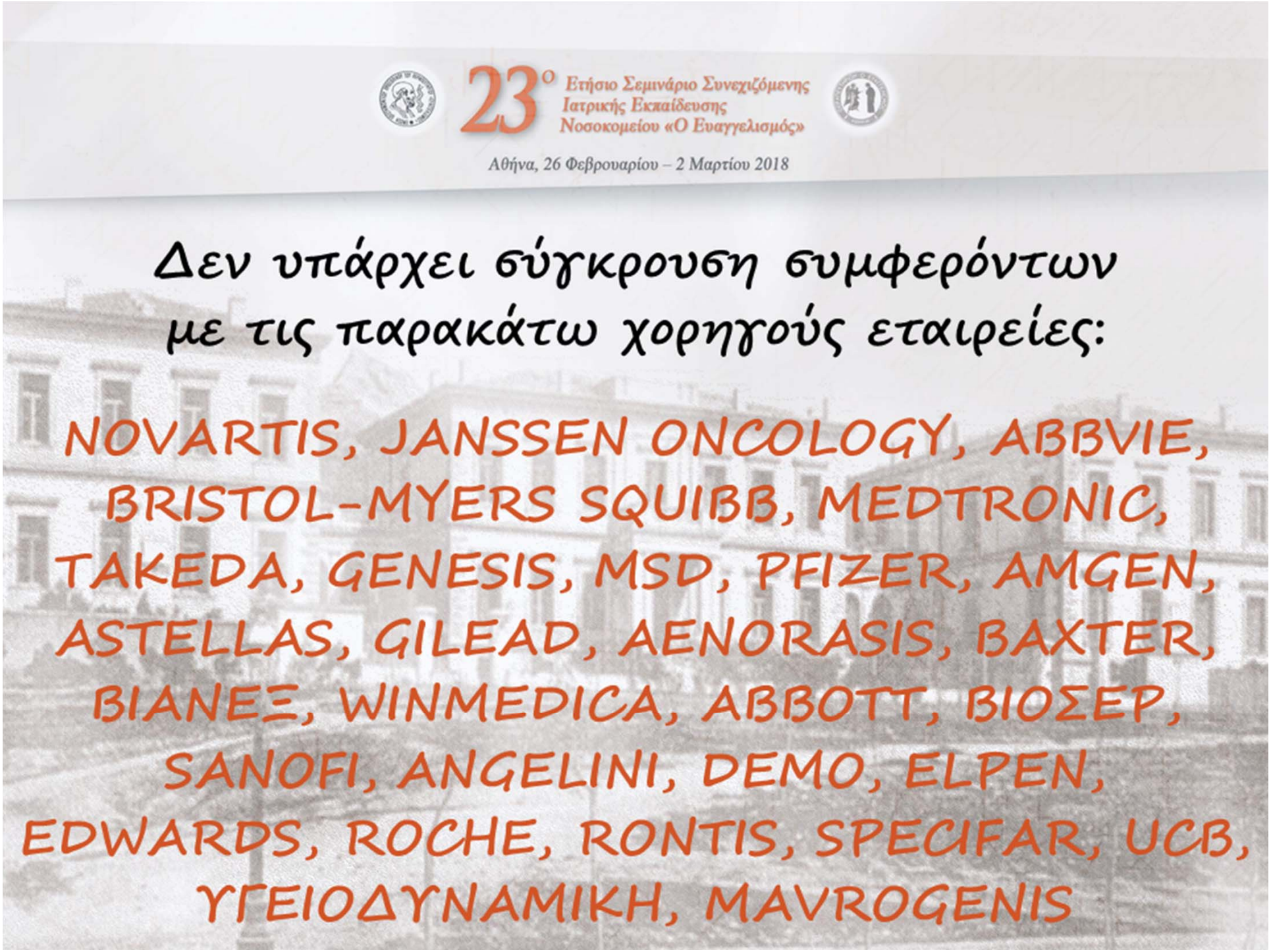
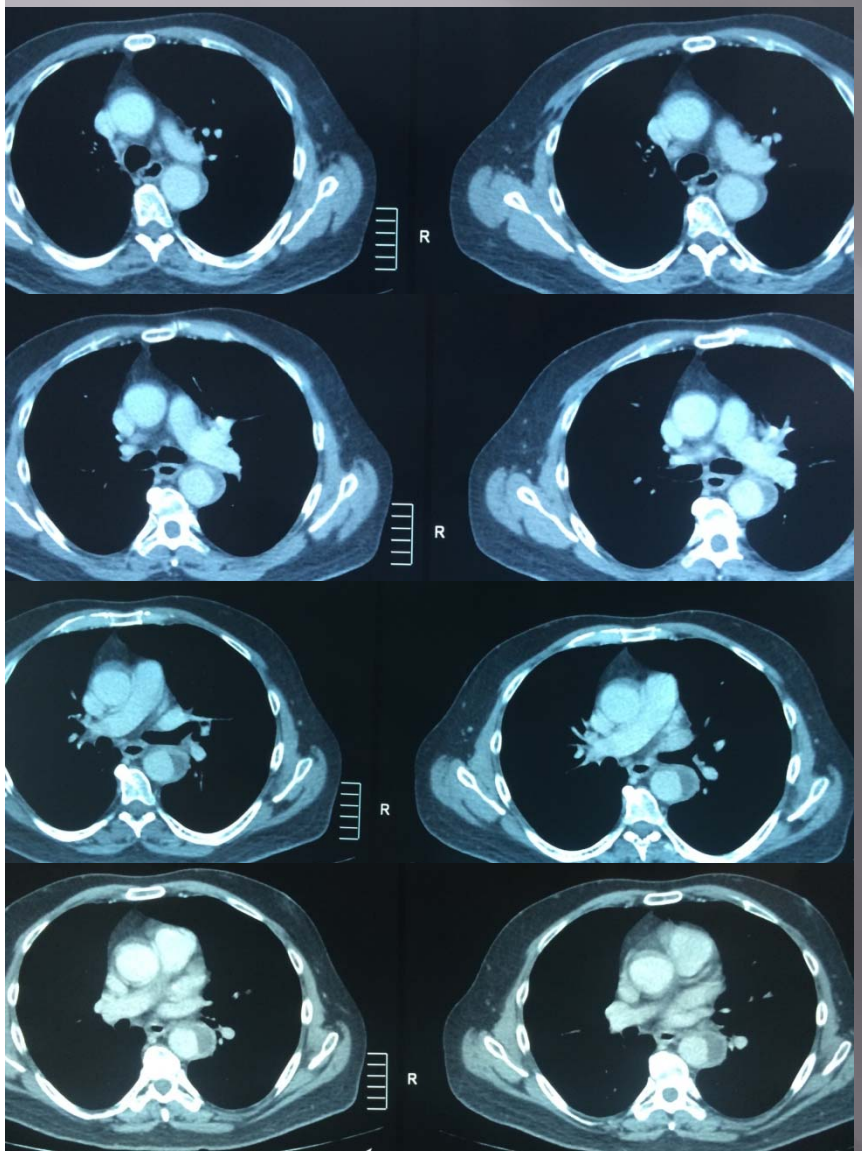
ΑΟΡΤΙΚΟΣ ΔΙΑΧΩΡΙΣΜΟΣ ΤΥΠΟΥ Β
ΚΑΤΕΥΘΥΝΤΗΡΙΕΣ ΟΔΗΓΙΕΣ / ΕΝΔΟΑΥΛΙΚΗ ΑΠΟΚΑΤΑΣΤΑΣΗ

