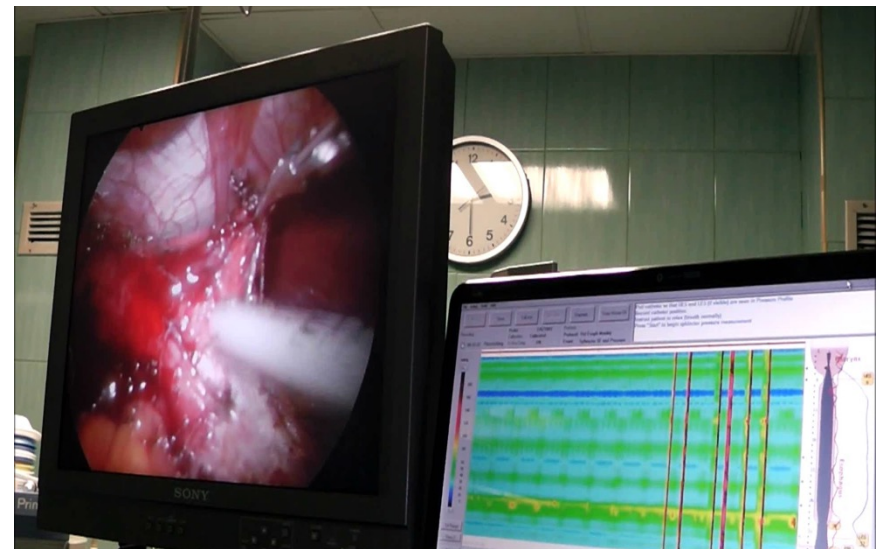
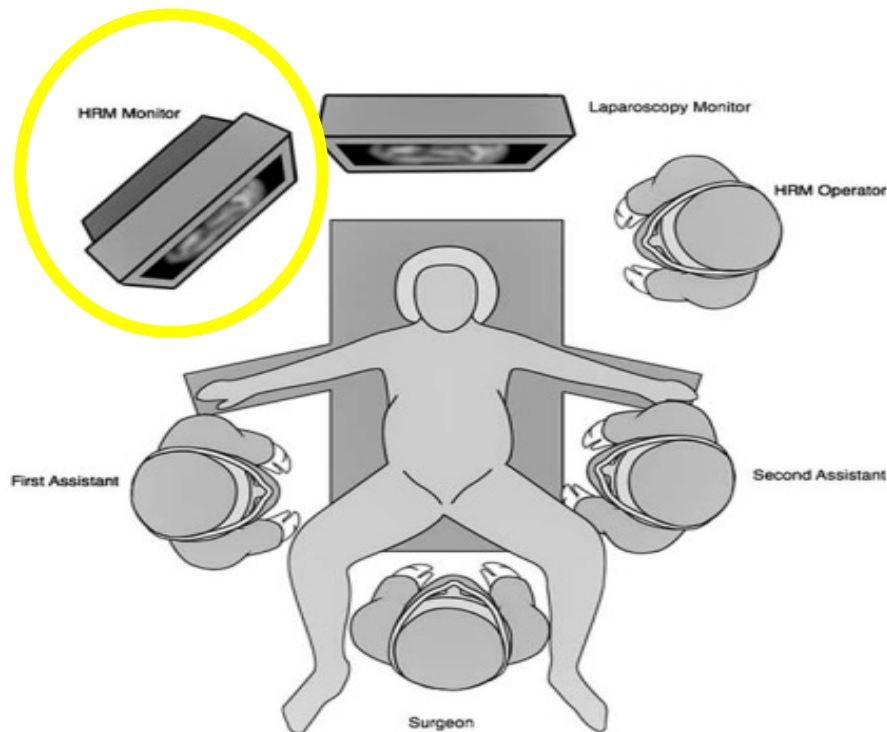
# Είναι απαραίτητη η θολοπλαστική?

Results Obtained With Laparoscopic Myotomy in the Treatment of Achalasia

Author	Year	Design	N All	Follow-up (mo)	N With ARP	N Without ARP	Symptom Improvement			Evidence of GER		
							All N (%)	With ARP (%)	Without ARP (%)	All n/N* (%)	With ARP n/N* (%)	Without ARP (%)
Mitchell <sup>109</sup>	1995	PC	14	12	14	0	14 (100)	14 (100)	—	1/14 (7)	1/14 (7)	—
Delgado <sup>110</sup>	1996	RC	12	—	12	0	10 (83)	10 (83)	—	—	—	—
Raiser <sup>111</sup>	1996	RC	35	26	35	0	28 (80)	28 (80)	—	0/18 (0)†	0/18 (0)	—
Collard <sup>112</sup>	1996	RC	12	14.4	12	0	10 (83)	10 (83)	—	0/6 (0)†	0/6 (0)	—
Anselmino <sup>113</sup>	1997	PC	43	12	43	—	39 (91)	39 (91)	—	2/35 (6)†	2/35 (6)	—
Hunter <sup>45</sup>	1997	RC	40	12	39	1	36 (90)	35 (90)	—	2/40 (5)	2/39 (5)	—
Vogt <sup>114</sup>	1997	PC	20	12	18	2	18 (90)	—	—	3/20 (15)	2/18 (11)	1/2 (50)
Morino <sup>32</sup>	1997	PC	21	29	21	0	21 (100)	21 (100)	—	1/17 (6)†	1/17 (6)	—
Kumar <sup>115</sup>	1998	PC	19	27	0	19	17 (89)	—	17 (89)	5/15 (33)	—	5/15 (33)
Richards <sup>116</sup>	1999	PC	16	8.3	0	16	14 (88)	—	14 (88)	3/14 (21)†	—	3/14 (21)
Stewart <sup>103</sup>	1999	RC	63	17	55	8	56 (89)	—	—	5/46 (11)	—	—
Patti <sup>102</sup>	1999	RC	133	23	133	—	124 (93)	124 (93)	—	6/36 (17)†	6/35 (17)	—
Bloomston <sup>104</sup>	2000	RC	67	18	8	59	61 (91)	—	—	13/68 (19)	—	13/68 (19)
Yamamura <sup>117</sup>	2000	RC	24	16.5	24	0	20 (95)	20 (95)	—	1/9 (11)†	1/9 (11)	—
Zaninotto <sup>118</sup>	2000	PC	94	24	94	0	86 (91)	86 (91)	—	10/75 (13)†	10/75 (13)	—
Bonavina <sup>119</sup>	2000	RC	92	28	92	—	80 (87)	80 (87)	—	2/26 (8)†	2/26 (8)	—
Cade <sup>105</sup>	2000	RC	19	24	—	19	18 (95)	—	18 (95)	7/19 (37)	—	7/19 (37)
Aekroyd <sup>120</sup>	2001	PC	82	24	82	—	82 (100)	82 (100)	—	1/68 (1)	1/68 (1)	—
Wills <sup>121</sup>	2001	PC	62	38	62	—	49 (79)	49 (79)	—	2/62 (3)	2/62 (3)	—
Pechlivanides <sup>122</sup>	2001	PC	29	12	29	—	26 (90)	26 (90)	—	2/20 (10)†	2/20 (10)	—
Donahue <sup>123</sup>	2002	RC	81	45	81	—	69 (85)	69 (85)	—	—	—	—
Oelschlagel <sup>124</sup>	2003	PC	110	46	110	—	91 (83)	91 (83)	—	19/43 (44)†	19/43 (44)	—
Douard <sup>86</sup>	2004	PC	52	50	52	—	48 (92)	48 (92)	—	6/52 (11)†	6/52 (11)	—
Araïn <sup>125</sup>	2004	RC	78	16	78	—	62 (97)	62 (97)	—	1/6 (17)†	1/6 (17)	—
Perrone <sup>126</sup>	2004	PC	100	26	100	—	97 (97)	97 (97)	—	1/92 (1)	1/92 (1)	—
Frantzides <sup>127</sup>	2004	RC	53	36	52	1	49 (92)	48 (92)	—	5/53 (9)	5/53 (9)	—
Dempsey <sup>128</sup>	2004	RC	51	32.5	29	22	44 (86)	25 (86)	19 (86)	—	—	—
Avtan <sup>129</sup>	2005	RC	15	42	—	15	13 (87)	—	13 (87)	1/9 (11)†	—	1/9 (11)
Ramacciato <sup>130</sup>	2005	PC	32	12	17	15	31 (97)	16 (94)	15 (100)	4/32 (13)	1/17 (6)	3/15 (20)
Rossetti <sup>131</sup>	2005	PC	195	83	195	—	179 (92)	179 (92)	—	0/15 (0)†	0/15 (0)	—
Bonatti <sup>132</sup>	2005	RC	75	64	75	—	37 (84)	37 (84)	—	7/44 (15)	7/44 (15)	—
Rosemurgy <sup>133</sup>	2005	PC	262	32	79	183	236 (90)	—	—	—	—	—
Portale <sup>34</sup>	2005	RC	248	41	248	—	218 (88)	218 (88)	—	9/130 (7)†	9/130 (7)	—
Deb <sup>134</sup>	2005	RC	211	64	198	13	148 (89)	—	—	56/167 (34)	—	—
Khajanchee <sup>135</sup>	2005	PC	121	9	121	—	113 (93)	113 (93)	—	16/48 (33)†	16/48 (33)	—
Burpee <sup>136</sup>	2005	PC	66	28	10	56	54 (87)	—	54 (87)	18/30 (60)†	—	18/30 (60)
Smith <sup>36</sup>	2006	PC	209	21	206	3	173 (83)	—	—	4/209 (2)	4/206 (2)	—
Katada <sup>137</sup>	2006	RC	30	12	30	—	24 (80)	24 (80)	—	3/25 (12)†	3/25 (12)	—
Torquati <sup>138</sup>	2006	PC	200	42	53	147	170 (85)	—	—	12/43 (28)††	2/22 (9)	10/21 (48)
<b>Mean (Range)</b>												
Total			3086	35.4 (8–83)	2507	579	89.3 (77–100)	90.3 (77–100)	89.9 (86–100)	14.9 (0–60)	8.8 (0–44)	31.5 (11–60)

# Real-time Continuous Esophageal High-resolution Manometry (HRM) During Laparoscopic Heller Myotomy and Dor Fundoplication for the Treatment of Achalasia. A Promising Novelty in Regards of Perfecting Surgical Technique: Could It Guide Surgical Technique Toward Excellent Results?

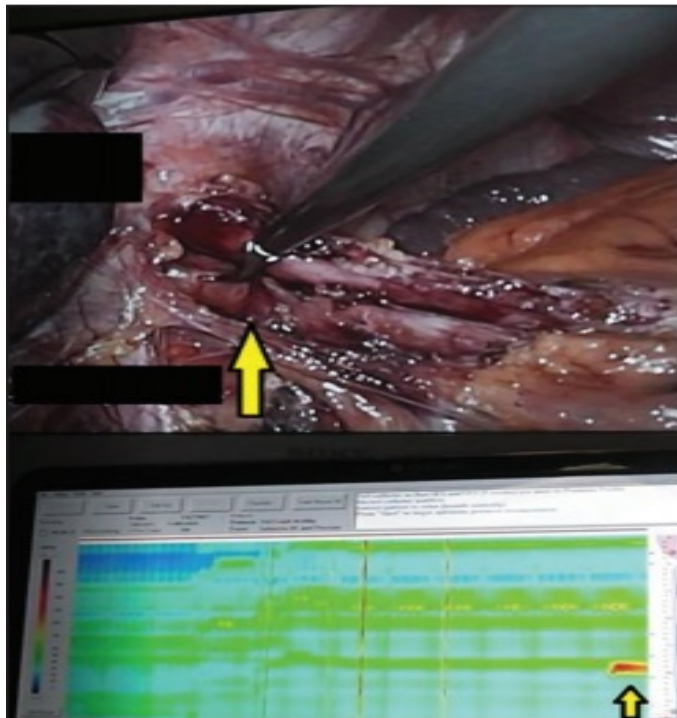
*Tania Triantafyllou, MD,\* Georgia Doulami, MD,\* Joanna Papailiou, MD, PhD,\*  
Apostolos Mantides, MD,† Georgios Zografos, MD, PhD,\*  
and Dimitrios Theodorou, MD, PhD\**



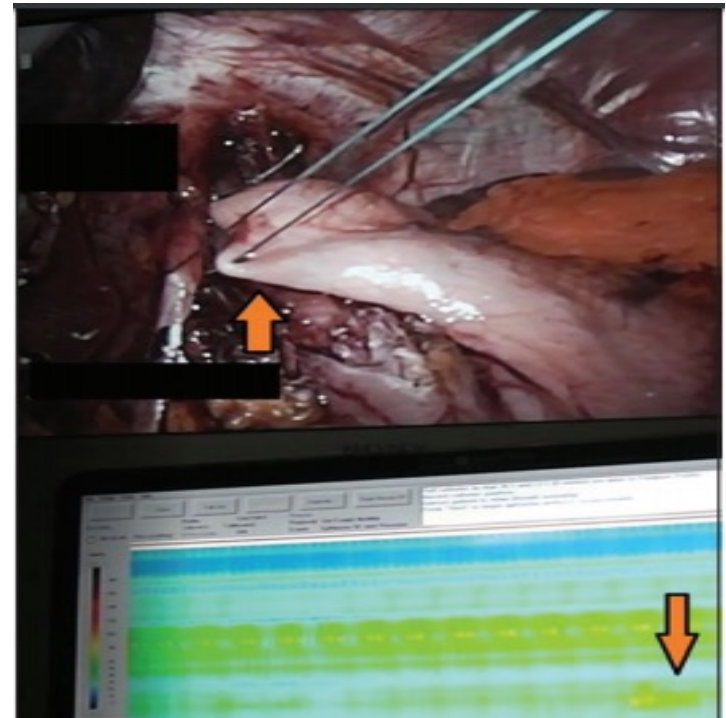
## Long-term outcome of myotomy and fundoplication based on intraoperative real-time high-resolution manometry in achalasia patients

Tania Triantafyllou<sup>a</sup>, Charalampos Theodoropoulos<sup>a</sup>, Georgia Georgiou<sup>a</sup>, Vasileios Kalles<sup>a</sup>, Demosthenis Chrysikos<sup>b</sup>, Konstantinos Filis<sup>a</sup>, Georgios Zografos<sup>a</sup>, Dimitrios Theodorou<sup>a</sup>

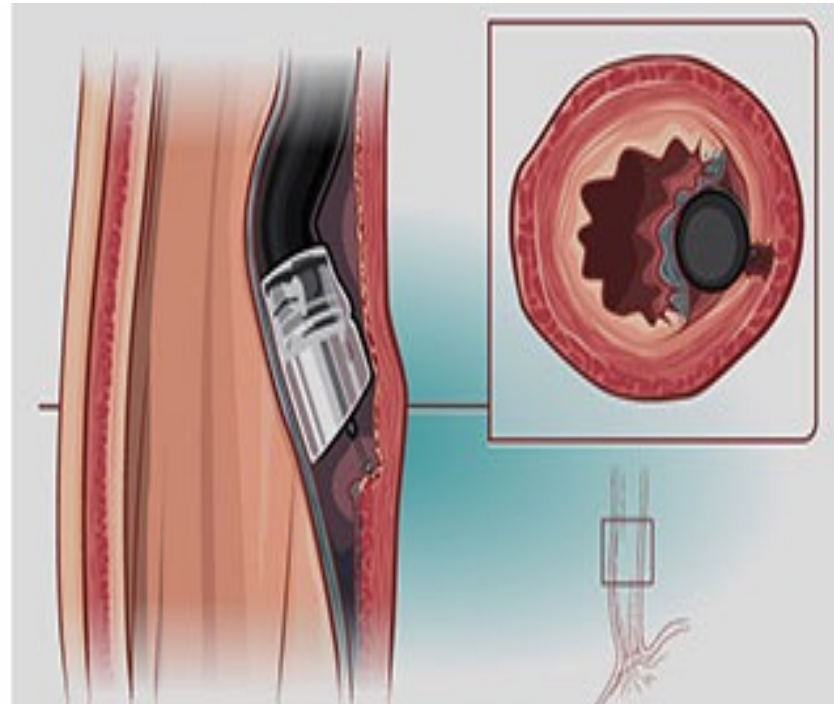
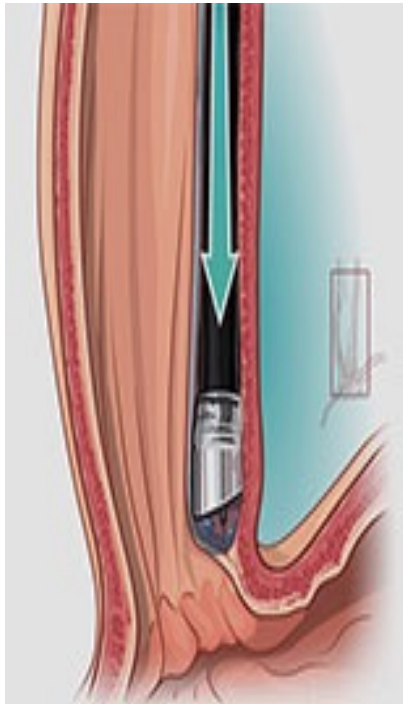
### ΜΥΟΤΟΜΗ



### ΘΟΛΟΠΛΑΣΤΙΚΗ



# POEM (Peroral Endoscopic Myotomy)





## A Decade of Investigation: Peroral Endoscopic Myotomy Versus Laparoscopic Heller Myotomy for Achalasia

Michael T. Olson, BS,<sup>1</sup> Tania Triantafyllou, MD,<sup>2</sup> and Saurabh Singhal, MBBS, MS<sup>3</sup>

Author, year (study design)	Patients (n)	Primary outcome(s)	Median F/U [Range] (months)	Results	Finding(s)
Sanaka et al., 2018 (Propensity score matching) <sup>54</sup>	31 (POEM), 88 (LHM)	Difference in esophageal acid exposure between procedure type	2-Month posttreatment	POEM versus LHM Abnormal total acid exposure: 48.4% versus 13.6% ( $P < .001$ ) Abnormal DeMeester score: 54.8% versus 17.4% ( $P < .005$ )	POEM leads to significantly higher rates of abnormal esophageal acid exposure, w/o an increase in GERD Sx
Hanna et al., 2018 (Retrospective) <sup>54</sup>	42 (POEM), 54 (LHM)	Patient-reported outcomes between procedure type	21.9 (POEM), 37.0 (LHM)	POEM versus LHM Daily dysphagia: 24% versus 28% Daily regurgitation and chest pain: 7% versus 11%	No significant difference in follow-up Eckardt score; two procedures have similar patient-reported effectiveness
Ramirez et al., 2018 (Prospective) <sup>55</sup>	35 (POEM), 35 (LHM)	Myotomy extension, treatment success (Eckardt score $\leq 3$ ), symptomatic reflux	10 (6–32) [POEM], 20 (6–68) [LHM]	POEM versus LHM Efficacy (Eckardt score $\leq 3$ ): 94.2% versus 91.4% ( $P = 1.0$ ); similar symptomatic reflux rates	Shorter myotomy on the gastric side in POEM may contribute to an acceptable reflux rate with comparable dysphagia relief
Docimo et al., 2017 (Retrospective) <sup>56</sup>	44 (POEM), 122 (LHM)	Postoperative pain	1–24 Hours post-op	POEM versus LHM Average pain scores upon arrival to recovery room and 1 hour postop: 2.3 $\pm$ 3.0 versus 3.61 $\pm$ 3.0 ( $P = .025$ ), and 2.2 $\pm$ 2.6 versus 3.5 $\pm$ 3.1 ( $P = .034$ ), respectively	POEM has less postop pain; LHM patients required more narcotic analgesic administration during the first 24 hours
Peng et al., 2017 (Retrospective) <sup>57</sup>	13 (POEM), 18 (LHM)	Treatment success (Eckardt score $\leq 3$ ), GERD occurrence, QOL	36	POEM versus LHM Treatment success: 83.3% versus 80.0% ( $P = 1.0$ ), similar GERD rates, no difference in QOL	POEM and LHM are both effective treatments that have comparable long-term outcomes
Schneider et al., 2016 (Retrospective) <sup>58</sup>	42 (POEM), 84 (LHM)	Early clinical outcomes (Eckardt score, QOL metrics, dysphagia, esophagitis)	36.2 (22.2–41.2) weeks [POEM], 158.1 (36.5–272.9) weeks [LHM]	POEM versus LHM Eckardt scores, QOL metrics, and dysphagia significantly improved in both groups; esophagitis: 53.4% versus 31.6% (Yates'	Early clinical outcomes are excellent with POEM and comparable to the standard-of-care LHM

# ΕΚΚΟΛΠΩΜΑΤΑ ΟΙΣΟΦΑΓΟΥ

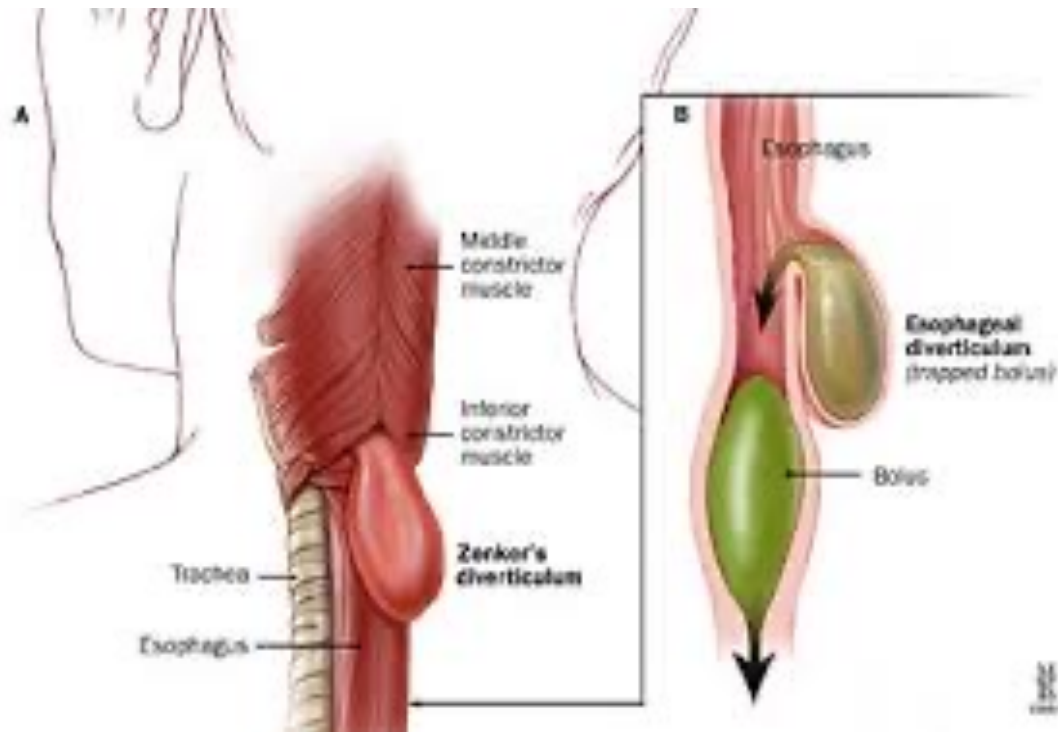
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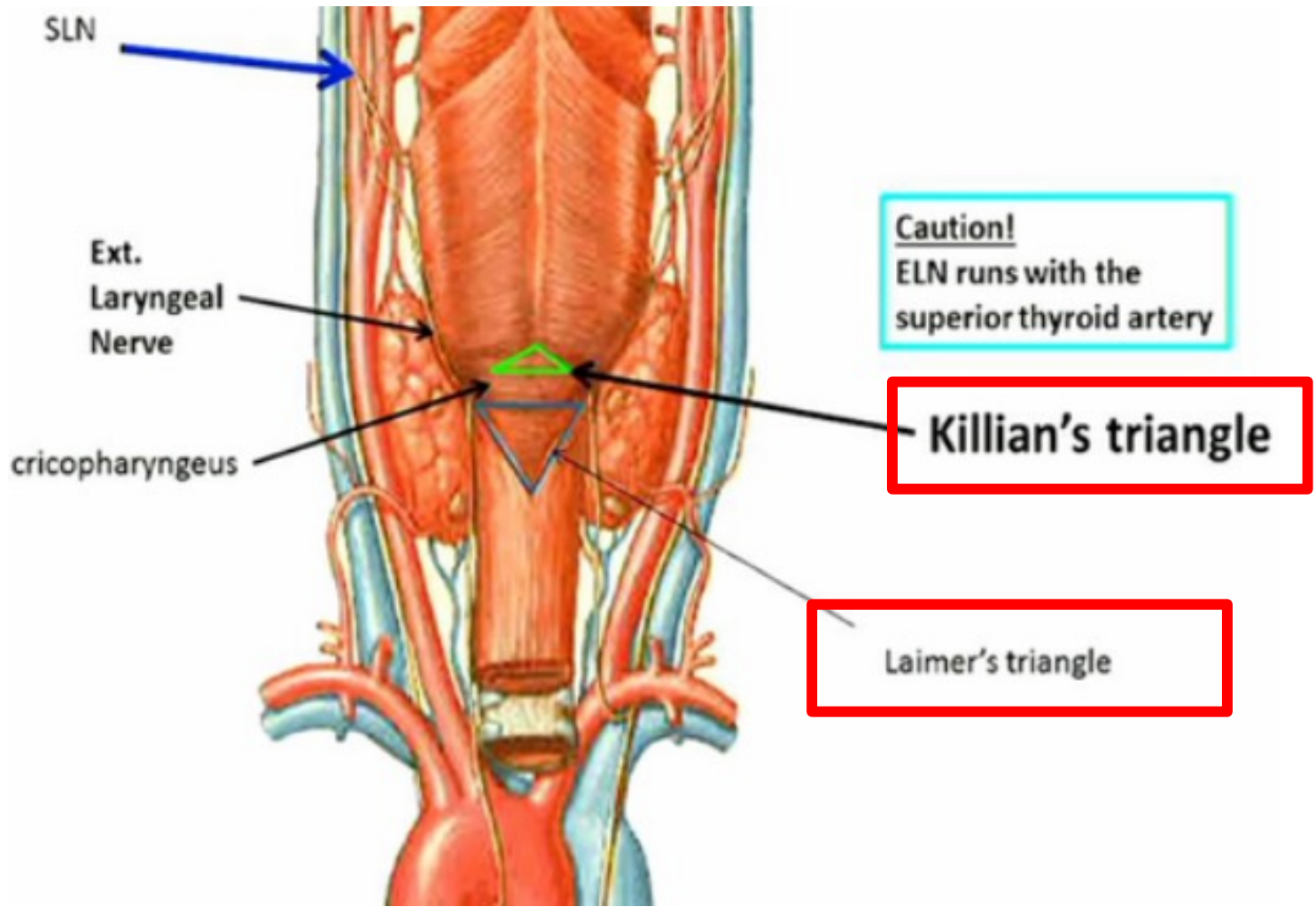
- Είναι τα συχνότερα
- Είναι **ψευδή** (από βλεννογόνο μόνο)
  - Οφείλονται σε αυξημένη ενδοαυλική πίεση
  - Άνω Zenker / Κάτω επιφρενικά

## Έλξης:

- Είναι σπάνια
- Είναι **αληθή** (όλες στιβάδες)
  - Οφείλονται σε εξωτερικές φλεγμονές και ίνωση
  - Μεσότητα

# ZENKER



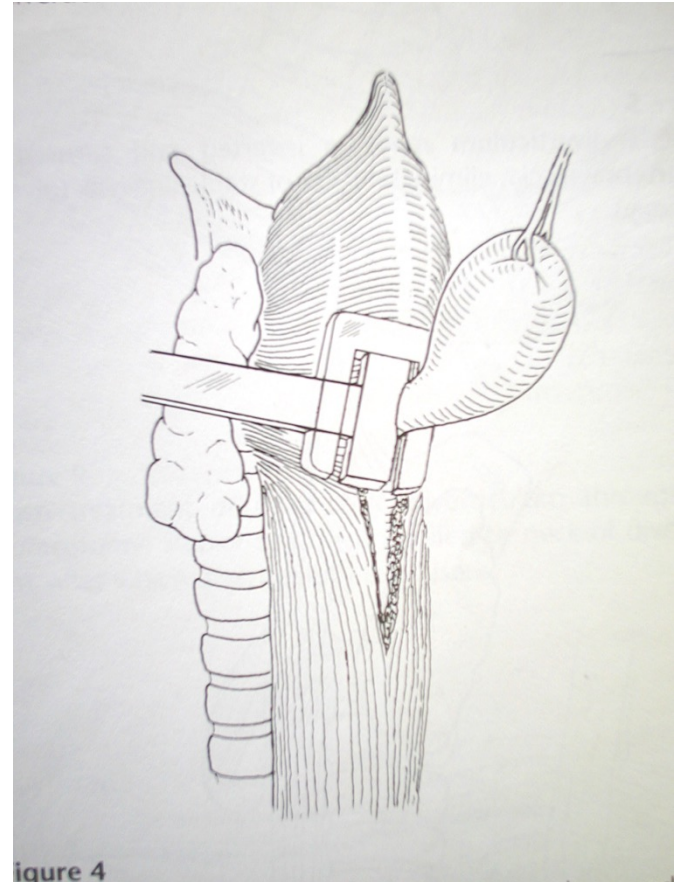


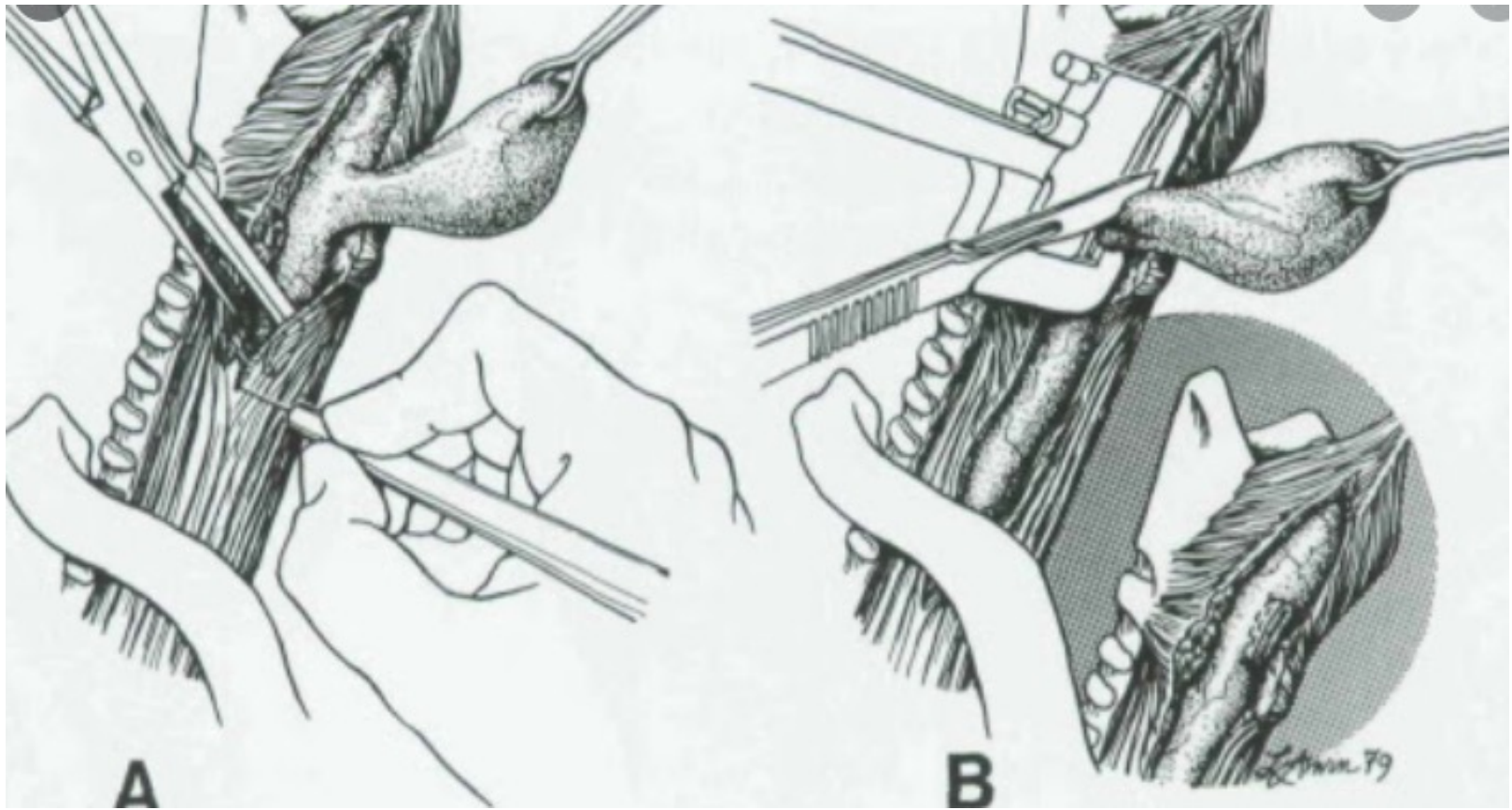
# ΑΝΤΙΜΕΤΩΠΙΣΗ

- **ΕΝΔΟΣΚΟΠΙΚΗ**
- **ΧΕΙΡΟΥΡΓΙΚΗ**

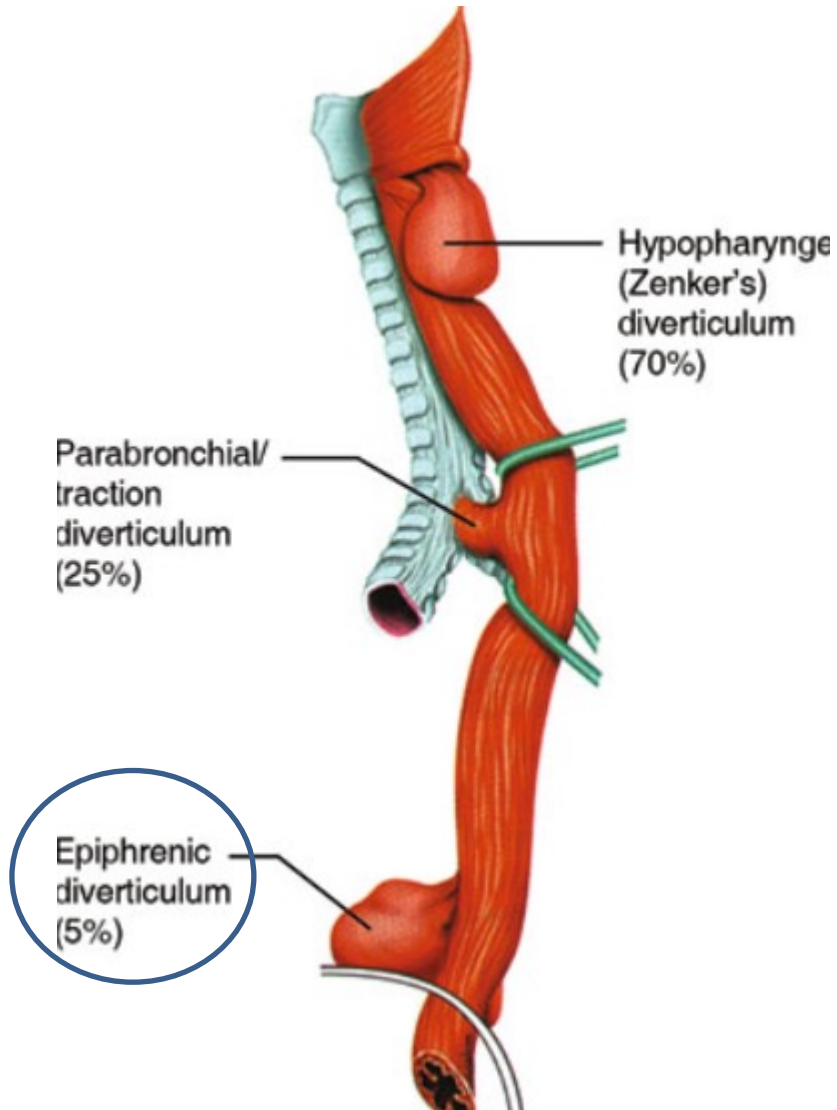
• Η θεραπεία απαιτεί

- Μείωση πιέσεων μυοτομή περιφερικά
- Αφαίρεση εκκολπώματος??





# ΕΠΙΦΡΕΝΙΚΟ



# ΓΟΠ

- Γαστρικό περιεχόμενο στον οισοφάγο
- Παλινδρομικό επεισόδιο: φυσιολογικό φαινόμενο

✓ Συμπτώματα

Καυσαλγία

Αναγωγή

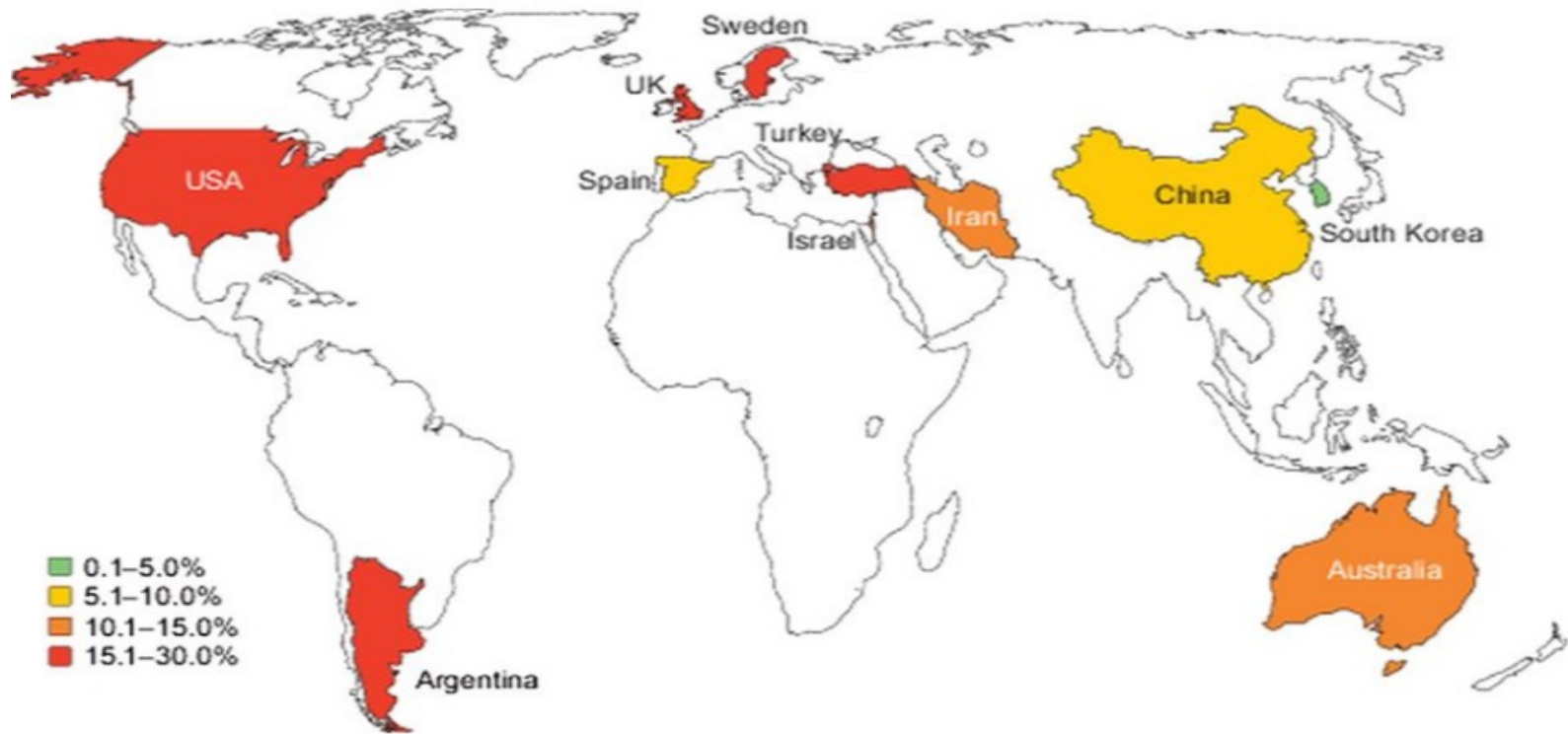
**30%**

Άτυπα:  
Αναπνευστικά  
(βράγχος, βήχας, άσθμα)

✓ Επιπλοκές

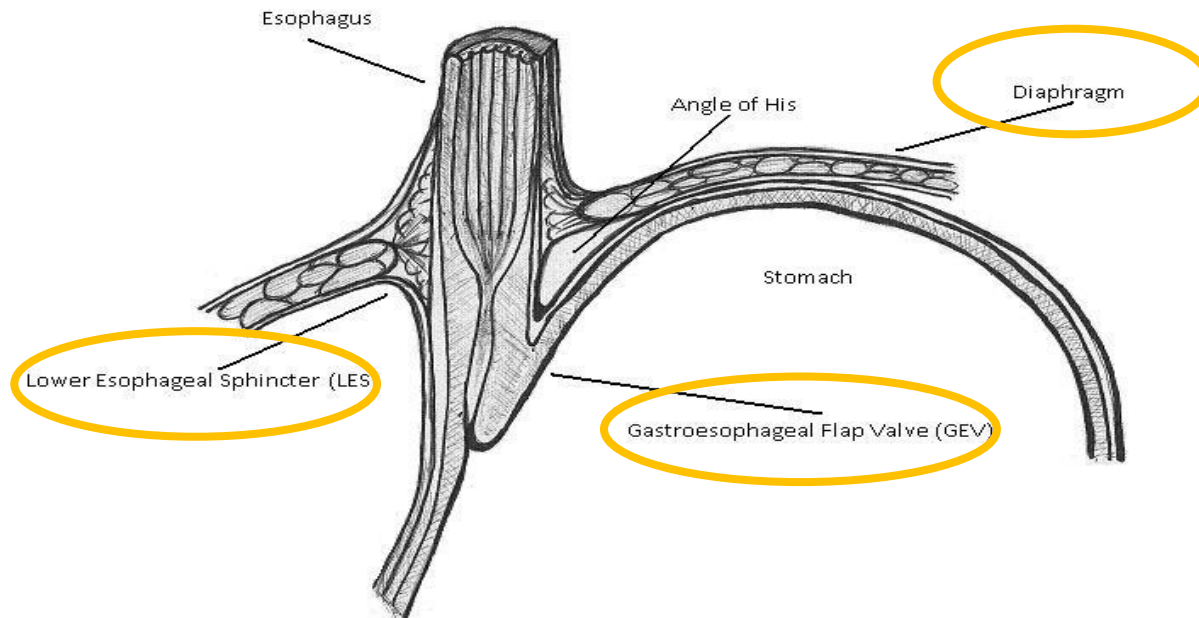


- ✓ Ανεπτυγμένες χώρες 26-28%
- ✓ Παχυσαρκία!!