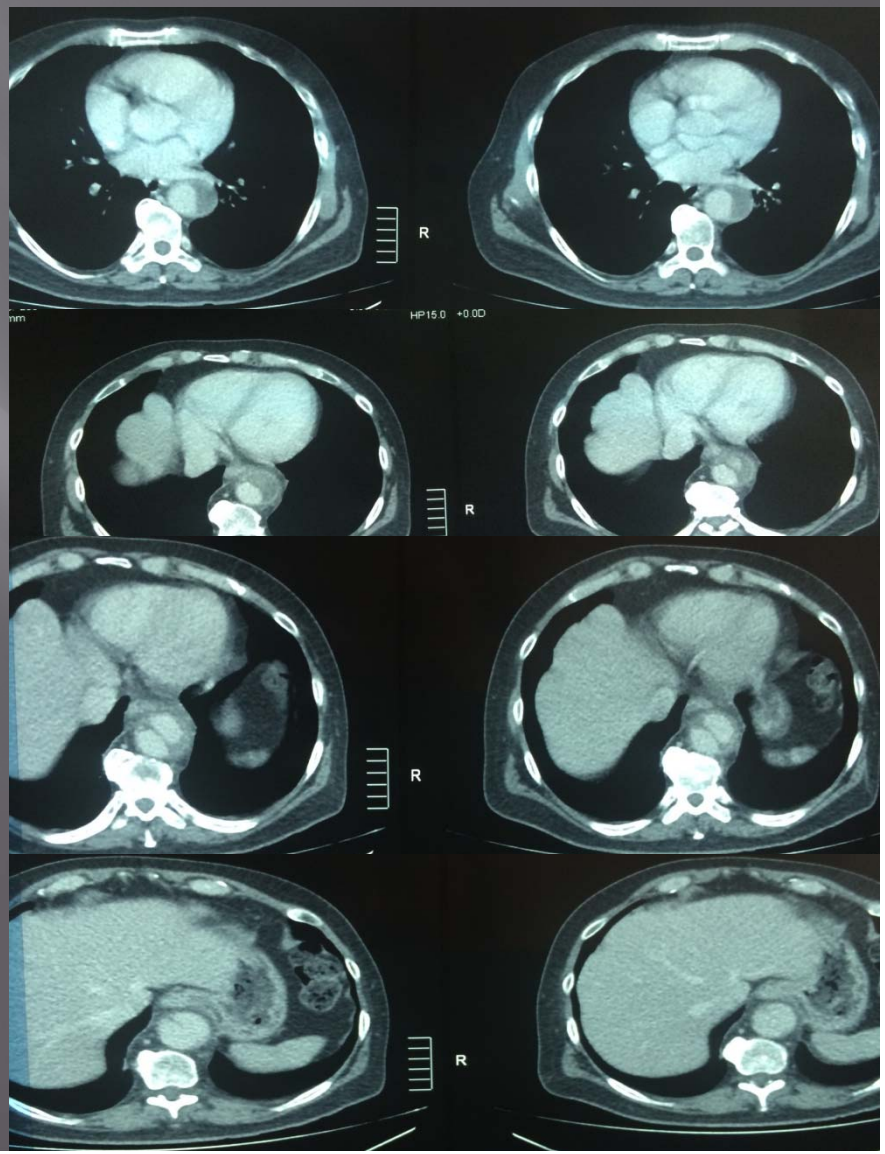
ΘΕΟΔΩΡΟΣ ΚΡΑΤΗΜΕΝΟΣ
ΕΠΙΜΕΛΗΤΗΣ Α ΕΣΥ
ΕΠΕΜΒΑΤΙΚΟΣ ΑΚΤΙΝΟΛΟΓΟΣ
ΜΟΝΑΔΑ ΕΠΕΜΒΑΤΙΚΗΣ ΑΚΤΙΝΟΛΟΓΙΑΣ,
ΑΚΤΙΝΟΛΟΓΙΚΟ ΤΜΗΜΑ
Γ.Ν.Α. Ο ΕΥΑΓΓΕΛΙΣΜΟΣ


23ο Ετήσιο Σεμινάριο Συνεχιζόμενης Ιατρικής Εκπαίδευσης Νοσοκομείου «Ο Ευαγγελισμός»
Αθήνα, 26 Φεβρουαρίου – 2 Μαρτίου 2018
Δεν υπάρχει σύγκρουση συμφερόντων με τις παρακάτω χορηγούς εταιρείες:
NOVARTIS, JANSSEN ONCOLOGY, ABBVIE, BRISTOL-MYERS SQUIBB, MEDTRONIC, TAKEDA, GENESIS, MSD, PFIZER, AMGEN, ASTELLAS, GILEAD, AENORASIS, BAXTER, BIANEΞ, WINMEDICA, ABBOTT, BIOΣΕΡ, SANOFI, ANGELINI, DEMO, ELPEN, EDWARDS, ROCHE, RONTIS, SPECIFAR, UCB, ΥΓΕΙΟΔΥΝΑΜΙΚΗ, MAVROGENIS

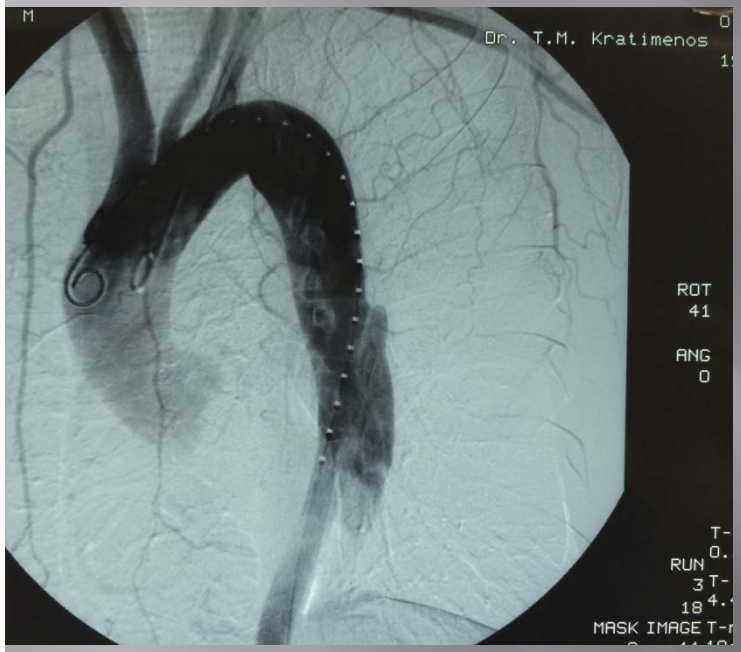
Περιστατικό: Άρρεν 42 ετών με επιπλεγμένο αορτικό διαχωρισμό τύπου Β

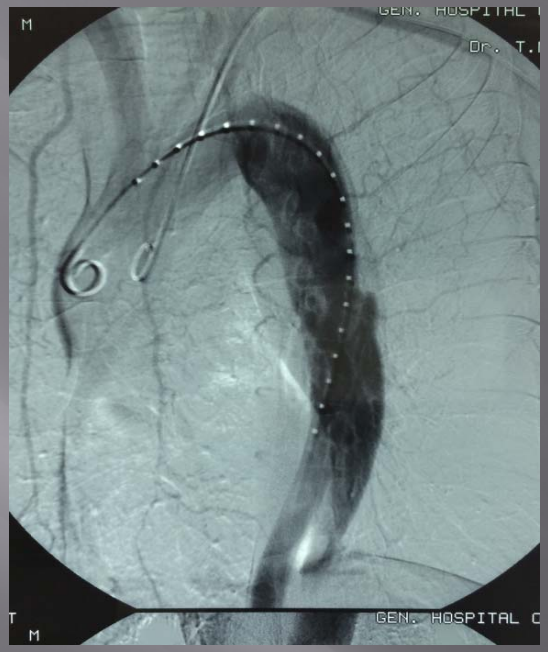
(εμμένων θωρακικό άλγος και μη ελεγχόμενη αρτηριακή υπέρταση παρά τη χορηγούμενη φαρμακευτική αγωγή).