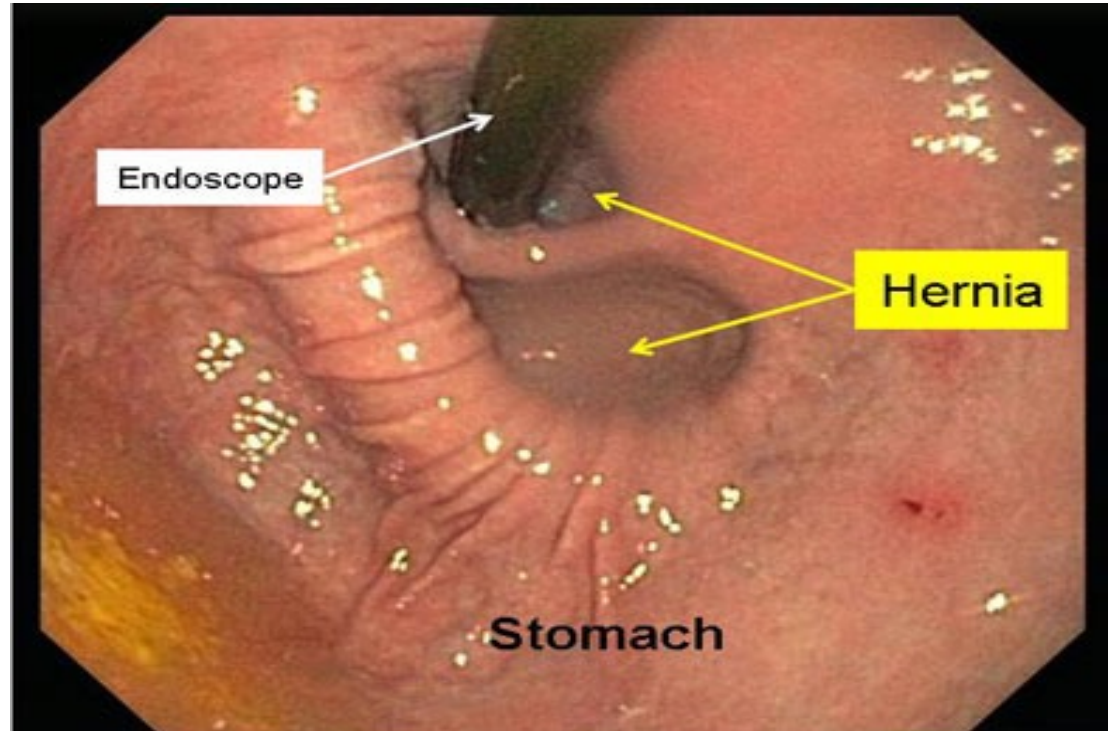
# Antireflux Barrier

- Κάτω οισοφαγικός σφιγκτήρας
- Σκέλη διαφράγματος
- Φρενοοισοφαγική μεμβράνη
- Διαφορά πίεσης (flap valve)



# Διερεύνηση

- ✓ Γαστροσκόπηση
- ✓ Βαριούχο γέυμα
- ✓ Μανομετρία
- ✓ Πεχαμετρία

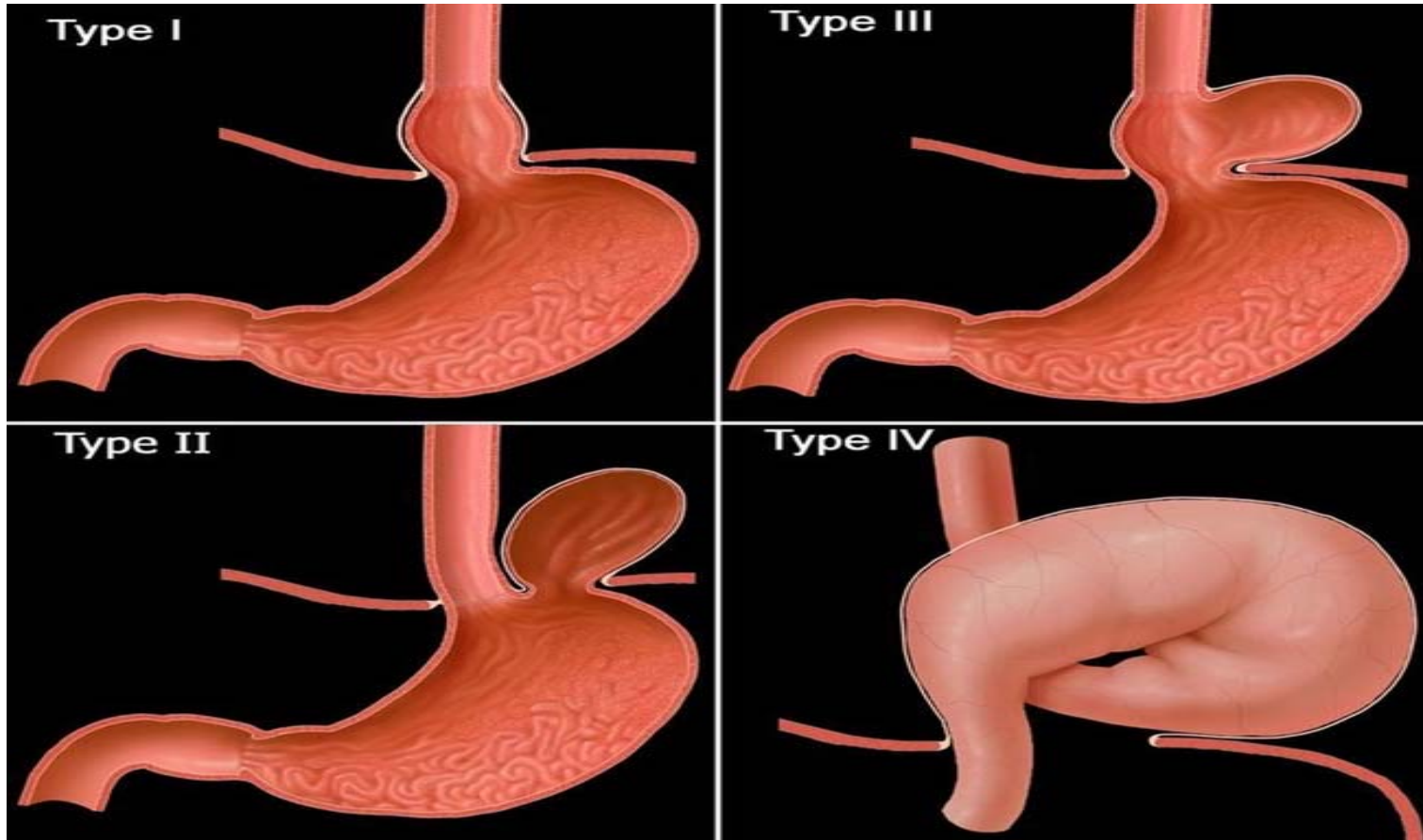


## ΕΝΔΟΣΚΟΠΗΣΗ: ΠΟΤΕ?

- ✓ **Alarming** symptoms (δυσφαγία, ΑΒ, αιμορραγία, έμετοι)
- ✓ **≥ 2 παράγοντες κινδύνου** για Barrett (άνδρας, ≥50 ετών, Καυκάσια φυλή, παχυσαρκία, οικογ.ιστορικό, κάπνισμα)
- ✓ Γνωστή οισοφαγίτιδα ≥C (<75% περιμέτρου αυλού)

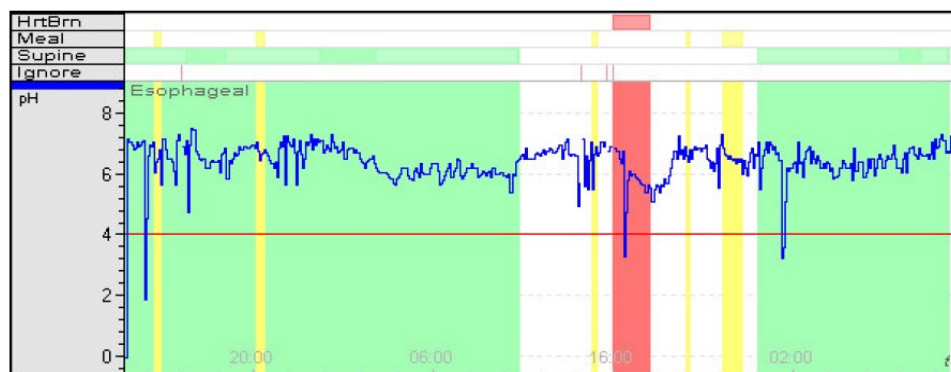
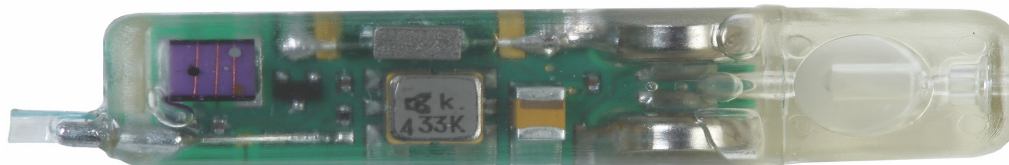
# ΔΙΑΦΡΑΓΜΑΤΟΚΗΛΗ

90%



- Type I - Sliding hernia - the most common type, the esophagogastric junction migrates through the gap in the cephalad direction.
- Type II - Paraesophageal hernia - only migrates the gastric fundus, the esophagogastric junction remains in intra-abdominal position.
- Type III - Combination of types I and II.
- Type IV - Involves the migration of other structures and organs such as omentum or transverse colon.

# ΠΑΛΙΝΔΡΟΜΗΣΗ

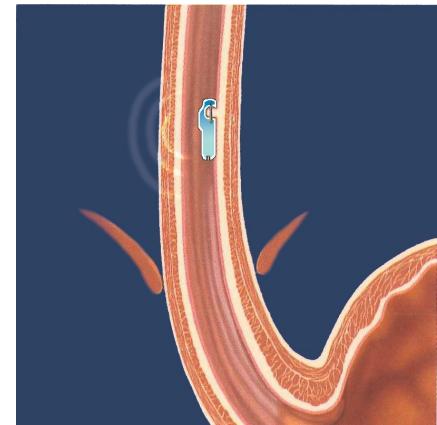
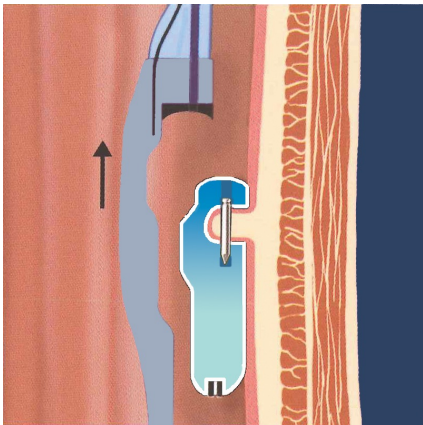
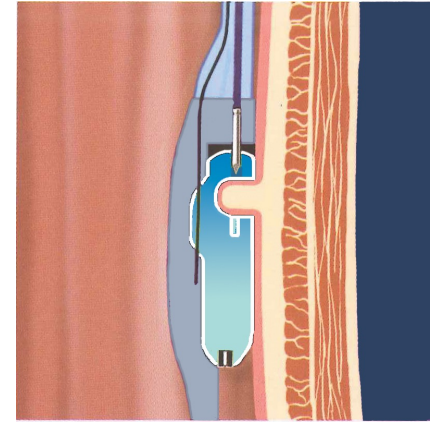
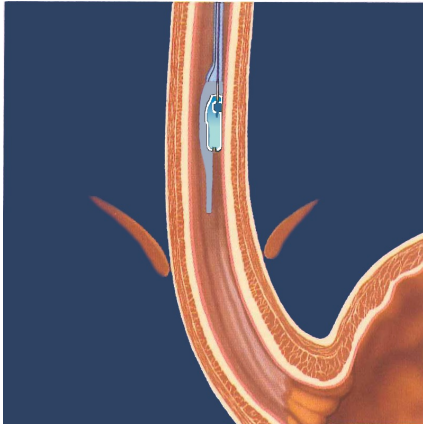


Reflux Table - Day 1

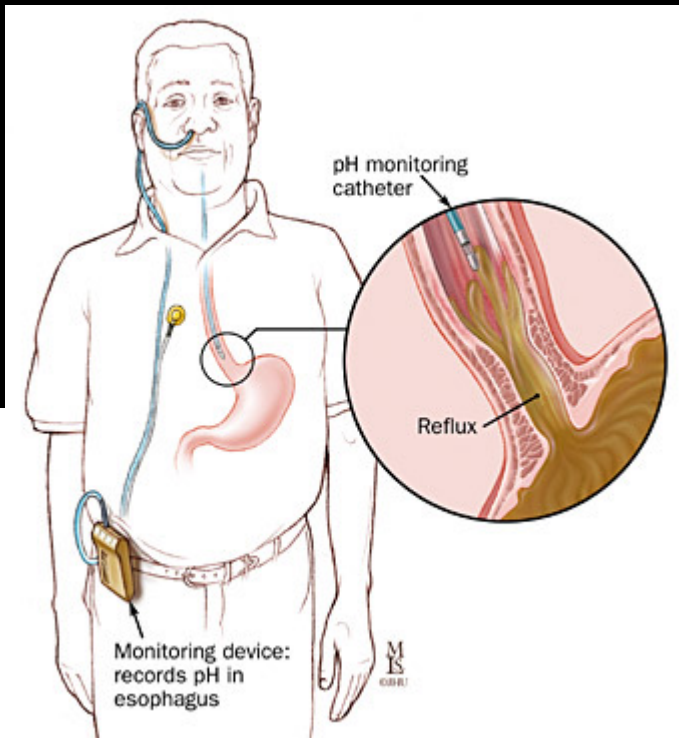
	Total	Upright	Supine	Meal	PostPr	PrePra
Duration of Period (min)	23:58	02:04	1d, 03:11	00:49	03:58	19:10
Number of Refluxes	1	0	1	0	0	1
Number of Long Refluxes > 5 (min)	0	0	0	0	0	0
Duration of longest reflux (min)	1	0	1	0	0	1
Time pH < 4 (min)	1	0	1	0	0	1
Fraction Time pH < 4 (%)	0.1	0.0	0.0	0.0	0.0	0.1

DeMeester Table - Day 1

	Score
Duration (d, hh: mm: ss)	23:58
Number of Refluxes	-0.4
Number of Long Refluxes	0.3
Longest Reflux	0.2
Fraction Time pH < 4 (Total)	-0.1
Fraction Time pH < 4 (Upright)	0.1
Fraction Time pH < 4 (Supine)	0.4
Total Score	0.5



# 24ΩΡΗ ΠΛΗΘΥΣΜΟΓΡΑΦΙΑ-pH- ΜΕΤΡΙΑ ΟΙΣΟΦΑΓΟΥ



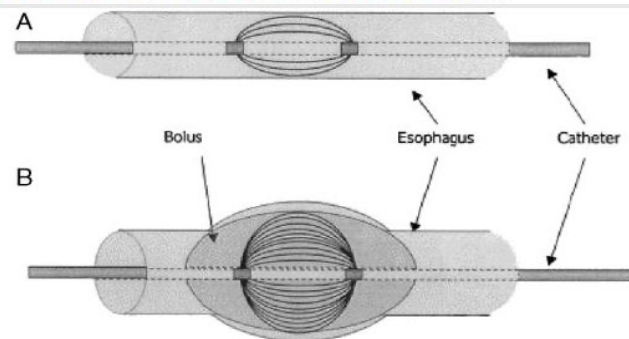


# ΑΡΧΕΣ ΛΕΙΤΟΥΡΓΙΑΣ-ΕΜΠΕΔΗΣΗ

.Μεταβολή αντίστασης (Ohms) μεταξύ μεταλλικών ελασμάτων

## Clinical Importance of Impedance Measurements

Agrawal, Amit MD; Castell, Donald O. MD, MACG



.Υγρός βλωμός ≠ Αέρας

Low conductivity



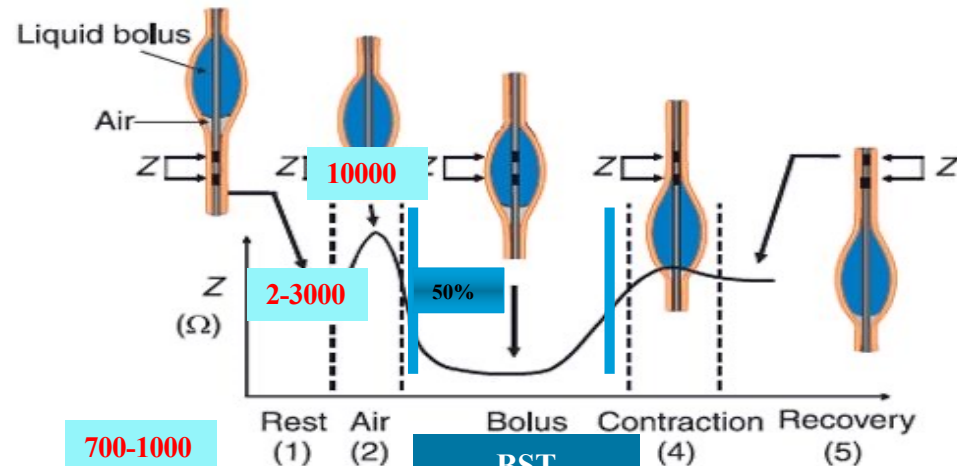
High conductivity

Air
Esophageal mucosa (empty esophagus)
Food/Saliva
Gastric refluxate

High impedance

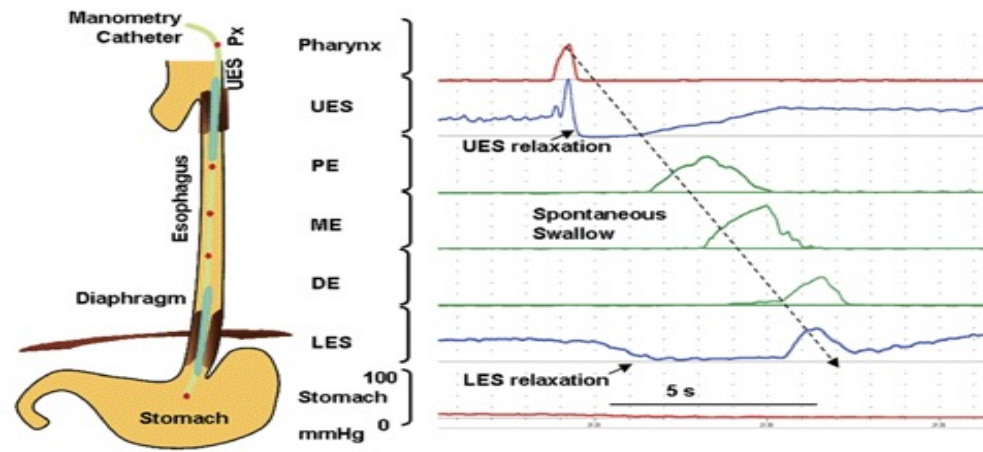


Low impedance



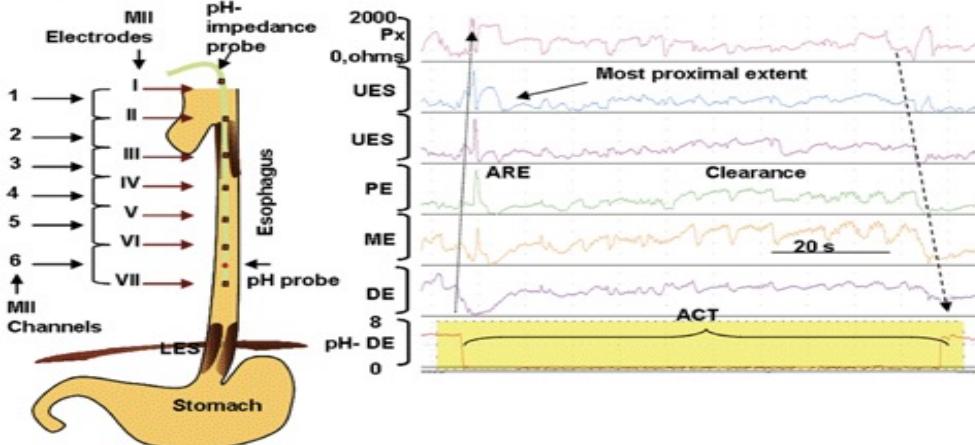
# ΕΦΑΡΜΟΓΕΣ ΕΜΠΕΔΗΣΗΣ

## A Manometry



Συνδυασμός με  
pHμετρία

## B pH Impedance



Low conductivity



High conductivity

Air
Esophageal mucosa (empty esophagus)
Food/Saliva
Gastric refluxate

High impedance



Low impedance

# Θεραπεία

- ✓ Δίαιτα και συνήθειες
- ✓ Αντιόξινα
- ✓ H<sub>2</sub> Αναστολείς
- ✓ Αναστολείς της αντλίας πρωτονίου

# PPI

- Σε 83% ρυθμίζει τα συμπτώματα
- Σε 78% επουλώνει την οισοφαγίτιδα

## Μειονεκτήματα:

- Μακροχρόνια χρήση απαραίτητη:
  - - Κόστος
  - - Ποιότητα ζωής ειδικά στους νέους
- **Η ΓΟΠ δεν σταματά**
- Παλινδρόμηση χολής στο 75% των ασθενών

# PPI

## Risk of Community-Acquired Pneumonia and Use of Gastric Acid-Suppressive Drugs

**Conclusion** Current use of gastric acid-suppressive therapy was associated with an increased risk of community-acquired pneumonia.