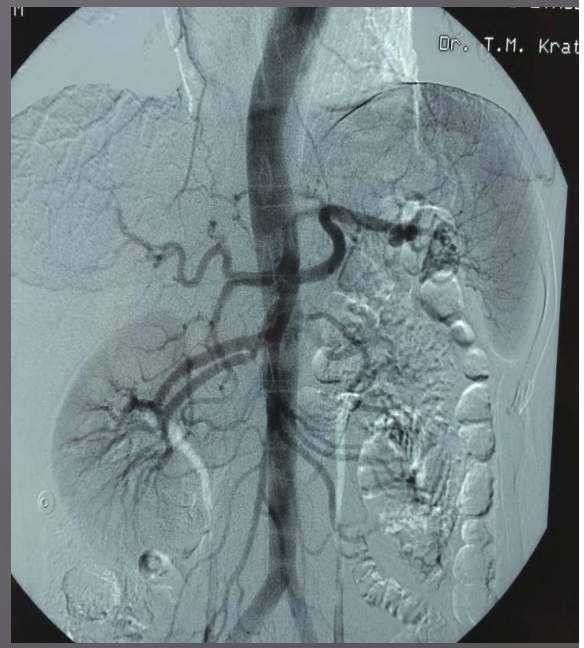


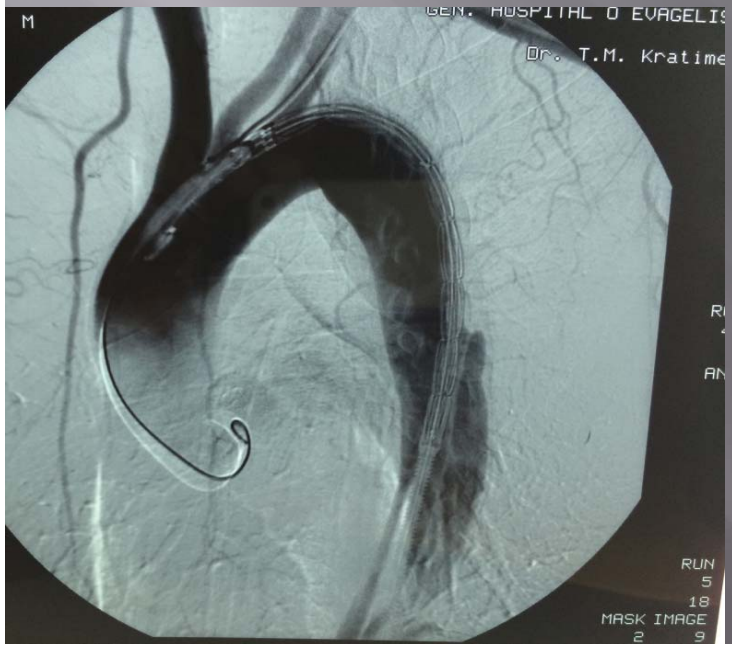


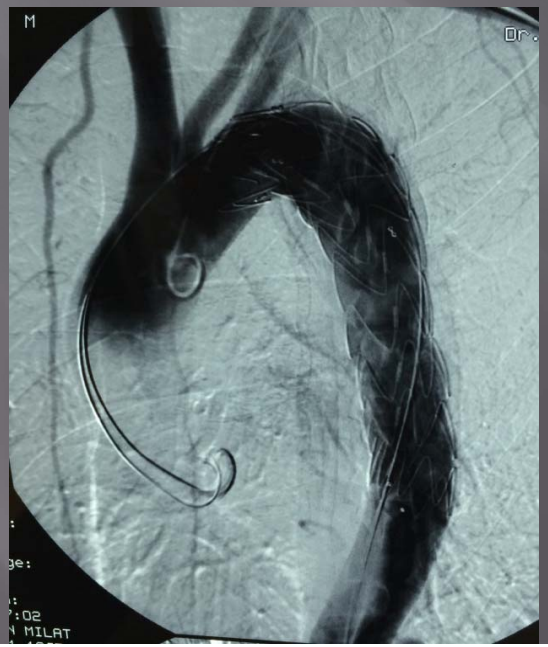
IA-DSA IMAGES

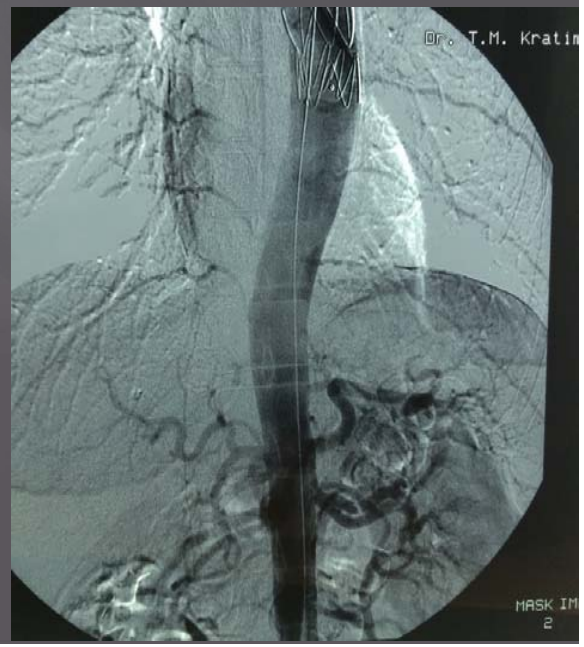






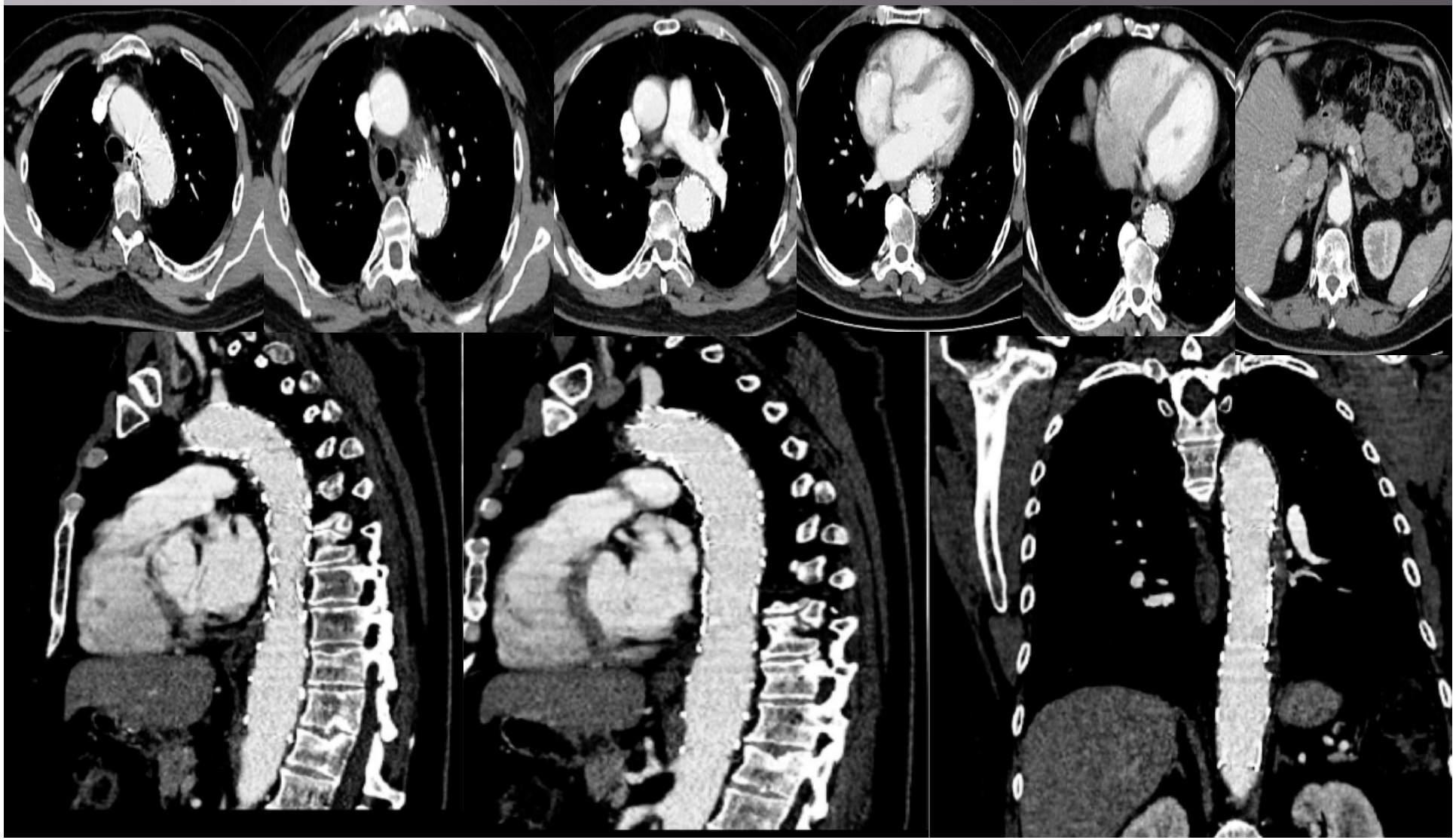






Αξονική τομογραφία 30 ημέρες μετά την εμφύτευση του ενδομοσχεύματος (stent-graft):

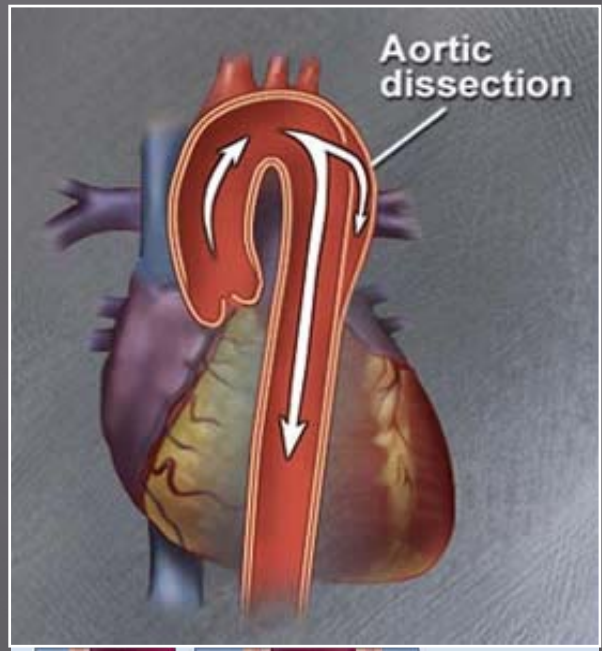
1. Perfect sealing of the grafts, no endoleaks,
2. Very good descending thoracic aorta remodeling

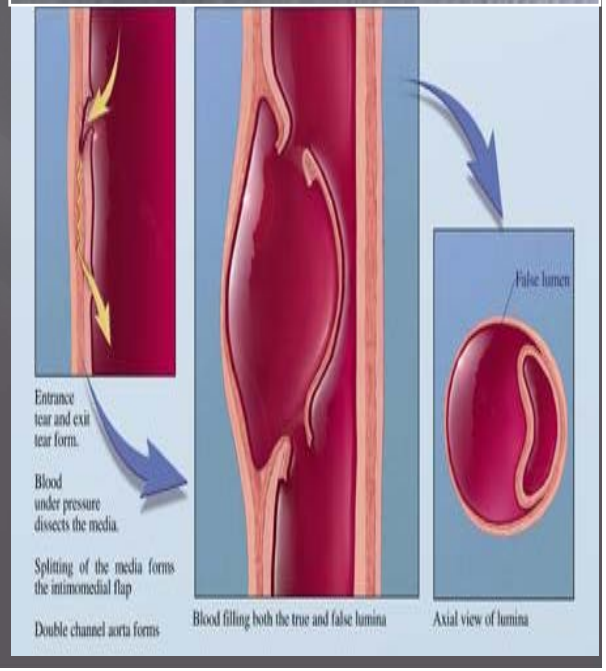


ΟΞΥΣ ΑΟΡΤΙΚΟΣ ΔΙΑΧΩΡΙΣΜΟΣ

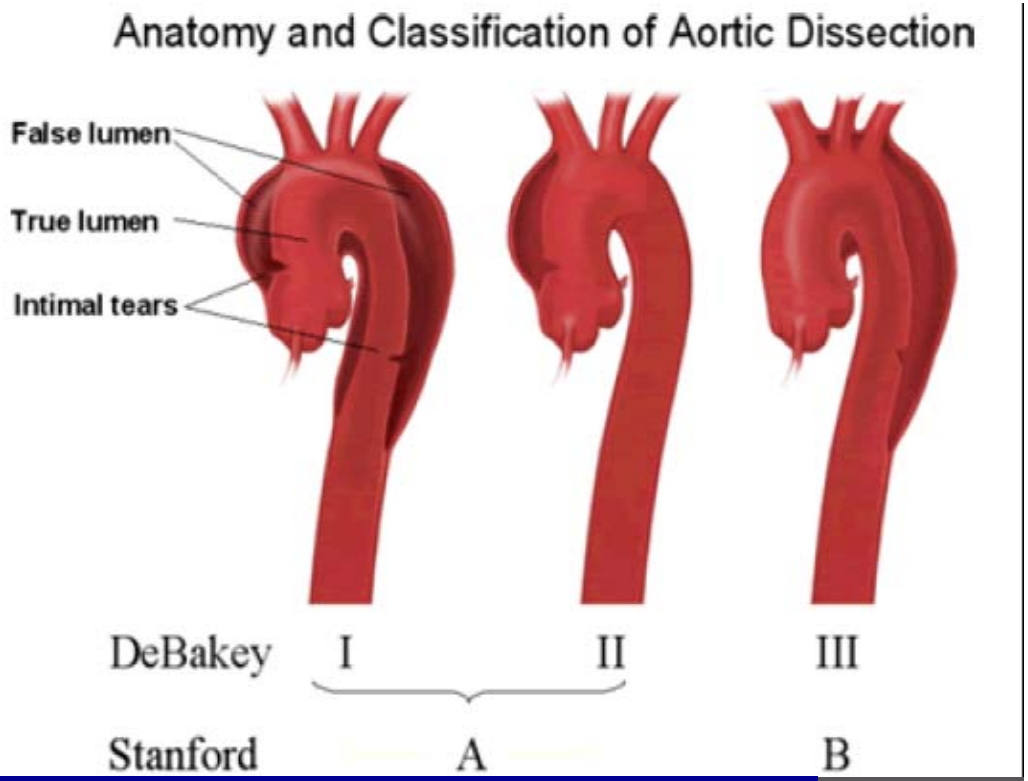
- Ο οξύς διαχωρισμός του αορτικού τοιχώματος χαρακτηρίζεται από την αιφνίδια είσοδο αίματος από τον αυλό της αορτής στο μέσο χιτώνα της, διαμέσου μιας ή περισσοτέρων ρήξεων του έσω χιτώνα (Intimal tear), με αποτέλεσμα να διαχωρίζεται ο μέσος χιτώνας και να δημιουργείται ο ψευδής αυλός.

- Ο αληθής και ο ψευδής αυλός χωρίζονται από μία μεμβράνη (Septum) που αποτελείται από τον έσω χιτώνα και 70% περίπου του μέσου χιτώνα. Το αορτικό τοίχωμα που καλύπτει τον ψευδή αυλό είναι λεπτό και αδύναμο και αποτελείται από το 30% περίπου του μέσου χιτώνα και από τον έξω χιτώνα της αορτής.