**Table 1.** Relative Risks for Community-Acquired Pneumonia by Exposure to Gastric Acid-Suppressive Therapy

	Total	Unexposed	Exposed to Acid-Suppressive Drugs		
			Overall	H <sub>2</sub> -Receptor Antagonists	Proton Pump Inhibitors
No. of patients	364 683	345 224	19 459*	10 177	12 337
Person-years	977 893	970 331	7562*	2351	5191
No. of cases of pneumonia	5551	5366	185	54	131
Unadjusted relative risk (95% CI)		1.00	4.47 (3.82-5.12)	4.24 (3.18-5.43)	4.63 (3.84-5.43)

# PPI

## Long-term Proton Pump Inhibitor Therapy and Risk of Hip Fracture

**Conclusion** Long-term PPI therapy, particularly at high doses, is associated with an increased risk of hip fracture.

**Table 2.** Risk of Hip Fracture Associated With Increasing Cumulative Duration of Proton Pump Inhibitor Therapy

	Cumulative Proton Pump Inhibitor Therapy Duration, y			
	1	2	3	4
OR (95% CI)*				
Crude	1.43 (1.35-1.52)	1.84 (1.67-2.01)	2.10 (1.91-2.35)	2.17 (1.93-2.45)
Adjusted†	1.22 (1.15-1.30)	1.41 (1.28-1.56)	1.54 (1.37-1.73)	1.59 (1.39-1.80)

## Indications for surgery

When the diagnosis of reflux is objectively confirmed, surgical therapy should be considered in individuals who:

1. Have failed medical management (inadequate symptom control, severe regurgitation not controlled with acid suppression, or medication side-effects)

OR

2. Opt for surgery despite successful medical management (due to quality-of-life considerations, lifelong need for medication intake, expense of medications, etc.)

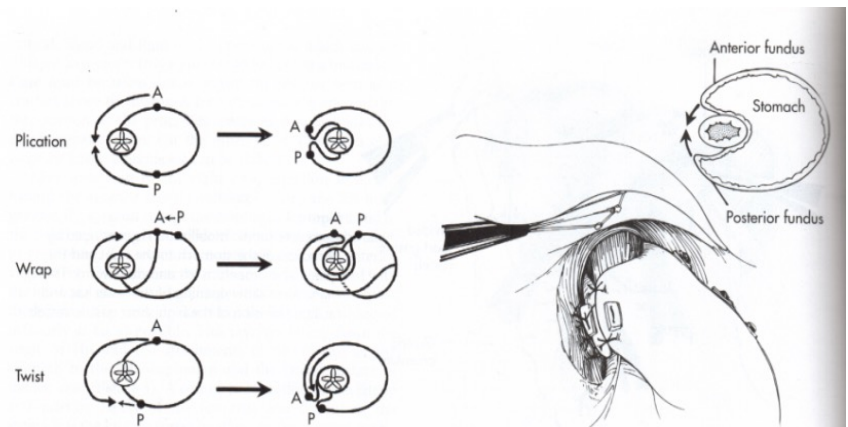
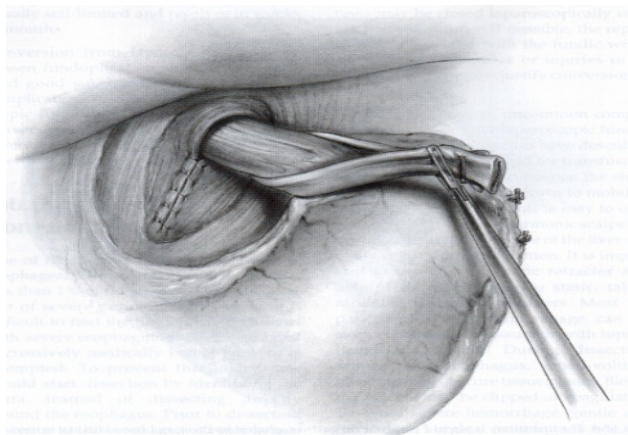
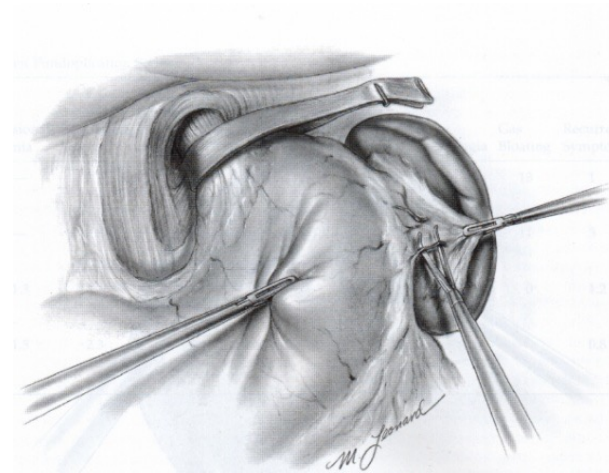
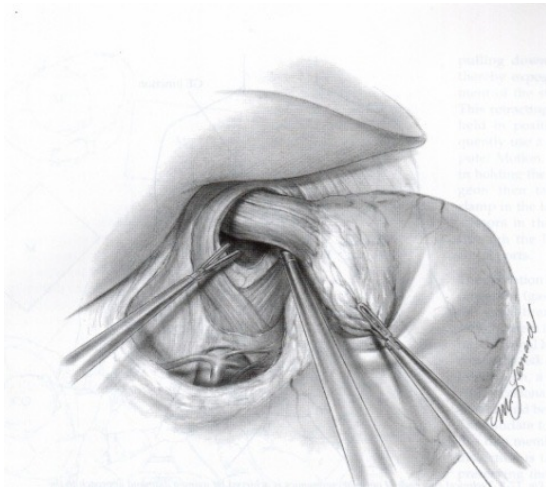
OR

3. Have complications of GERD (e.g., Barrett's esophagus, peptic stricture) [18, 19]

OR

4. Have extra-esophageal manifestations (asthma, hoarseness, cough, chest pain, aspiration) [20–23]

# ΧΕΙΡΟΥΡΓΙΚΗ ΤΕΧΝΙΚΗ





# Μακροχρόνια Αποτελέσματα

## Laparoscopic Nissen Fundoplication: Clinical Outcomes at 10 Years

Jamie J Kelly, BM, FRCS, David I Watson, MD, FRACS, Kin Fah Chin, BM, FRCS,  
Peter G Devitt, MS, FRCS, FRACS, Philip A Game, MBBS, FRCS, FRACS, Glyn G Jamieson, MS, FRACS

- 
- BACKGROUND:** Laparoscopic Nissen fundoplication is now the most common operative procedure for treatment of gastroesophageal reflux disease, although longterm clinical outcomes after this procedure remain uncertain.
- STUDY DESIGN:** Outcomes for 250 patients who underwent Nissen (total) fundoplication at least 10 years ago (September 1991 to August 1995) were determined prospectively using a structured questionnaire that evaluated clinical symptom scores for heartburn, dysphagia, and satisfaction with clinical outcomes.
- RESULTS:** Clinical followup data for at least 10 years (120 to 167 months) after operation were available for 226 patients, an additional 21 patients had died, making outcomes for 247 patients (99%). Of the three (1%) remaining patients, one was lost to followup and dementia developed in two. One hundred eighty-seven (83%) patients were highly satisfied with the clinical outcomes. One hundred eighty-nine (84%) had good or excellent control of heartburn. Symptom scores for heartburn, dysphagia, and overall satisfaction were unchanged from 5-year followup data. Forty-two (17%) patients underwent revision operations, 28 (22%) were in the first 125 patients and 14 (11%) in the subsequent 125 patients. Antireflux medication use increased gradually, resulting in 47 (21%) patients using medication at 10 years. Of 21 deaths, 1 was postoperative and the remaining 20 were similar to that predicted for a matched population. A high preoperative heartburn score correlated with high patient satisfaction and lower dysphagia score at 10 or more years ( $p = 0.038$  and  $p = 0.041$ , respectively).
- CONCLUSIONS:** Laparoscopic Nissen fundoplication is an effective longterm treatment for gastroesophageal reflux disease. (J Am Coll Surg 2007;205:570–575. © 2007 by the American College of Surgeons)
-

# Μακροχρόνια Αποτελέσματα

## Long-Term Outcome of Antireflux Surgery in Patients With Barrett's Esophagus

Wayne L. Hofstetter, MD, Jeffrey H. Peters, MD, Tom R. DeMeester, MD, Jeffrey A. Hagen, MD, Steven R. DeMeester, MD, Peter F. Crookes, MD, Peter Tsai, MD, Farzana Banki, MD, and Cedric G. Bremner, MD

*From the Department of Surgery, Division of Thoracic and Foregut Surgery, University of Southern California, Los Angeles, California*

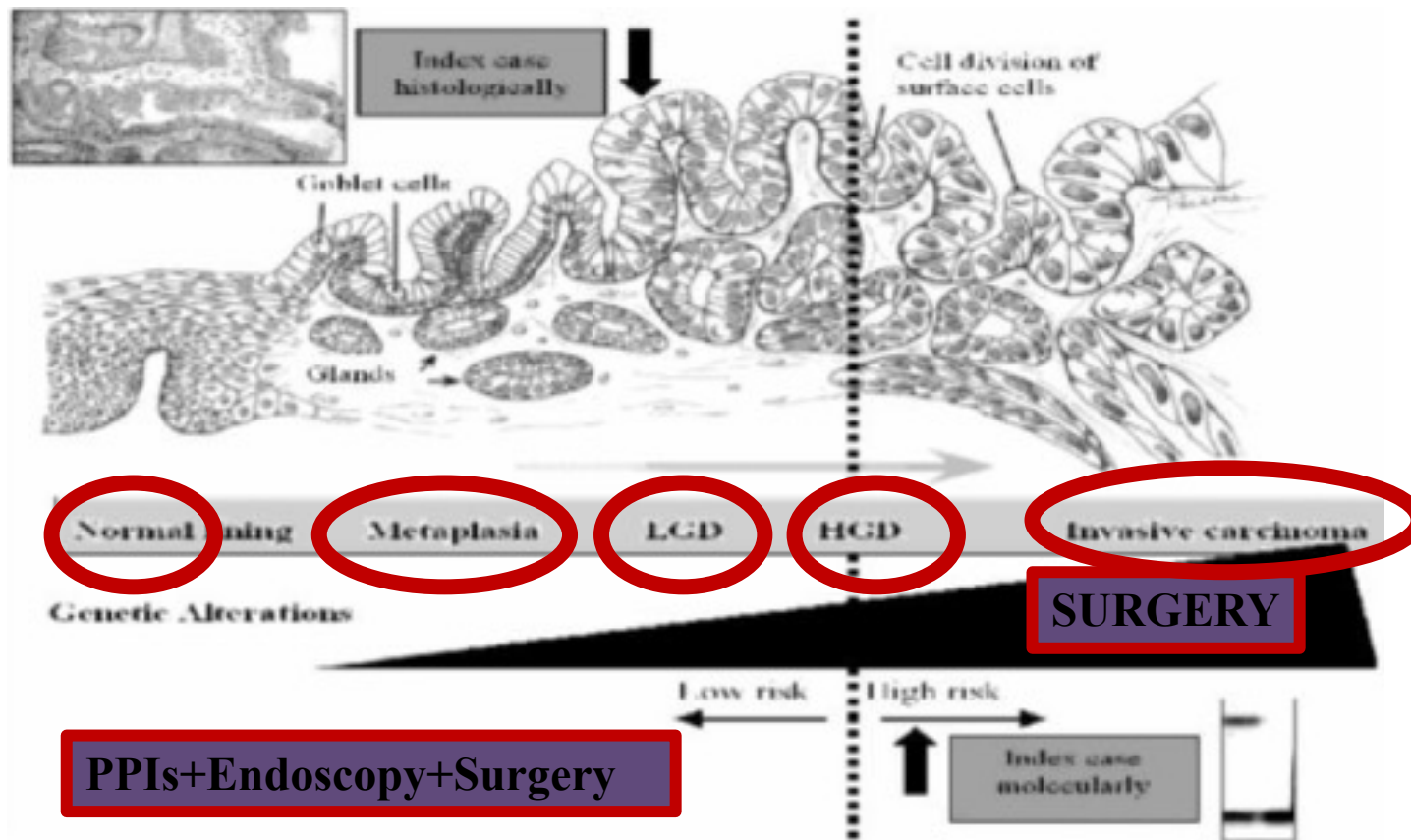
condition to be improved, and 97% were satisfied. Low-grade dysplasia regressed to nondysplastic Barrett's in 7 of 16 (44%), and intestinal metaplasia regressed to cardiac mucosa in 9 of 63 (14%). Low-grade dysplasia developed in 4 of 63 (6%) patients. No patient developed high-grade dysplasia or cancer in 410 patient-years of follow-up.

# ΕΠΙΠΛΟΚΕΣ ΓΟΠ

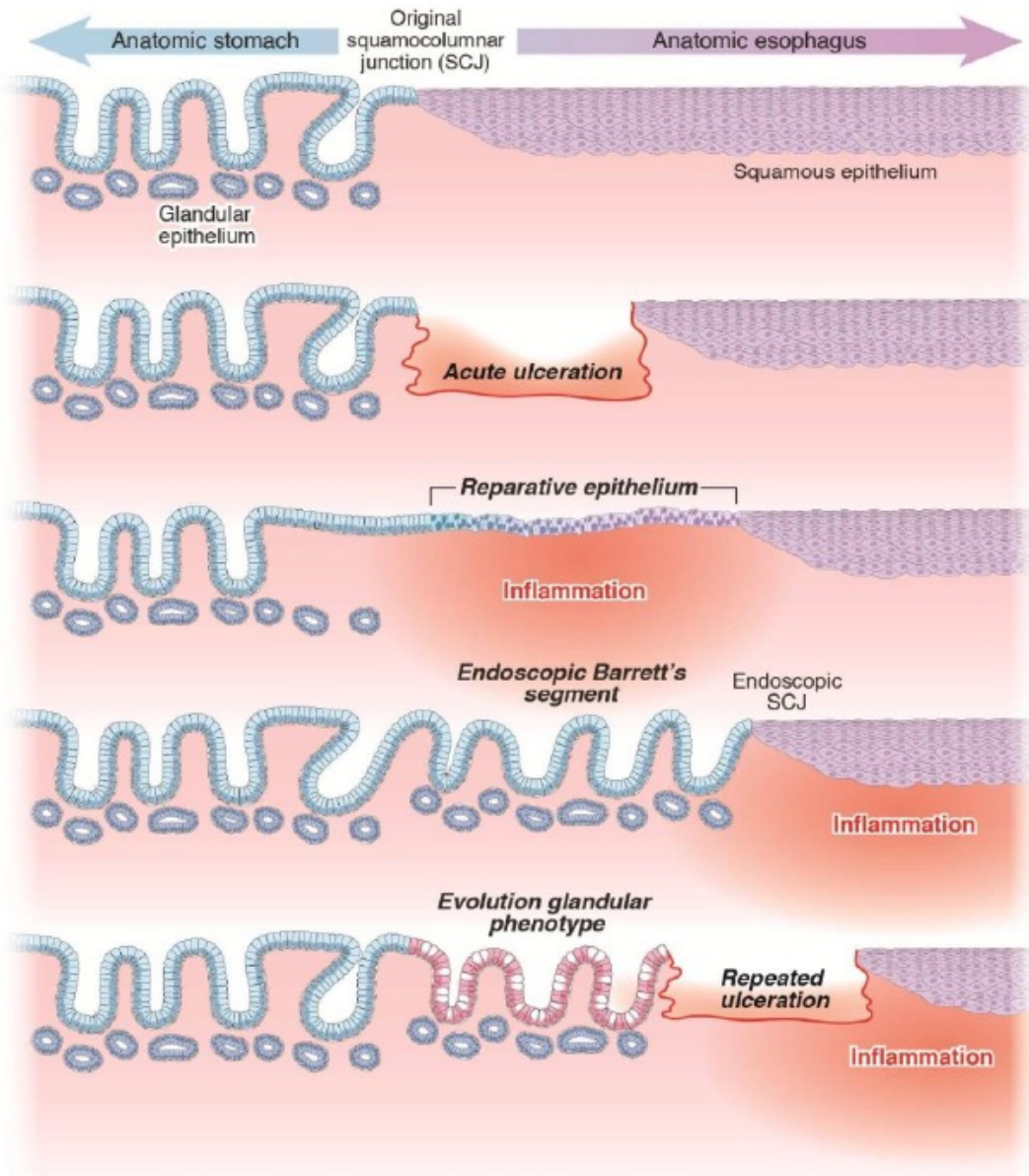
- Οισοφαγίτιδα
- Στένωση
- Έλκος
- Barrett
- Καρκίνος

## From reflux esophagitis to Barrett's esophagus and esophageal adenocarcinoma

Rui-Hua Wang



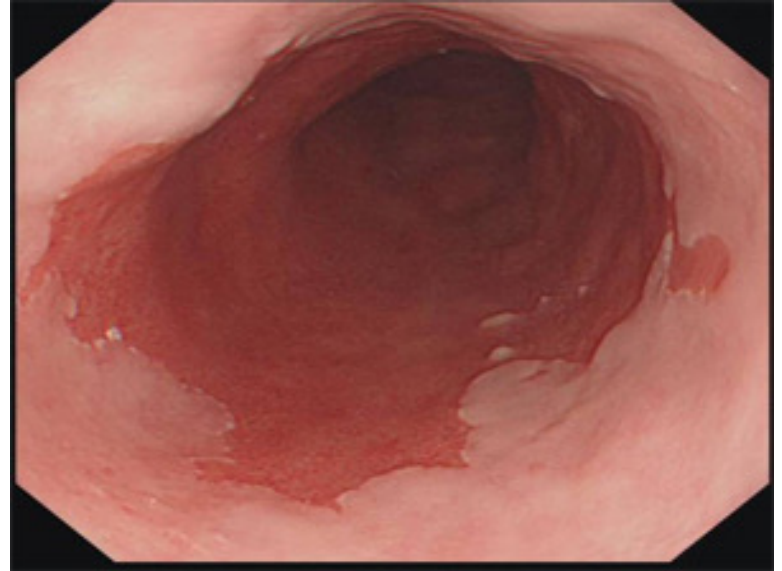
# BARRETT'S OESOPHAGUS



Model of wounding and competitive replacement for development of Barrett's Epithelium by chronic acid reflux

# BARRETT

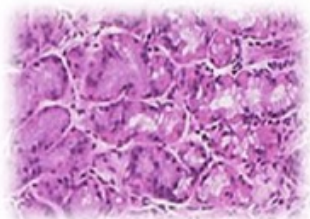
- Αντικατάσταση του επιθηλίου με μεταπλαστικό κυλινδρικό επιθήλιο
- 3-5% των ασθενών με καθημερινά ενοχλήματα
- 17 φορές πιο συχνός καρκίνος



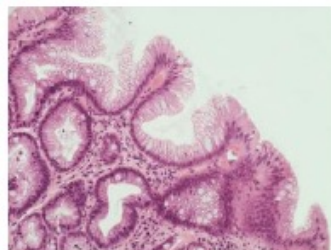
- ✓ Πρόγραμμα συστηματικών ενδοσκοπήσεων
- ✓ Χειρουργική θεραπεία (θολοπλαστική) δραστική αποτροπή παλινδρόμησης

# BARRETT'S CARCINOGENESIS

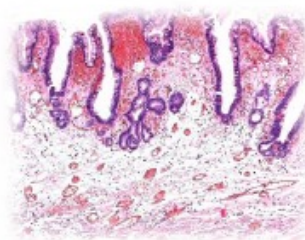
Mucosa of gastroesophageal junction with oesophagitis



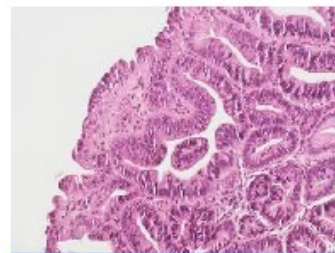
BE without dysplasia



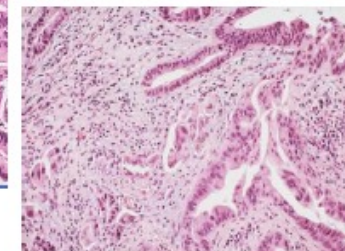
BE with low-grade dysplasia



BE with high-grade dysplasia



Adenocarcinoma



0.5%

10%

40%

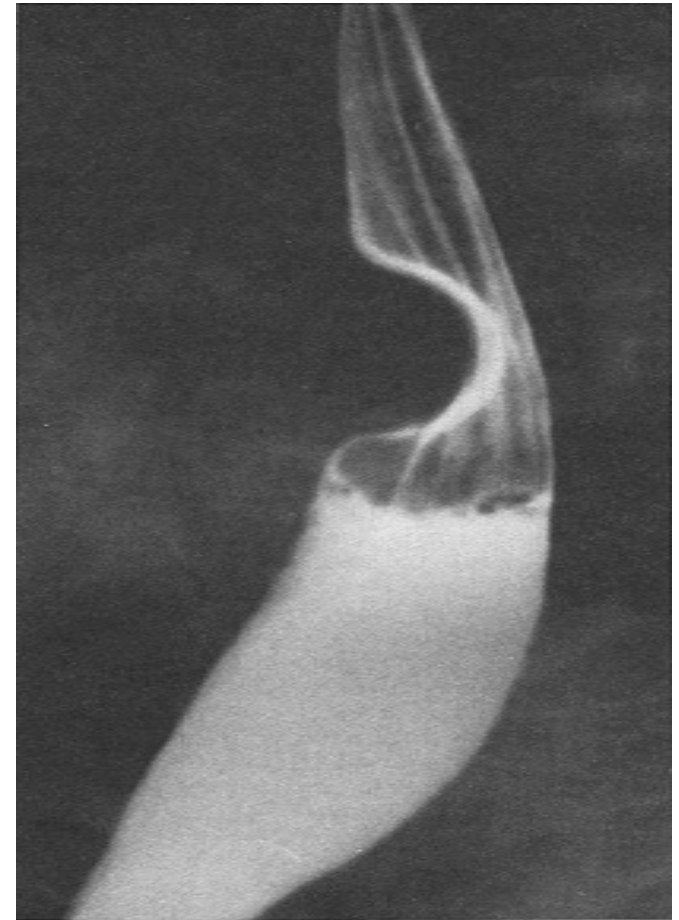




# ΚΑΛΟΗΘΗ ΝΕΟΠΛΑΣΜΑΤΑ ΟΙΣΟΦΑΓΟΥ

## ΣΤΡΩΜΑΤΙΚΟΙ ΟΓΚΟΙ (GISTS)

- ~~ΔΕΙΟΜΥΩΜΑΤΑ~~ 70% στο στομάχι
- 1-5% οισοφάγου (80% στον περιφερικό)
- Εντόπιση στον οισοφάγο: νέοι άνδρες



# GISTs

- Pacemaker cells of the gut- Cajal
- Ki67, βαθμός διαφ/σης, αριθμός μιτώσεων, μέγεθος
- Συνήθως ασυμπτωματικά
- Κύριο σύμπτωμα στις λοιπές εντοπίσεις: αιμορραγία
- Οισοφάγο: δυσφαγία (23-50%), οπισθ.άλγος (15%), αιμορραγία (10%)
- Συνήθως εξωφυτικά
- Νέκρωση, εξέλκωση
  
- KIT μεταλλάξεις 75%
- CD34, SMA, DOG1, S-100 protein and Ki67

# ΔΙΑΓΝΩΣΗ

- ❖ Γαστροσκόπηση
- ❖ Βιοψία;
- ❖ Ενδοσκ. Υπέρηχος- FNA (όχι σε μικρούς όγκους)
- ❖ Αξονική

# ΘΕΡΑΠΕΙΑ


WHO: κακοήθεια

Εκτομή (<2εκ συζήτηση για παρακολούθηση...)

Όχι λεμφ.καθαρισμός (!!! Θετικοί λεμφ;;)

R1/ διάσπαση κάψας: υψηλού κινδύνου

Υψηλού κινδύνου:

 >5 cm, >5 mitosis/50 high power field, διαφ/ση, ατελής εκτομή ή διάσπαση κάψας

 Μεταστατικά

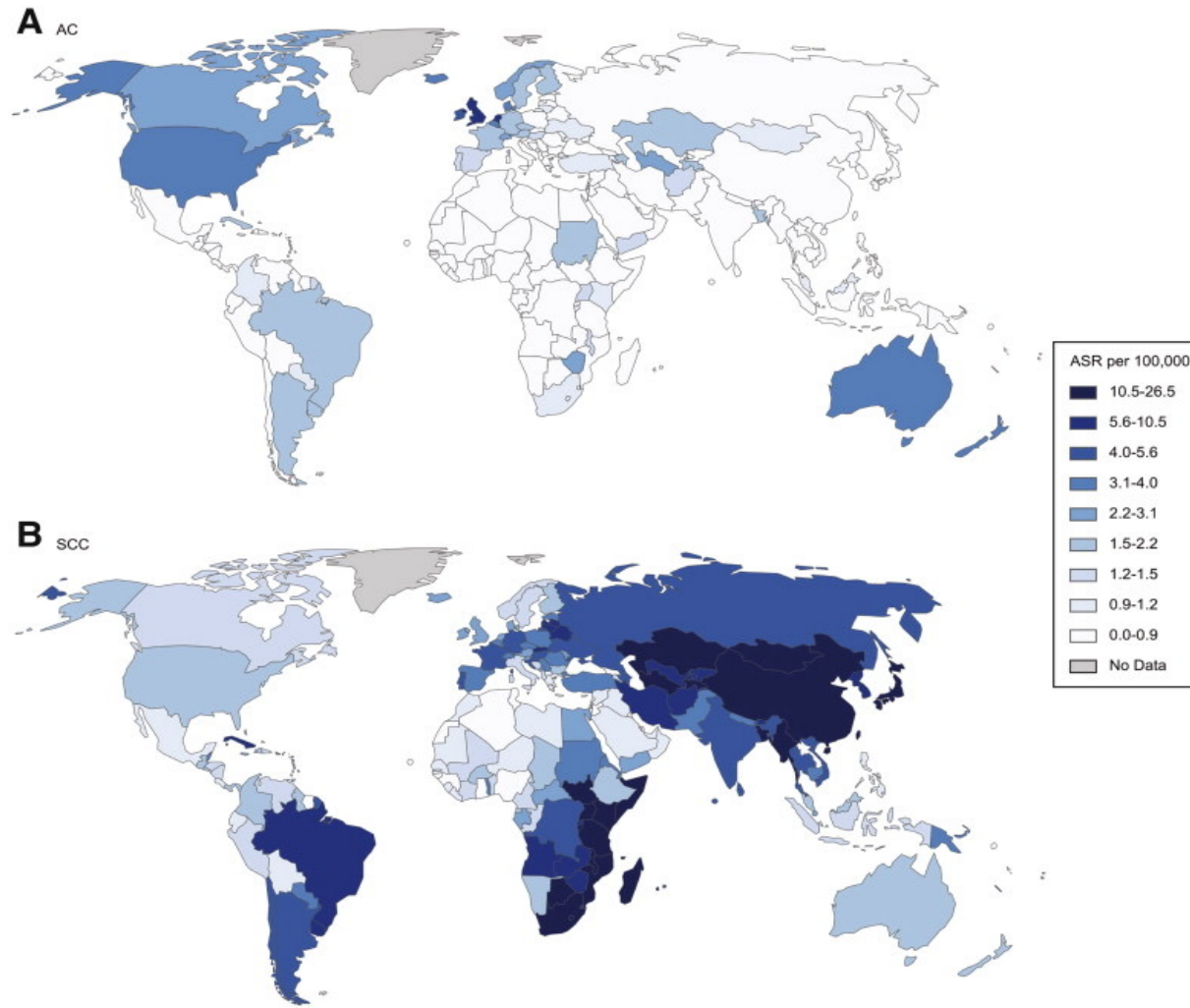
Ιματινίμπη

# Epidemiology, Diagnosis, and Management of Esophageal Adenocarcinoma



Joel H. Rubenstein<sup>1,2</sup> and Nicholas J. Shaheen<sup>3</sup>

<sup>1</sup>Veterans Affairs Center for Clinical Management Research, Ann Arbor, Michigan; <sup>2</sup>Barrett's Esophagus Program, Division of Gastroenterology, Department of Medicine, University of Michigan, Ann Arbor, Michigan; and <sup>3</sup>Center for Esophageal Diseases and Swallowing, Division of Gastroenterology and Hepatology, Department of Medicine, University of North Carolina, Chapel Hill, North Carolina



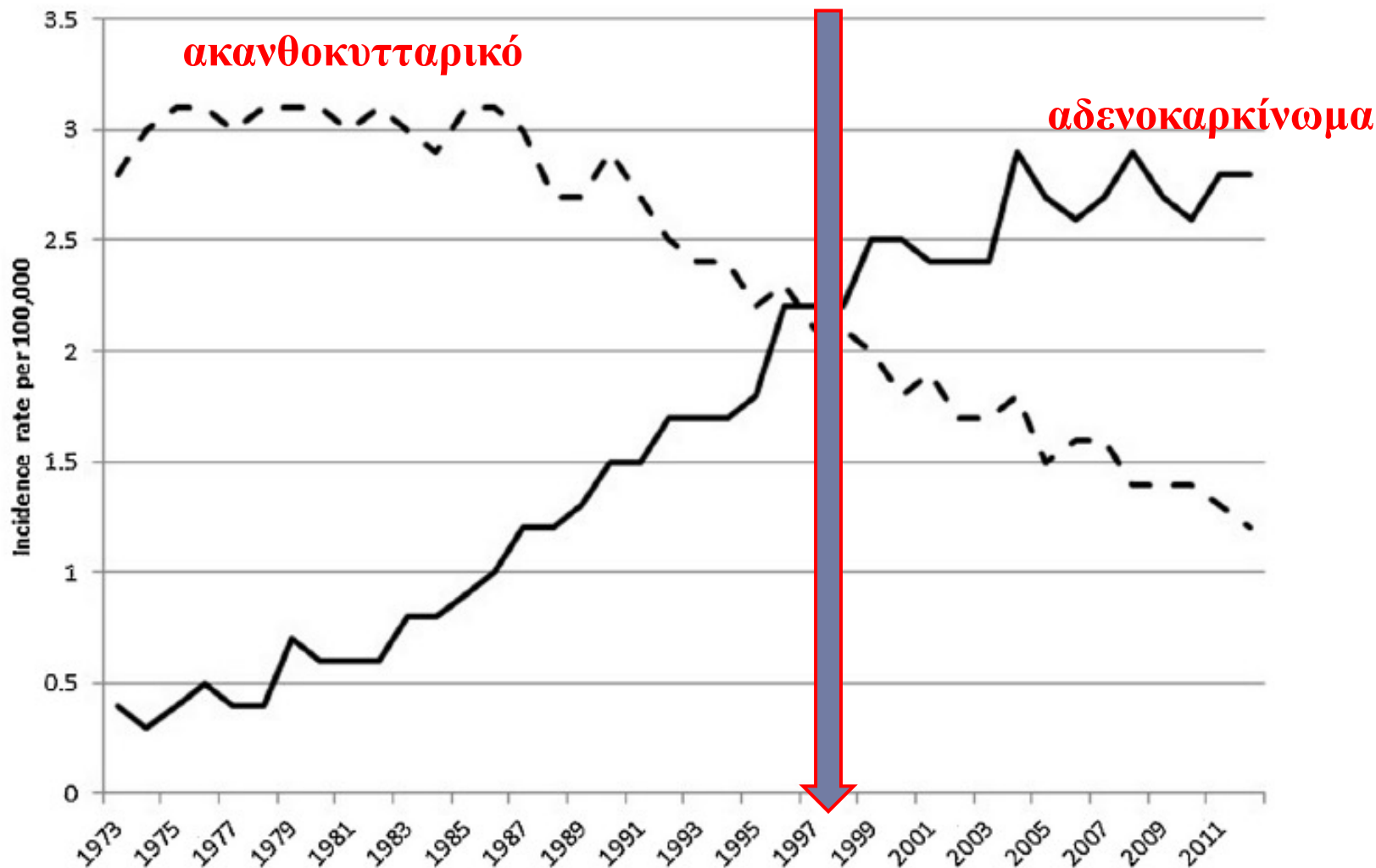
• 15-25% 5-y survival

• 604,000  
παγκοσμίως/2020

• 8ος συχνότερος  
καρκίνος παγκοσμίως

• 6η συχνότερη αιτία  
θανάτου από καρκίνο

• 544,000 θάνατοι/2020



**ΔΥΣΗ**

J. Ferlay, I. Soerjomataram, M. Ervik, R. Dikshit, S. Eser, C. Mathers, M. Rebelo, D. M. Parkin, D. Forman, F. Bray, GLOBOCAN 2012 v1.1, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer. (2014). Available from: <http://globocan.iarc.fr>, accessed on 16/01/2015.

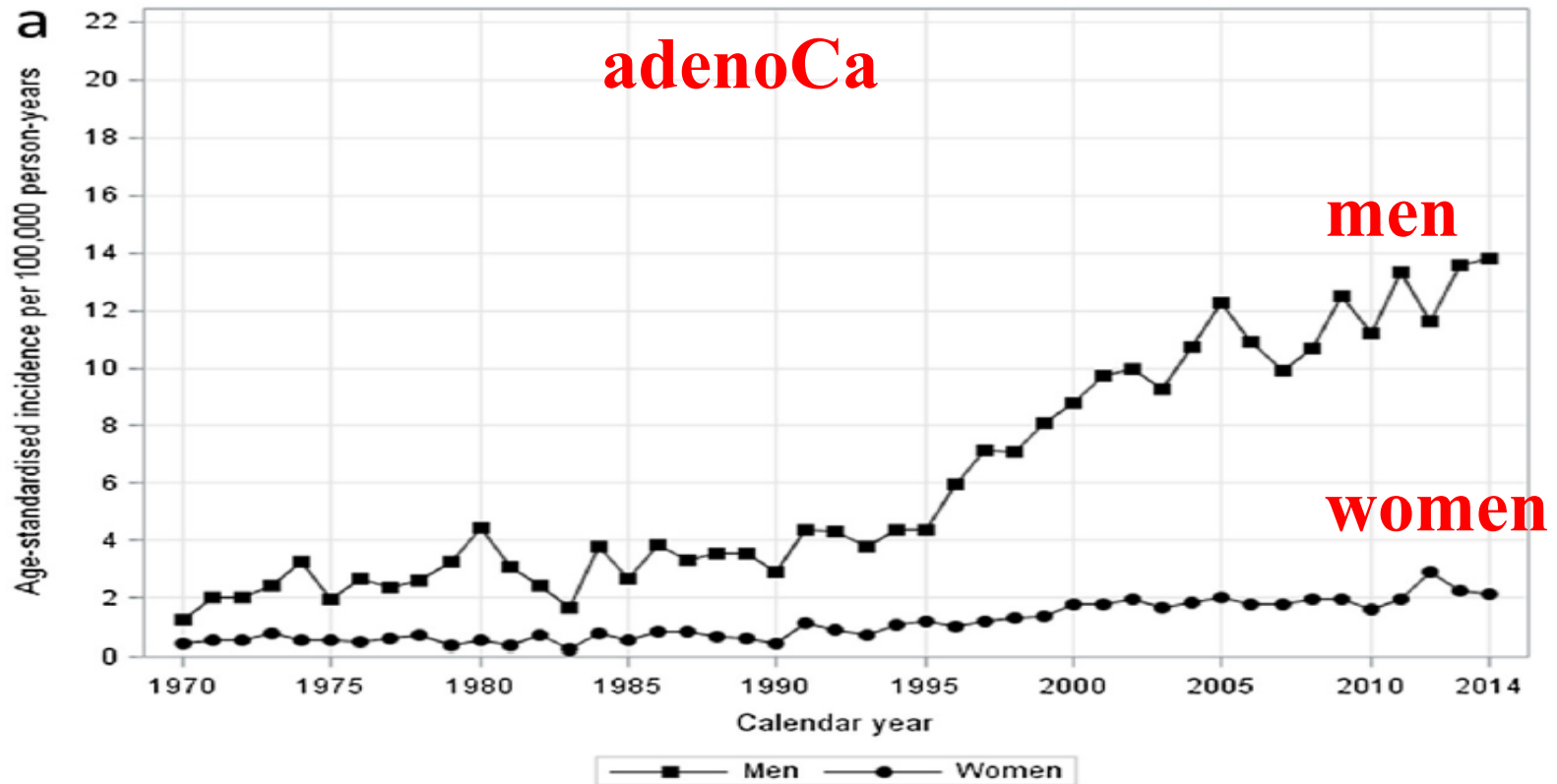
Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