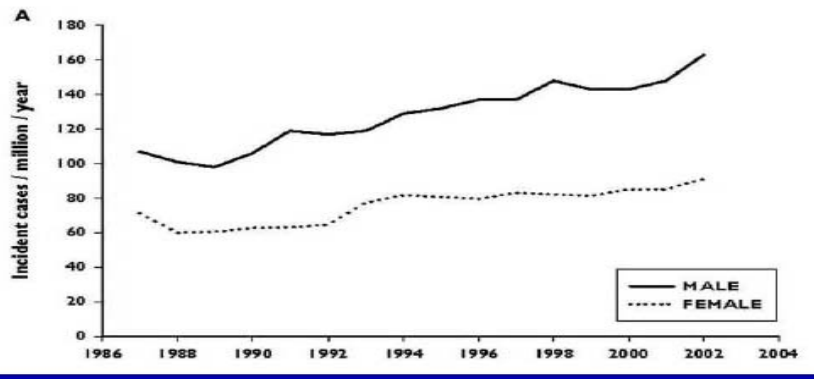




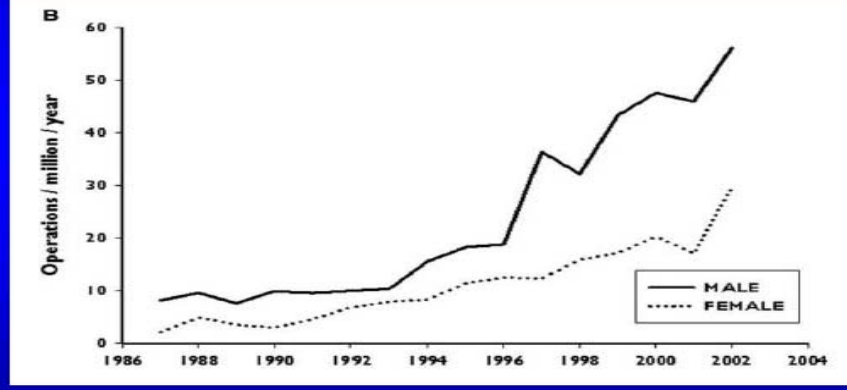
ΔΙΑΧΩΡΙΣΜΟΙ ΑΟΡΤΗΣ



Incidence of thoracic aortic aneurysms and dissection is up



Operations for thoracic aortic aneurysms and dissection up



Olsson C. et al., Circulation 2006;114:2611-2618

Risk Factors for Development of Thoracic Aortic Dissection

- **Conditions associated with increased aortic wall stress**

1. Hypertension, particularly if uncontrolled
2. Pheochromocytoma
3. Cocaine or other stimulant use
4. Weight lifting or other Valsalva maneuver
5. Trauma
6. Deceleration or torsional injury
7. Coarctation of the aorta

- **Conditions associated with aortic media abnormalities**

Genetic

Marfan syndrome
Ehlers-Danlos syndrome,
Bicuspid aortic valve
aortic valve replacement
Turner syndrome
Loeys-Dietz syndrome
Familial thor. ao dissection syndr

Other

Pregnancy
Polycystic kidney disease
Chronic corticosteroid admin.
immunosuppression agent admin.
Infections involving the aortic wall

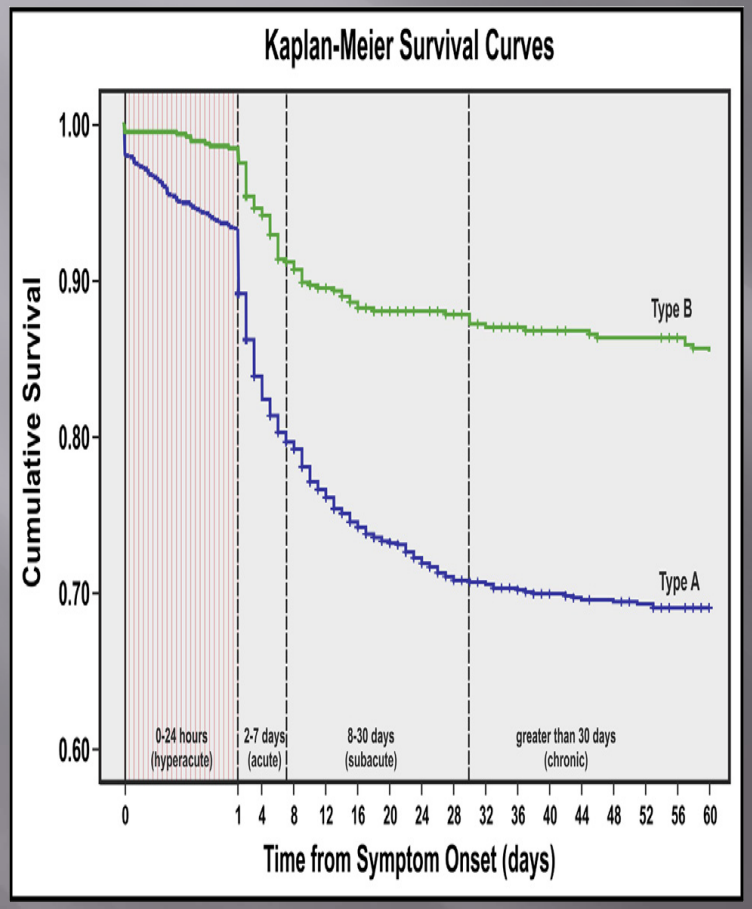
Inflammatory vasculitides

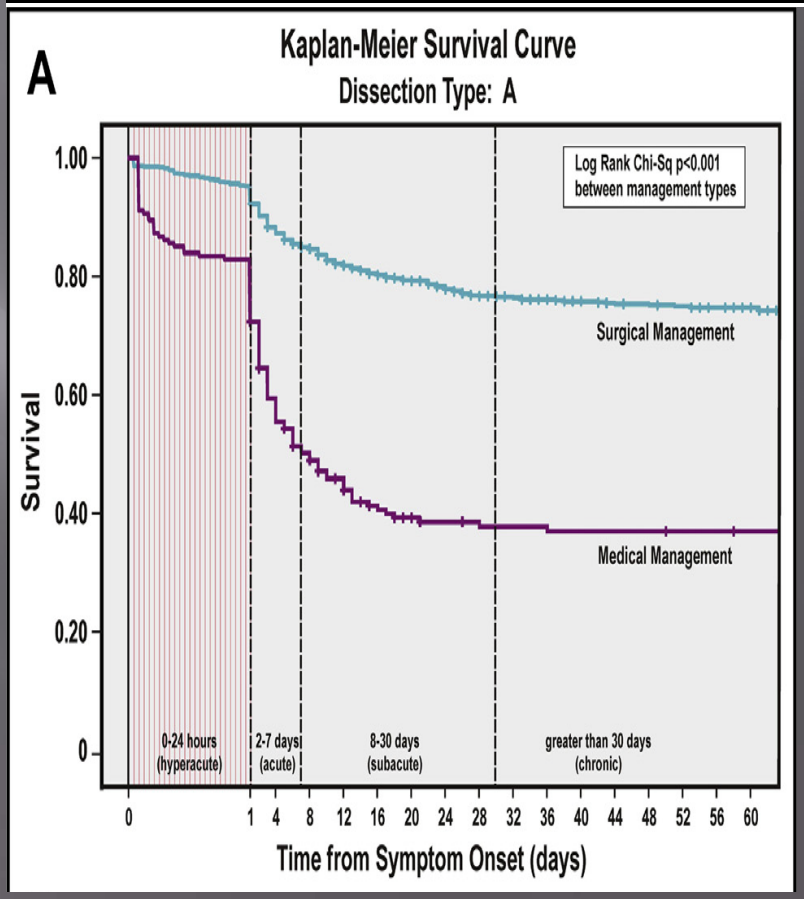
Takayasu arteritis
Giant cell arteritis
Behçet arteritis