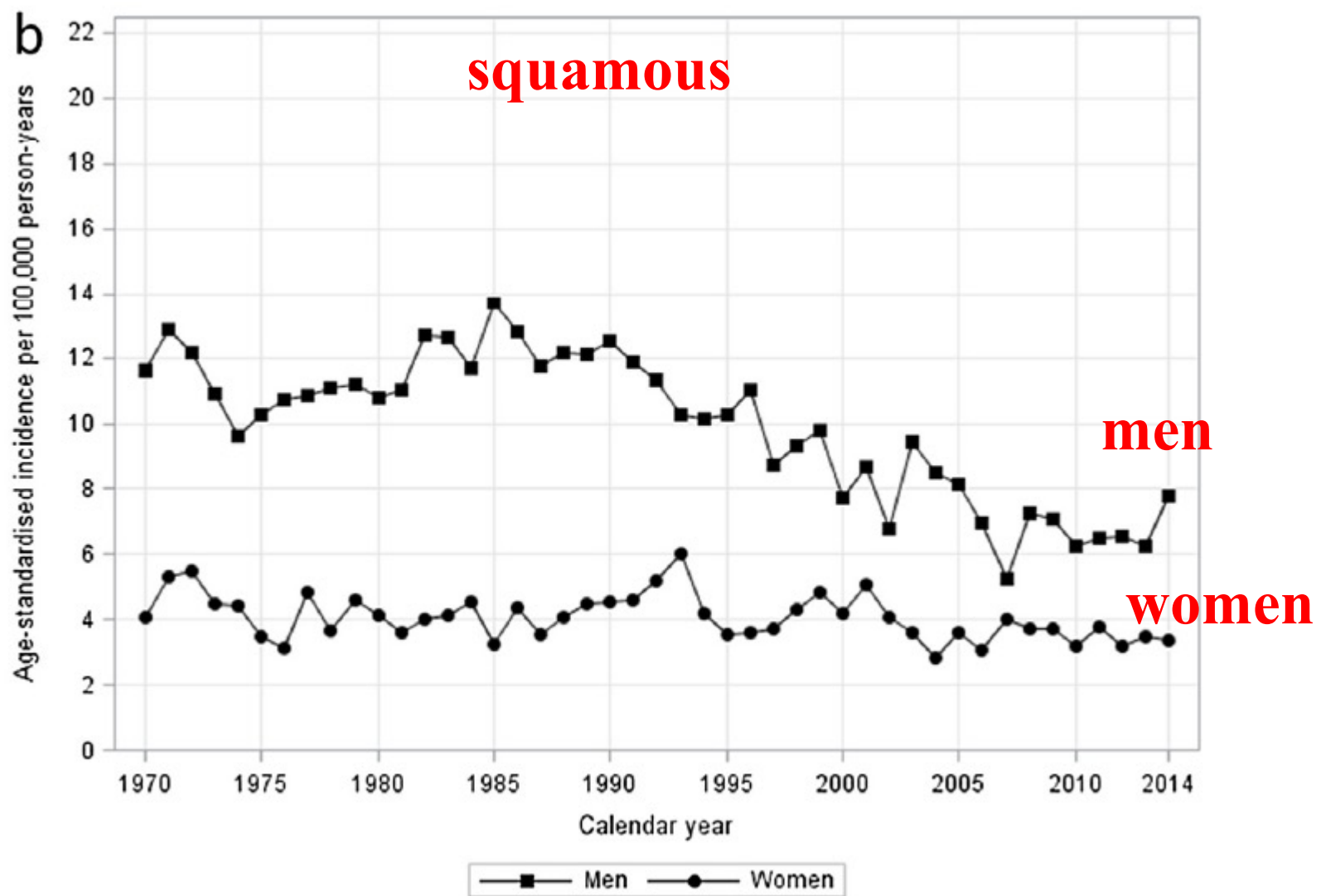
# Cancer Epidemiology

The International Journal of Cancer Epidemiology, Detection, and Prevention

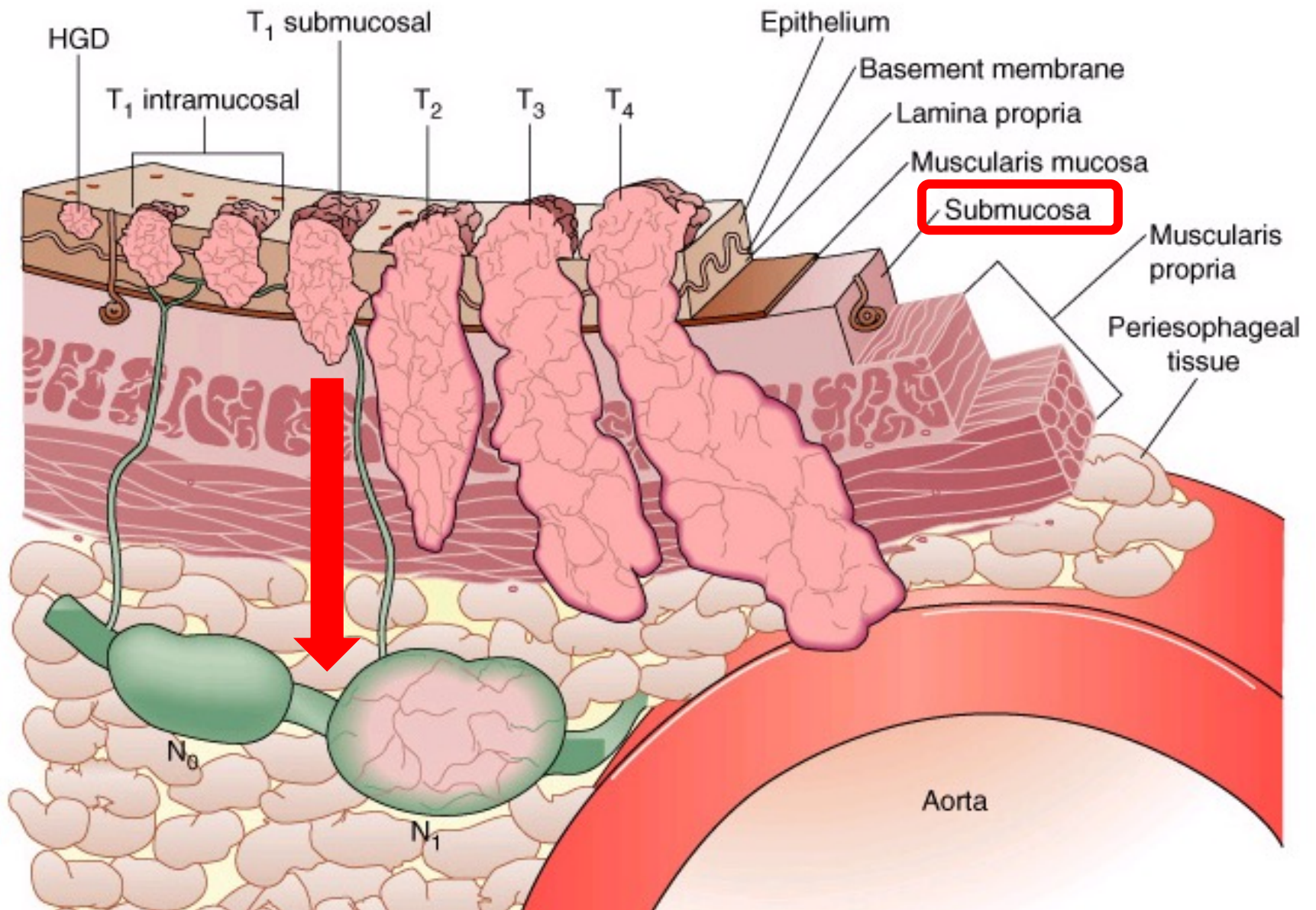
journal homepage: [www.cancerepidemiology.net](http://www.cancerepidemiology.net)

## Incidence trends in oesophageal cancer by histological type: An updated analysis in Sweden

Shao-Hua Xie<sup>a,\*</sup>, Fredrik Mattsson<sup>a</sup>, Jesper Lagergren<sup>a,b</sup><sup>a</sup> Upper Gastrointestinal Surgery, Department of Molecular medicine and Surgery, Karolinska Institutet, Karolinska University Hospital, Stockholm, Sweden<sup>b</sup> Division of Cancer Studies, King's College, London, United Kingdom







Upper esophageal cancer

Middle esophageal cancer

Lower esophageal cancer

Cervical

46.3% a 41.5% b 29.3%

29.2% a 20.8% b 15.5%

27.2% a 19.8% b 14.8%

Mediastinal

c 46.3%

c 35.7%

c 29.6%

56.1% d 22.0%

53.0% d 32.7%

58.0% d 39.5%

e 7.3%

e 16.1%

e 35.8%

Abdominal

g 2.4% h 2.4% f 12.2%

g 9.5% h 1.9% f 37.5%

g 23.5% h 7.4% f 70.4%

12.2%

39.9%

74.1%

Total

68.3%

66.1%

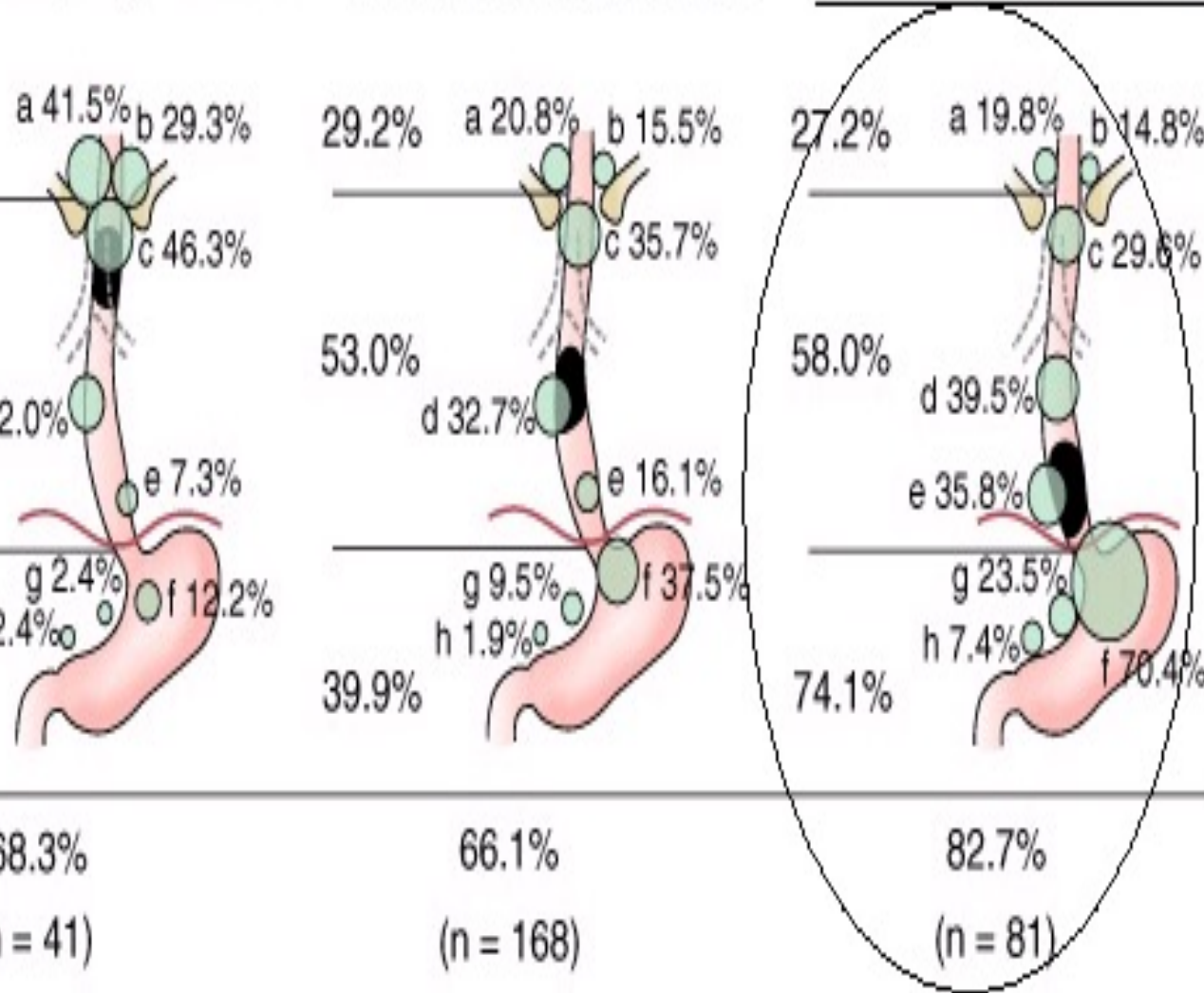
82.7%

(n = 290)

(n = 41)

(n = 168)

(n = 81)



	<b>Adenocarcinoma</b>	<b>Squamous Cancer</b>
<b>Location</b>	Distal esophagus and esophago-gastric junction	Proximal, mid-thoracic or distal esophagus
<b>Median age</b>	64 years	56 years
<b>Comorbidity</b>	<ul style="list-style-type: none"> <li>- Obesity</li> <li>- Metabolic syndrome</li> <li>- Coronary heart disease</li> </ul>	<ul style="list-style-type: none"> <li>- Malnutrition</li> <li>- Chronic obstructive lung disease</li> <li>- Liver cirrhosis</li> <li>- Simultaneous lung / head and neck cancers and other alcohol-tobacco associated cancers</li> </ul>
<b>Lymphatic spread</b>	Early (when the submucosal layer is reached by the tumour)	Even earlier than in adenocarcinoma
<b>Prognosis</b>	Poor	Very poor

# ΔΙΑΓΝΩΣΗ

## Οισοφαγογαστροσκόπηση (βιοψίες)

+

## CT θώρακος-ΑΚΚ:

- ✓ απομακρυσμένες μεταστάσεις (M1)
- ✓ διόγκωση απομακρυσμένων λεμφαδένων
- ✓ διήθηση καρδιάς/τραχείας/αορτής/σπονδύλων (T4b)

TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
Tis	High grade dysplasia
T1	Tumor invades the lamina propria, muscularis mucosae, or submucosa
T1a	Tumor invades the lamina propria or muscularis mucosae
T1b	Tumor invades the submucosa
T2	Tumor invades the muscularis propria
T3	Tumor invades the adventitia
T4	Tumor invades adjacent structures
T4a	Resectable tumor invading the pleura, pericardium, or diaphragm
T4b	Unresectable tumor invading the other adjacent structures such as aorta, vertebral body, trachea, etc.
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 7 or more regional lymph nodes
M0	No distant metastasis
M1	Distant metastasis (no longer M1a and M1b)

### *Additional changes*

Esophagogastric junction (EGJ) cancers are redefined, separate stage groupings for adenocarcinoma and squamous cell carcinoma, Histologic grade is factored into stage groupings, tumor location included in staging for squamous cell carcinoma

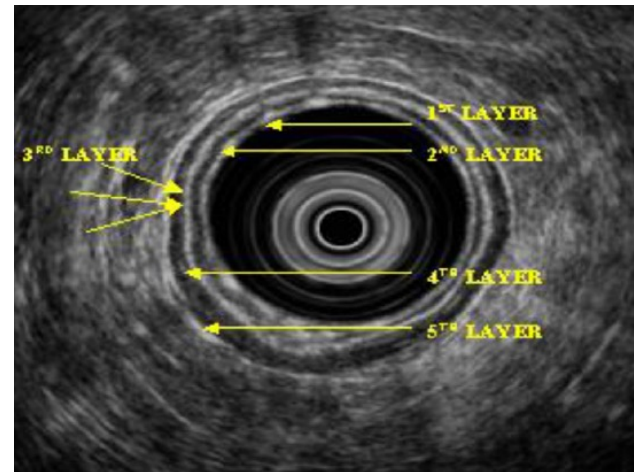
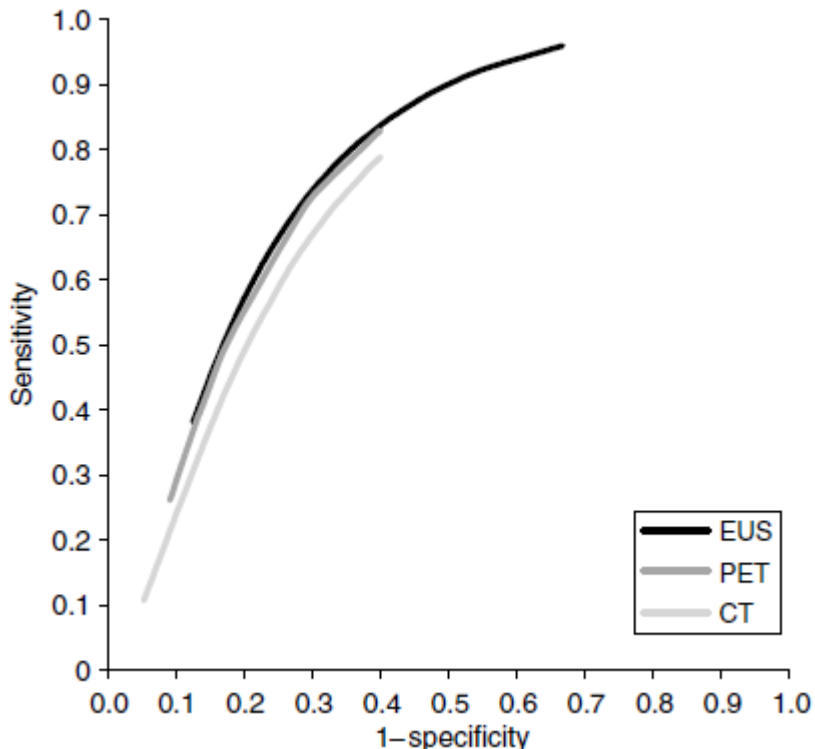
# Preoperative evaluation of oesophageal adenocarcinoma

Lauren G. Khanna, MD, MS <sup>a, \*</sup>,  
Frank G. Gress, MD, Professor of Medicine <sup>b, 1</sup>

<sup>a</sup> Division of Digestive & Liver Diseases, Columbia University Medical Center, 630 West 168th Street, New York, NY 10032, USA

<sup>b</sup> Division of Digestive & Liver Diseases, Columbia University Medical Center, 161 Fort Washington Avenue, Herbert Irving Pavilion 13, New York, NY 10032, USA

L.G. Khanna, F.G. Gress / Best Practice & Research Clinical Gastroenterology 29 (2015) 179–191



## ΠΡΩΙΜΗ ΝΟΣΟΣ

- EUS

## ΕΚΤΕΤΑΜΕΝΗ

- CT
- PET

# ESMO DIAGNOSTIC GUIDELINES

<b>Table 1. Diagnostic and staging investigations in oesophageal cancer</b>	
<b>Procedure</b>	<b>Purpose</b>
FBC	Assess for iron-deficiency anaemia
Renal and liver function	Assess renal and liver function to determine appropriate therapeutic options
Endoscopy and biopsy	Obtain tissue for diagnosis, histological classification and molecular biomarkers, e.g. PD-L1 and HER2 status (AC)
EUS	Accurate assessment of T and N stage in potentially resectable tumours
Bronchoscopy with endobronchial ultrasonography	Assess tumour growth towards central airways; complementary to EUS, especially when tumour stricture precludes EUS
CT of thorax + abdomen ± pelvis	Staging of tumour to detect local/distant lymphadenopathy and metastatic disease
PET–CT, if available	Staging of tumour to detect local/distant lymphadenopathy and metastatic disease
Laparoscopy ± washings	Exclude occult metastatic disease involving peritoneum/diaphragm, especially in locally advanced (T3/T4) ACs of the OGJ infiltrating the anatomical cardia

# Πρώιμος Καρκίνος

T1aN0

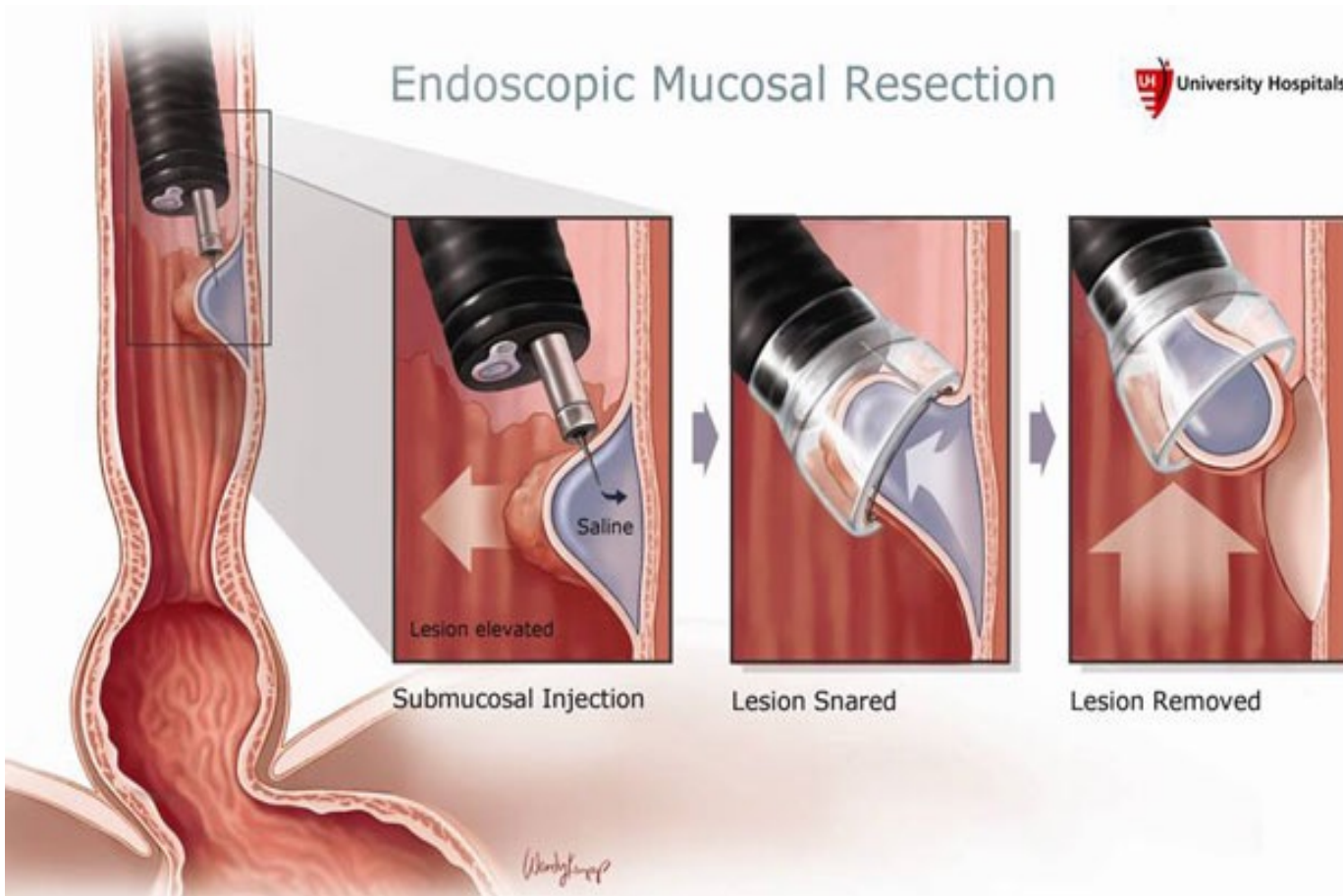
T1bN0

Παραδοσιακά:

Οισοφαγεκτομή

- ✓ Ελάχιστα επεμβατική εκτομή-ογκολογικό αποτέλεσμα
- ✓ Ογκολογικό αποτέλεσμα-κίνδυνος λεμφαδενικής διασποράς

# Endoscopic Mucosal Resection



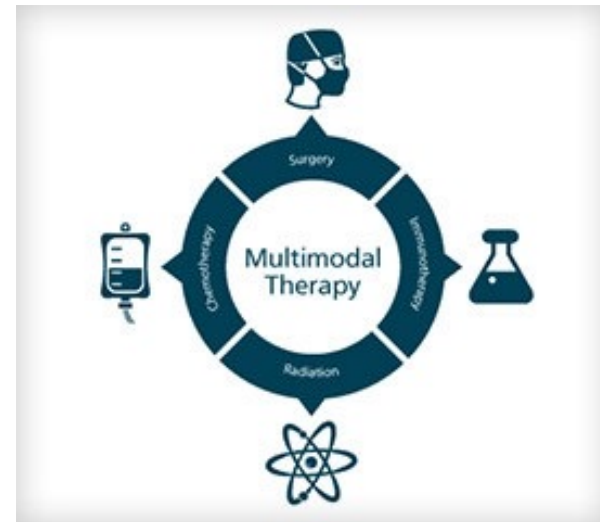


# Ιστολογικά χαρακτηριστικά

- ✓ Βάθος διήθησης
- ✓ Λεμφαγγειακές διηθήσεις
- ✓ Μέγεθος βλάβης
- ✓ Περινευρικές διηθήσεις
- ✓ Βαθμός διαφοροποίησης
- ✓ Εξέλκωση
- ✓ Όρια εκτομής

# Προσέγγιση MULTIMODALITY

- ✓ Χειρουργική
- ✓ Χημειοθεραπεία
- ✓ Ακτινοθεραπεία



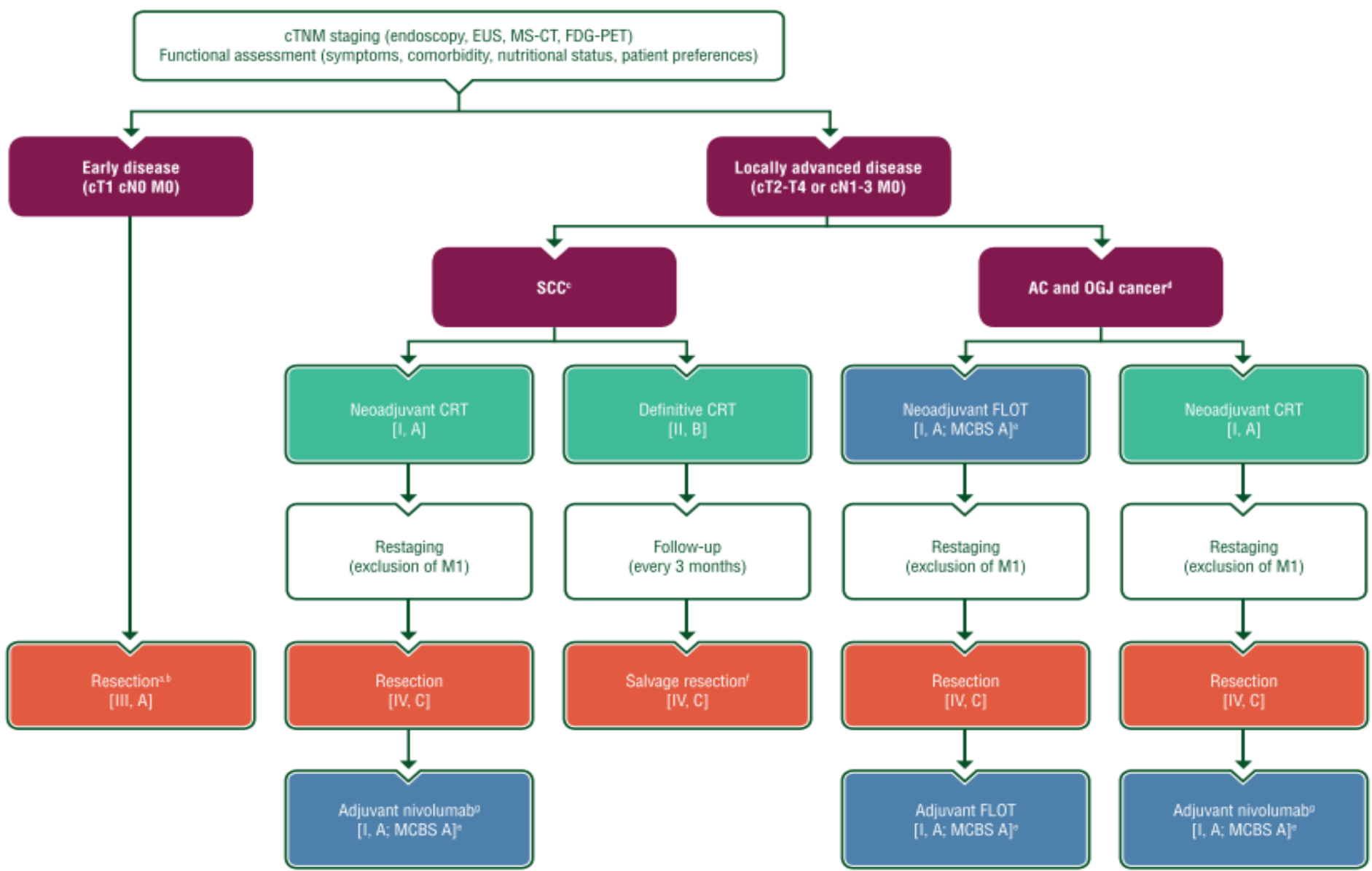
SURGERY



CHEMOTHERAPY



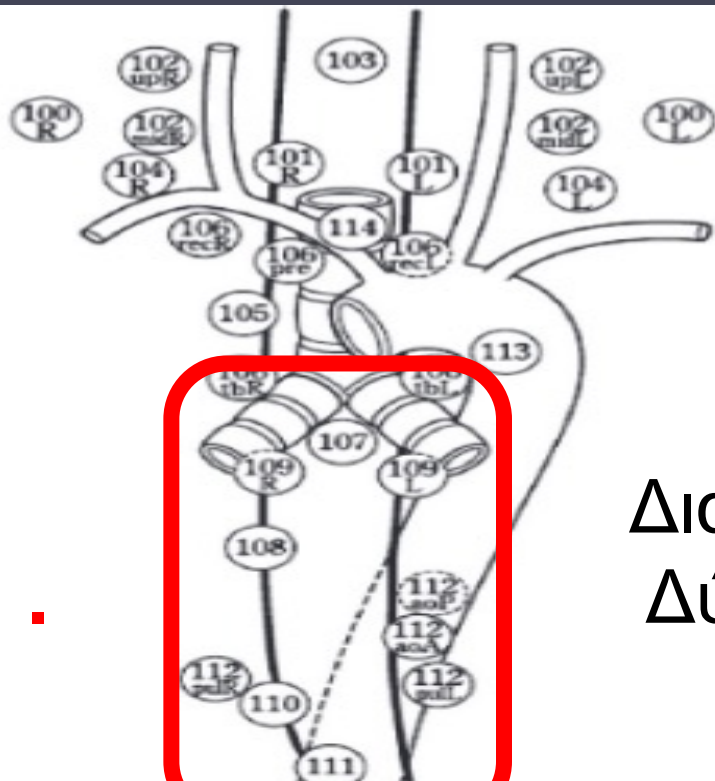
RADIATION THERAPY



# Ποιες είναι οι υπάρχουσες τεχνικές;

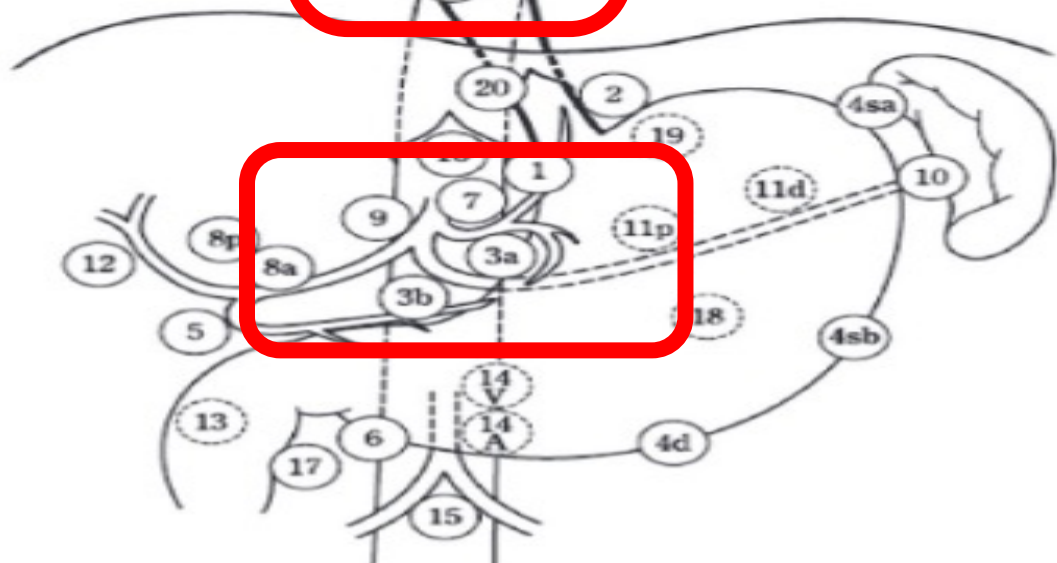
- ΔιαΔιαφραγματική Οισοφαγεκτομή ΔΔΟ  
(Λεμφαδενικός 1 πεδίου)
- ΔιαΘωρακική Οισοφαγεκτομή ΔΘΟ  
(Λεμφαδενικός 2 πεδίων, τραχηλική αναστόμωση)





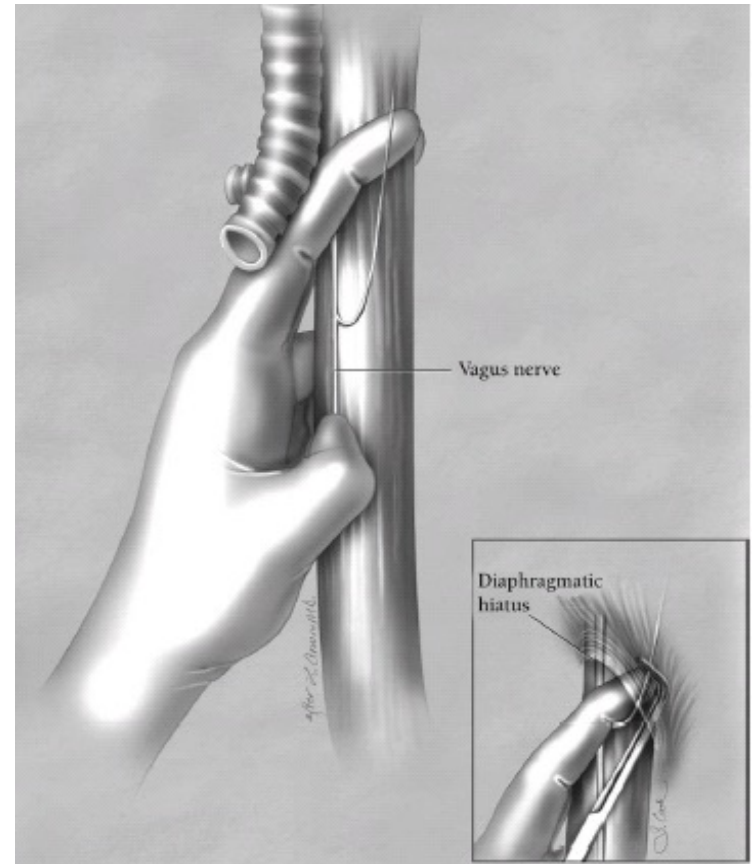
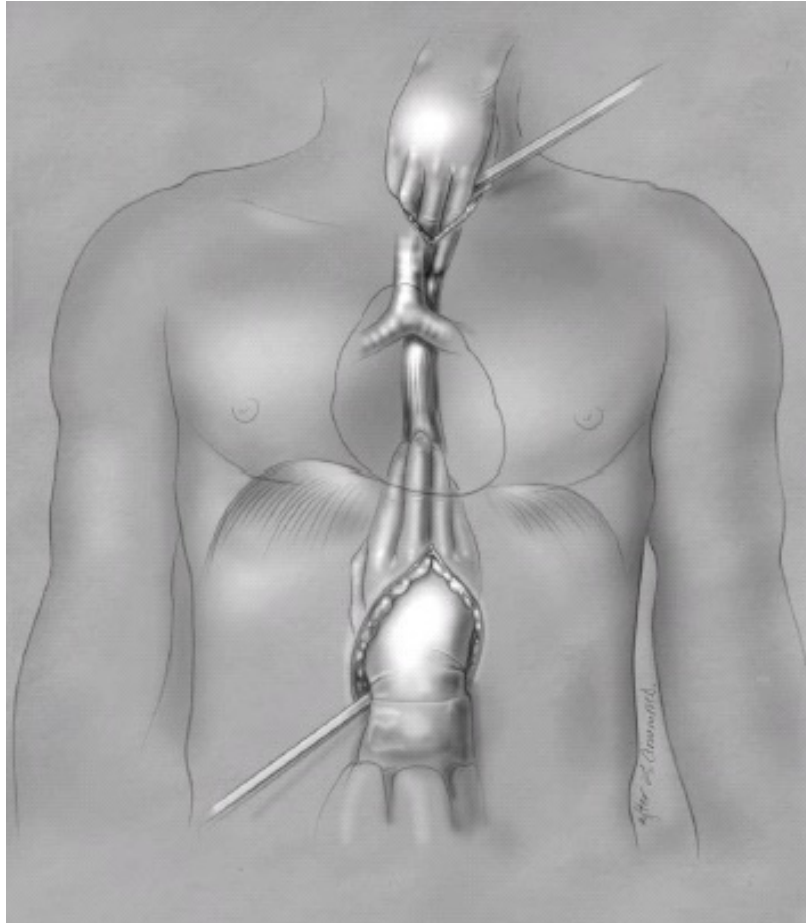
1.

Διαδιαφραγματική  
Δύο Πεδίων

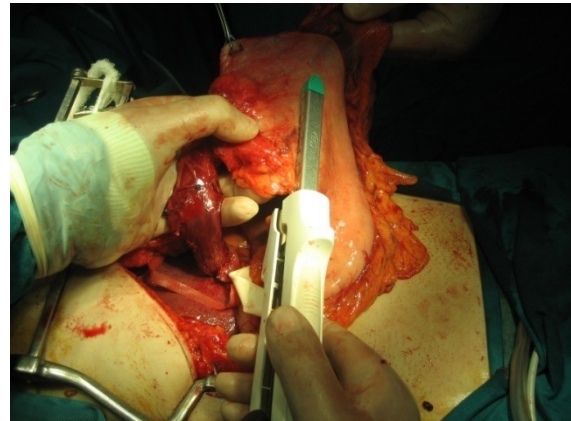
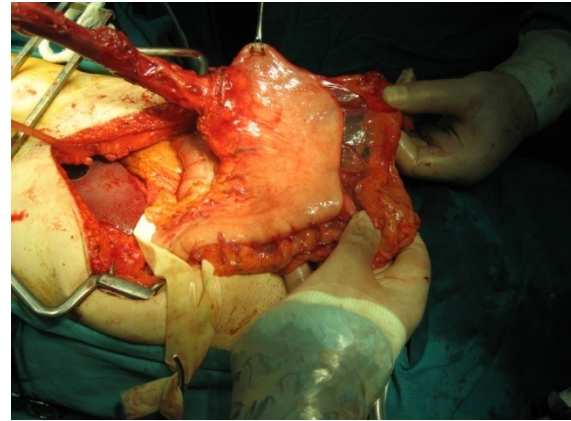
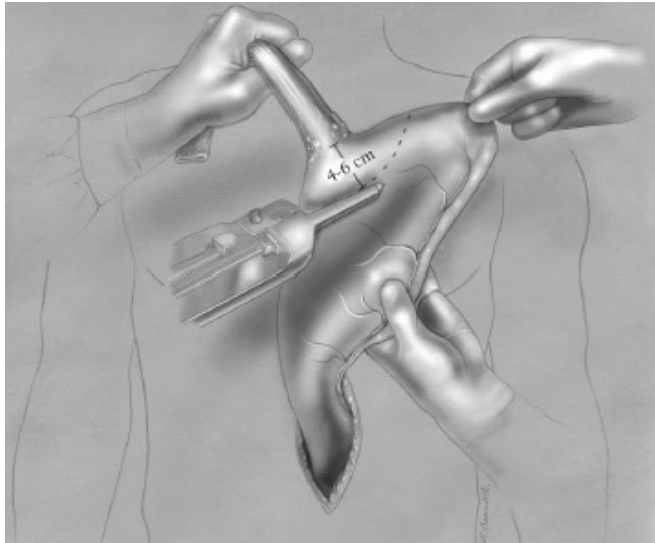


2.

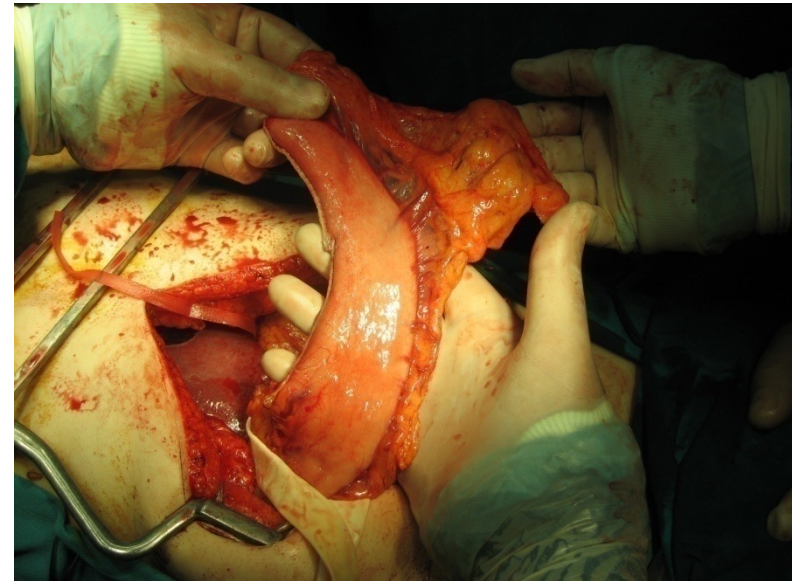
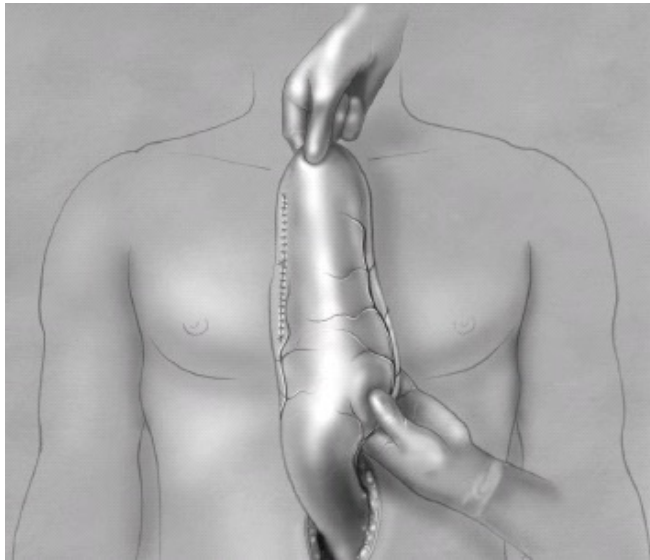
# ΔιαΔιαφραγματική Οισοφαγεκτομή ΔΔΟ