The IRAD Classification System for Characterizing Survival after Aortic Dissection

Anna M. Booher, MD,[a] Eric M. Isselbacher, MD,[b] Christoph A. Nienaber, MD,[c] Santi Trimarchi, MD,[d] Arturo Evangelista, MD,[e] Daniel G. Montgomery, BS,[a] James B. Froehlich, MD, MPH,[a] Marek P. Ehrlich, MD,[f] Jae K. Oh, MD,[g] James L. Januzzi, MD,[b] Patrick O'Gara, MD,[h] Thoralf M. Sundt, MD,[b] Kevin M. Harris, MD,[i] Eduardo Bossone, MD, PhD,[j] Reed E. Pyeritz, MD, PhD,[k] Kim A. Eagle, MD;[a] IRAD Investigators

The American Journal of Medicine, Vol 126, No 8, August 2013





Overall, 1815 cases were included:
1160 patients had Type A aortic dissection and 655 patients had Type B aortic dissection.
The mean age of all patients was 62.0 years; 67.3% were male and the majority was white.

Acute type B dissection: Guidelines AHA

Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association.

2010 ACCF/AHA/AATS/ACR/ASA/SCA/SCAI/SIR/STS/SVM Guidelines for the Diagnosis and Management of Patients With Thoracic Aortic Disease: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, American Association for Thoracic Surgery, American College of Radiology, American Stroke Association, Society of Cardiovascular Anesthesiologists, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of Thoracic Surgeons, and Society for Vascular Medicine

WRITING GROUP MEMBERS, Loren F. Hiratzka, George L. Bakris, Joshua A. Beckman, Robert M. Bersin, Vincent F. Carr, Donald E. Casey, Jr, Kim A. Eagle, Luke K. Hermann, Eric M. Isselbacher, Ella A. Kazerooni, Nicholas T. Kouchoukos, Bruce W. Lytle, Dianna M. Milewicz, David L. Reich, Souvik Sen, Julie A. Shinn, Lars G. Svensson and David M. Williams

Circulation. 2010;121:e266-e369; originally published online March 16, 2010;
doi: 10.1161/CIR.0b013e3181d4739e
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231

Print ISSN: 0009-7322. Online ISSN: 1524-4539

Acute thoracic aortic dissection involving the descending aorta should be managed medically unless life-threatening complications develop (eg, malperfusion syndrome, progression of dissection, enlarging aneurysm, inability to control blood pressure or symptoms).[285,288,334-337] *(Level of Evidence: B)*

Uncomplicated Aortic Type B Dissection: Consensus

J Am Coll Cardiol. 2013 Apr 23;61(16):1661-78.

Interdisciplinary expert consensus document on management of type B aortic dissection. Fattori R et al.

Patients with uncomplicated acute type B aortic dissection should be treated with medical therapy. At present there is no evidence of advantage with TEVAR or open surgery.

ΕΝΔΕΙΞΕΙΣ ΕΝΔΟΑΥΛΙΚΗΣ ΑΠΟΚΑΤΑΣΤΑΣΗΣ (TEVAR) ΤΟΥ ΑΟΡΤΙΚΟΥ ΔΙΑΧΩΡΙΣΜΟΥ ΤΥΠΟΥ Β

Επιπλεγμένος Διαχωρισμός Τύπου Β

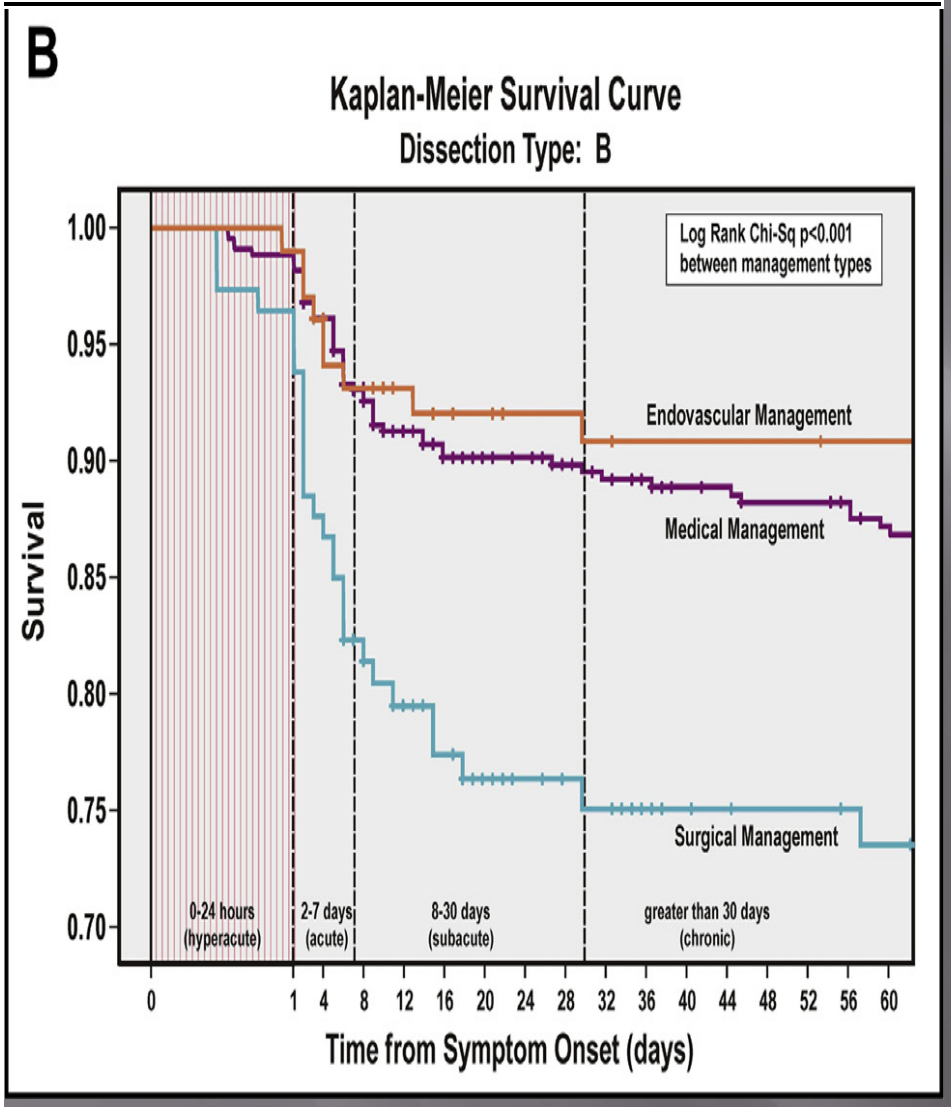
1. Ισχαιμία σπλαχνικών αγγείων ή των κάτω άκρων,
2. Ρήξη,
3. Επίμονο άλγος που δεν υφίεται στη φαρμακευτική αγωγή,
4. Μη ελεγχόμενη αρτηριακή πίεση