# ΔιαΔιαφραγματική Οισοφαγεκτομή ΔΔΟ

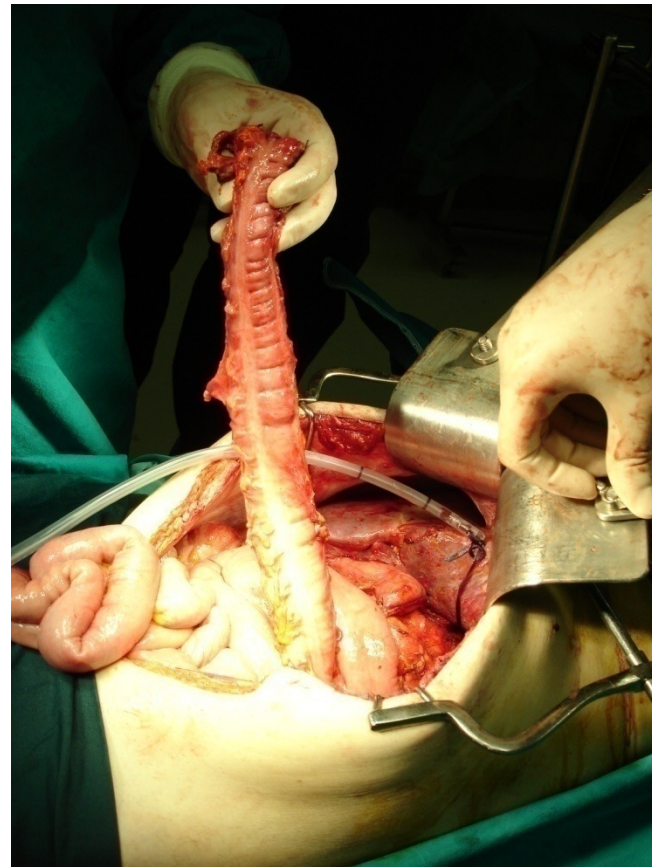


# ΔιαΔιαφραγματική Οισοφαγεκτομή ΔΔΟ



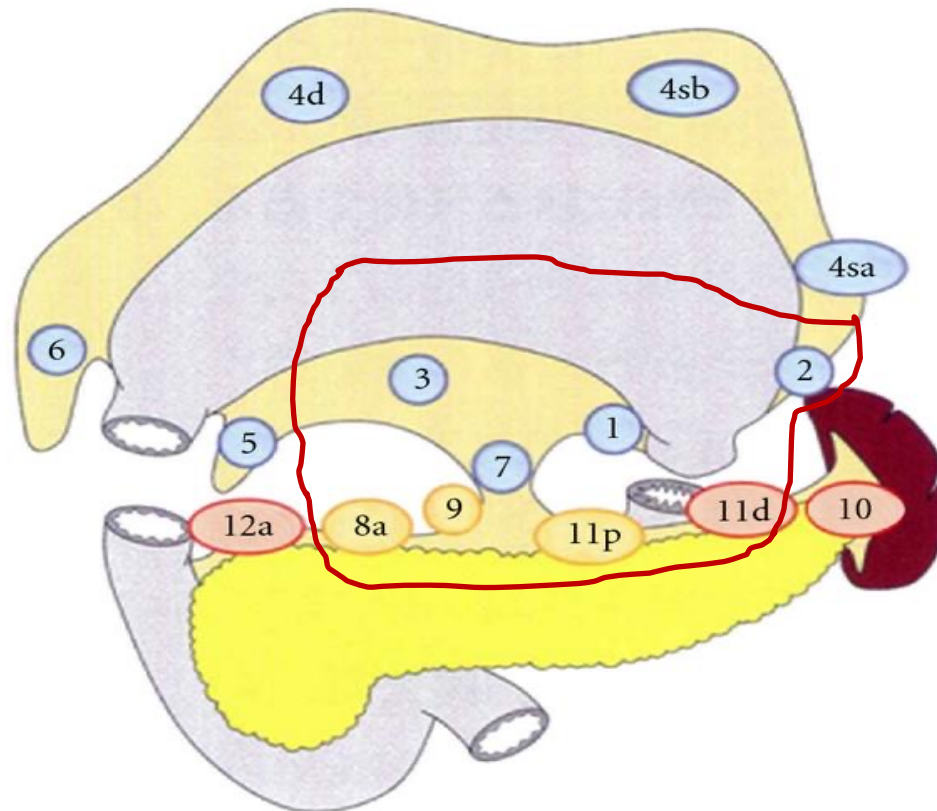


# ΔιαΔιαφραγματική Οισοφαγεκτομή ΔΔΟ



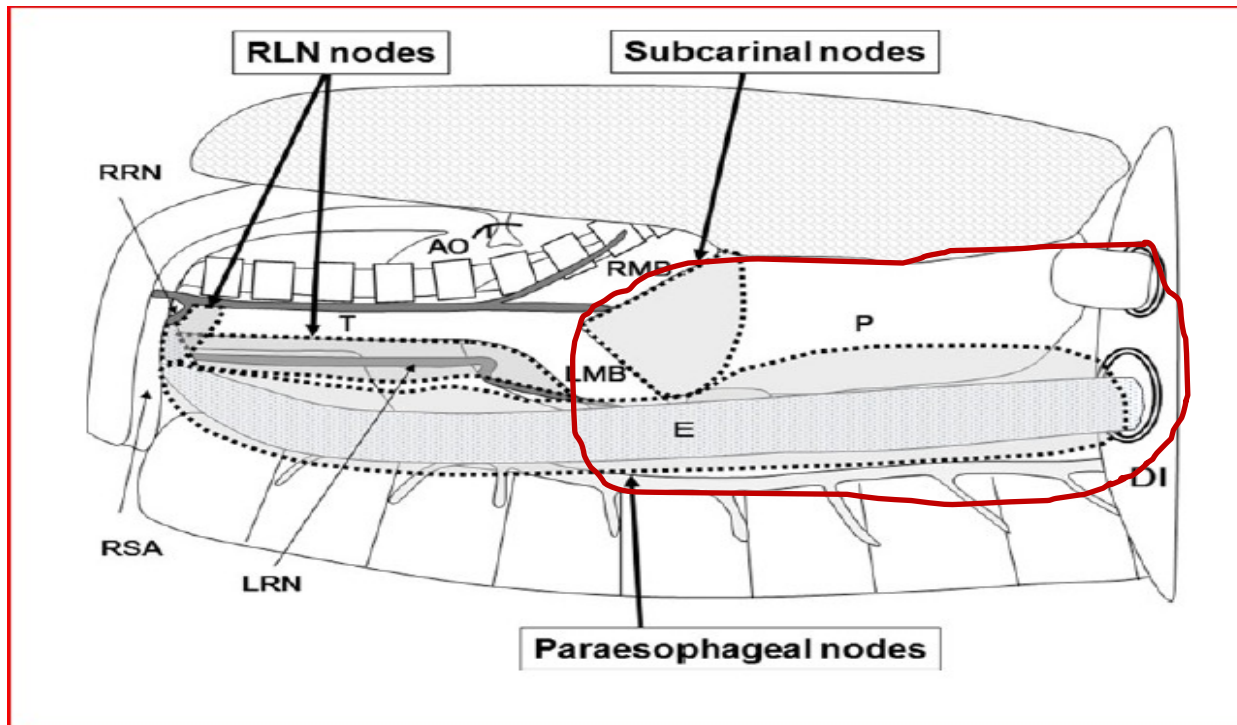
# Ενός Πεδίου : Κοιλιάς

Σταθμοί 1,2,3,7,8,9,11 κοιλιά



# Δυο Πεδίων : Κοιλιάς Μεσοθωρακίου

Σταθμοί 1,2,3,7,8,9,11 κοιλιά  
Μέσοι και κατώτεροι μεσοθωρακικοί

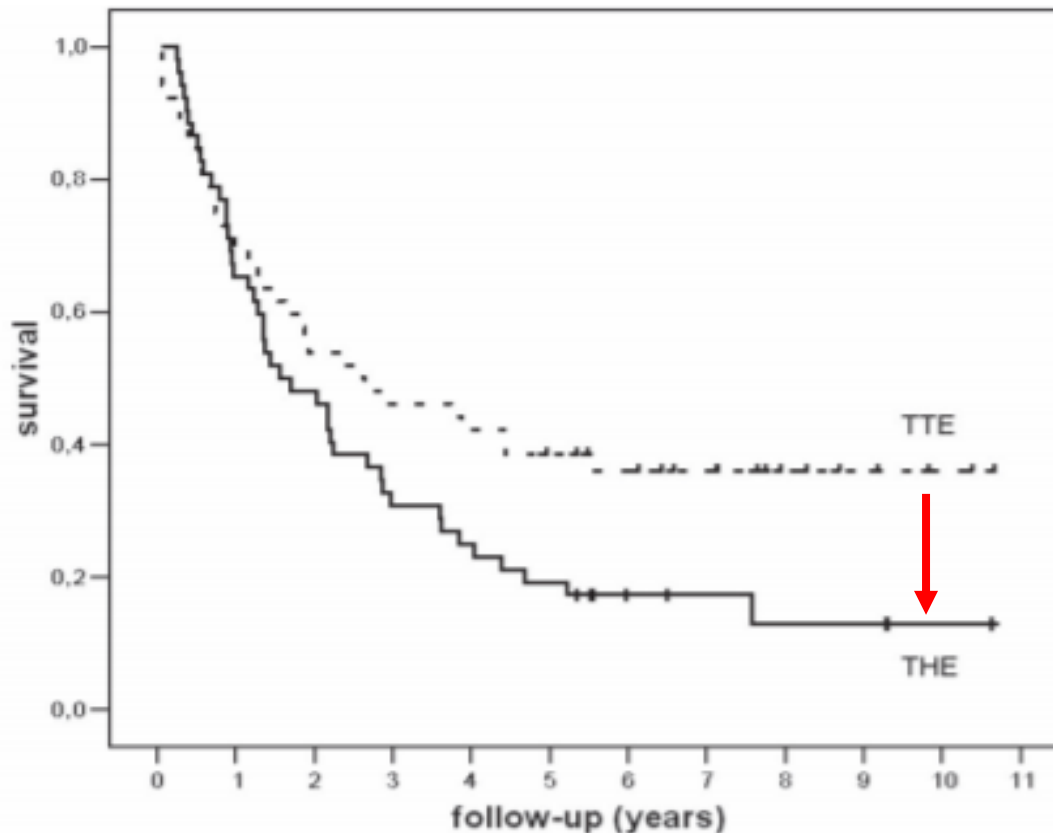


# Extended Transthoracic Resection Compared With Limited Transhiatal Resection for Adenocarcinoma of the Mid/Distal Esophagus

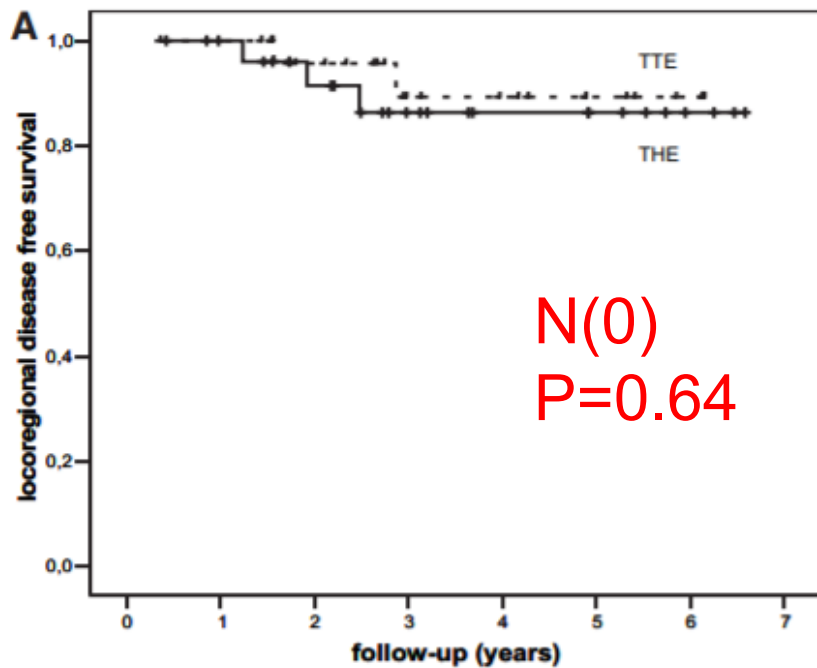
## *Five-Year Survival of a Randomized Clinical Trial*

*Jikke M. T. Omloo, MD,\* Sjoerd M. Lagarde, MD,\* Jan B. F. Hulscher, MD,\*  
Johannes B. Reitsma, MD, PhD,† Paul Fockens, MD, PhD,‡ Herman van Dekken, MD, PhD,§  
Fiebo J. W. ten Kate, MD,¶ Huug Obertop, MD,|| Hugo W. Tilanus, MD, PhD,||  
and J. Jan B. van Lanschot, MD||*

*Annals of Surgery* • Volume 246, Number 6, December 2007



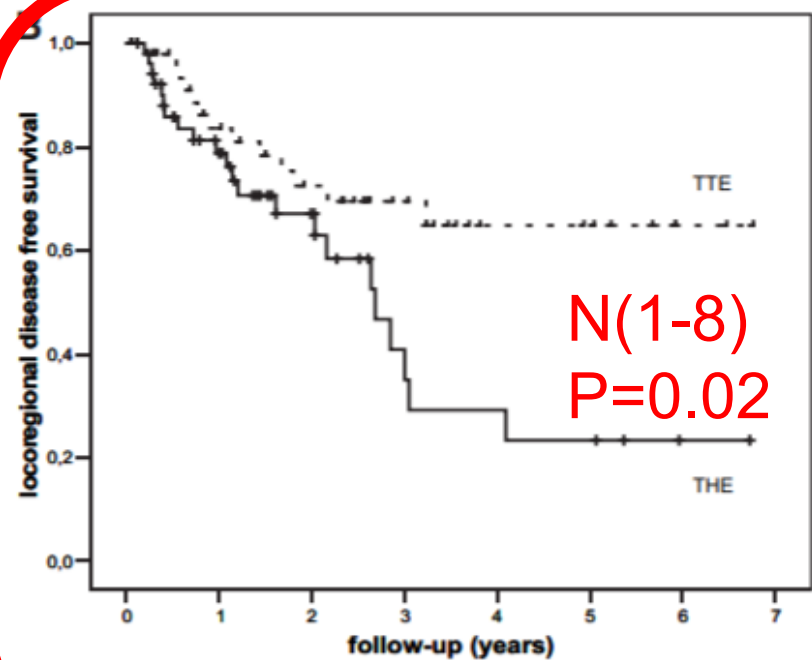
x3!!!  
P=0.05



N(0)  
P=0.64

Numbers at risk

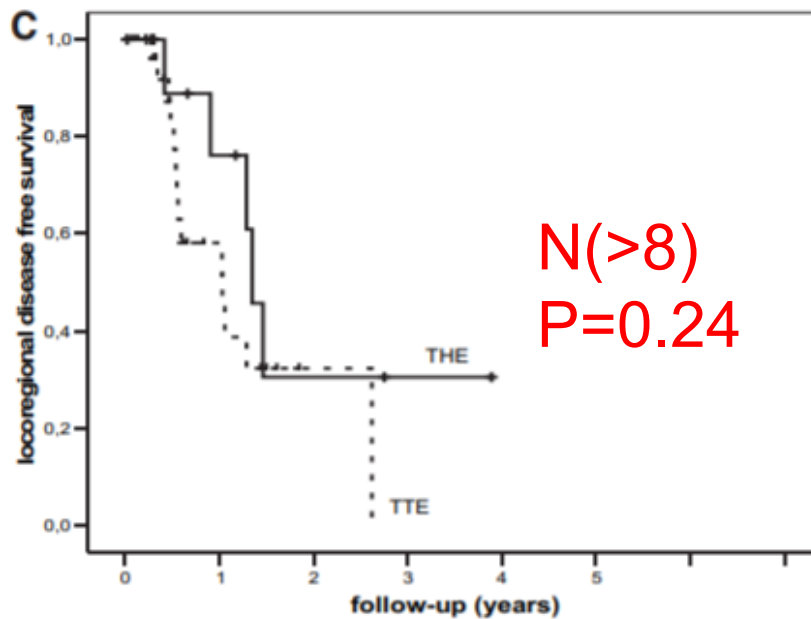
THE	28	25	20	13	9	7	3
TTE	27	26	20	12	10	6	3



N(1-8)  
P=0.02

Numbers at risk

THE	52	32	17	6	5	4	1
TTE	52	33	24	16	8	7	2



N(>8)  
P=0.24

## Κυριότερες επιπλοκές οισοφαγεκτομής

Επιπλοκές αναπνευστικού συστήματος

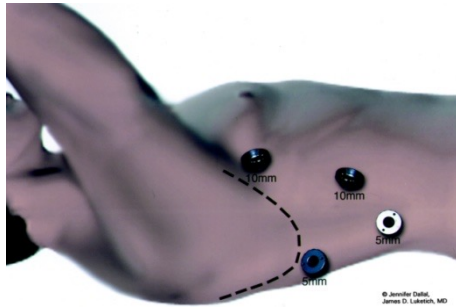
Επιπλοκές καρδιαγγειακού συστήματος

Αναστομωτική διαφυγή

Κάκωση μείζονος θωρακικού πόρου

Κάκωση παλίνδρομου λαρυγγικού νεύρου

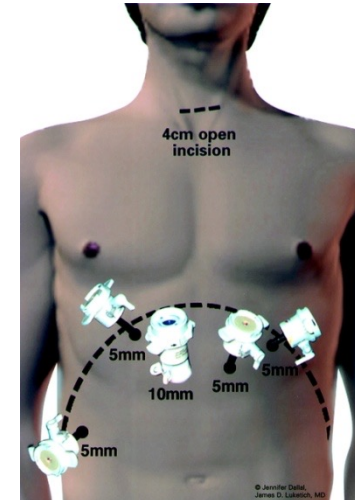
# ΕΛΑΧΙΣΤΑ ΕΠΕΜΒΑΤΙΚΗ ΟΙΣΟΦΑΓΕΚΤΟΜΗ



## Minimally Invasive Esophagectomy Outcomes in 222 Patients

*James D. Luketich, MD,\* Miguel Alvelo-Rivera, MD,\* Percival O. Buenaventura, MD,\*  
Neil A. Christie, MD,\* James S. McCaughan, MD,\* Virginia R. Litle, MD,\* Philip R. Schauer, MD,\*  
John M. Close, MA,† and Hiran C. Fernando, MD\**

1990



[Ann Surg.](#) 2018 Oct 10. doi: 10.1097/SLA.0000000000003031. [Epub ahead of print]

## Robot-assisted Minimally Invasive Thoracoscopic Esophagectomy Versus Open Transthoracic Esophagectomy for Resectable Esophageal Cancer: A Randomized Controlled Trial.

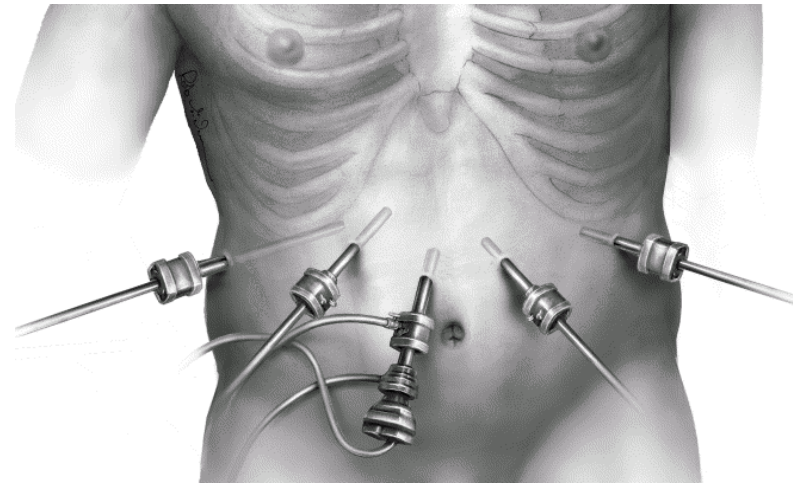
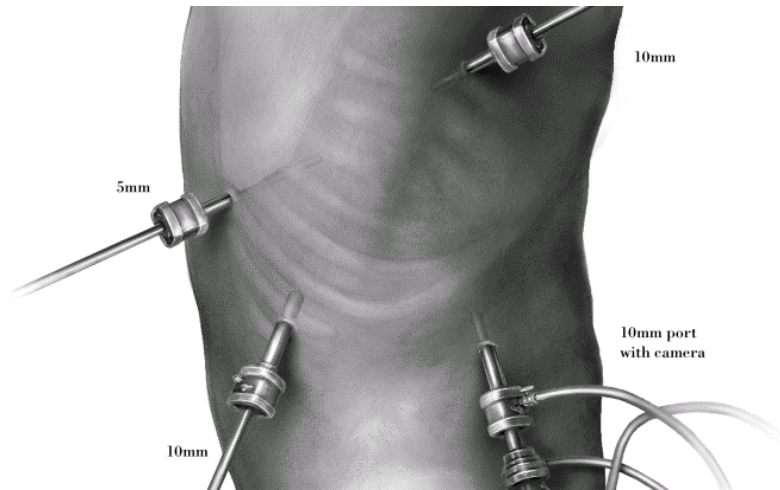
[van der Sluis PC<sup>1</sup>](#), [van der Horst S<sup>1</sup>](#), [May AM<sup>2</sup>](#), [Schippers C<sup>1</sup>](#), [Brosens LAA<sup>3</sup>](#), [Joore HCA<sup>4</sup>](#), [Kroese CC<sup>5</sup>](#), [Haj Mohammad N<sup>6</sup>](#), [Mook S<sup>7</sup>](#), [Vleggaar FP<sup>8</sup>](#), [Borel Rinkes IHM<sup>1</sup>](#), [Ruurda JP<sup>1</sup>](#), [van Hillegersberg R<sup>1</sup>](#).

2020



- Hospital stay
- Morbidity
- QOL?
- Cost?

# Ελάχιστα Επεμβατική Οισοφαγεκτομή





# Ελάχιστα Επεμβατική Οισοφαγεκτομή