Στόχοι της Ενδοαυλικής αποκατάστασης της Θωρακικής Αορτής (TEVAR) στους διαχωρισμούς τύπου Β είναι:

- Κάλυψη της περιοχής της πρωτογενούς ρωγμής
- Διάνοιξη του αληθούς και εξάλειψη του ψευδούς αυλού
- Αποκατάσταση επαρκούς αιματικής ροής στους σπλαγχνικούς κλάδους, την περιφερική αορτή και τα κάτω άκρα.

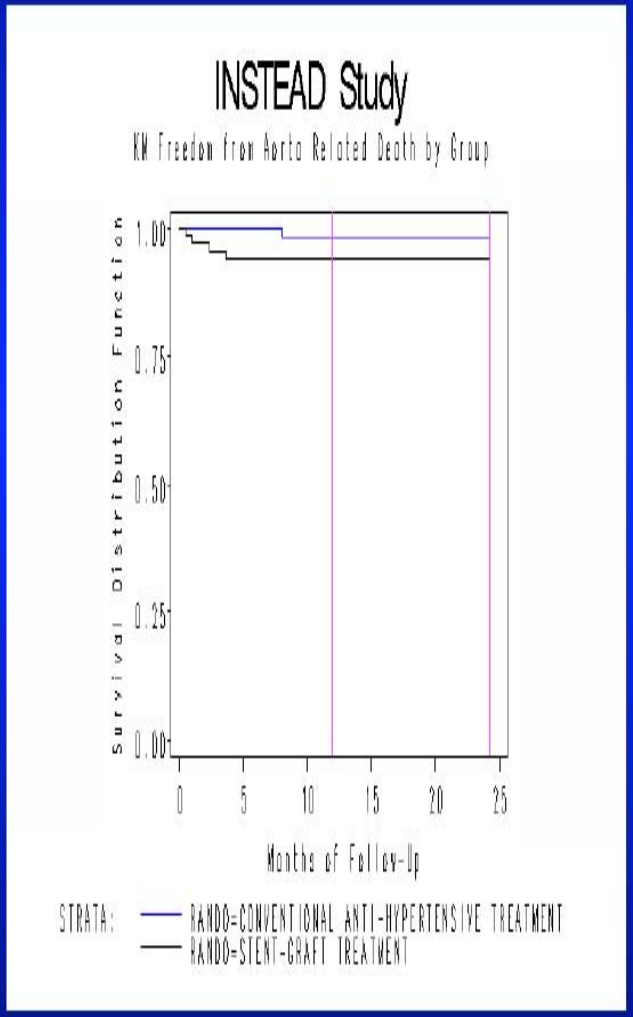
The IRAD Classification System for Characterizing Survival after Aortic Dissection

The American Journal of Medicine, Vol 126, No 8, August 2013



655 patients with Type B aortic dissection.

INSTEAD: Aorta related 1- and 2-year mortality



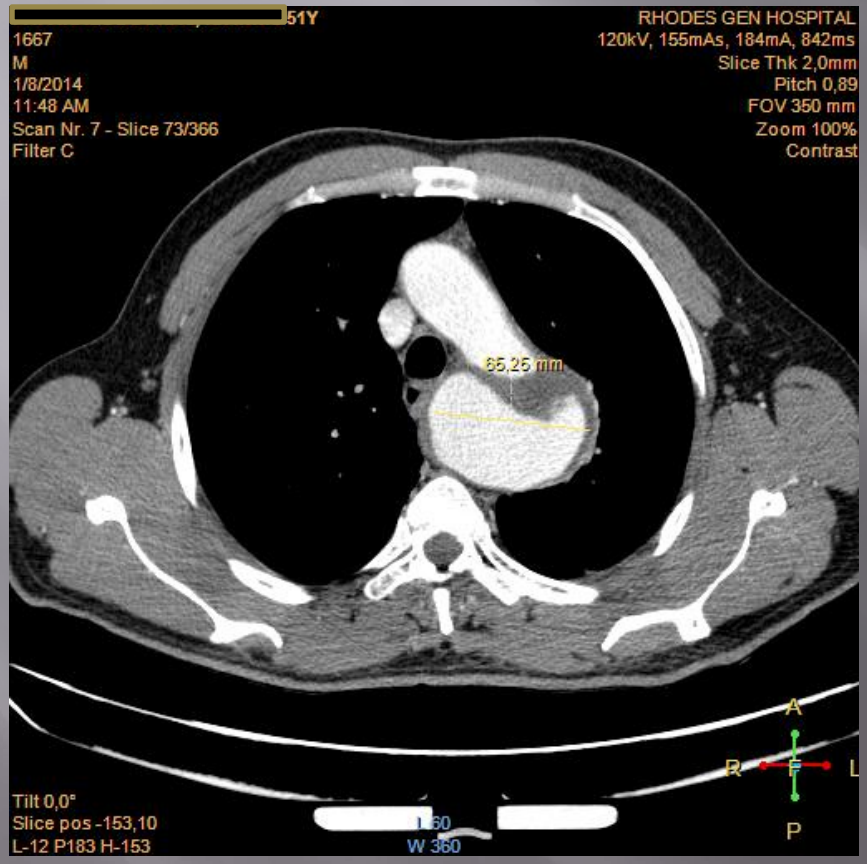
Primary endpoint analysis after adjudication

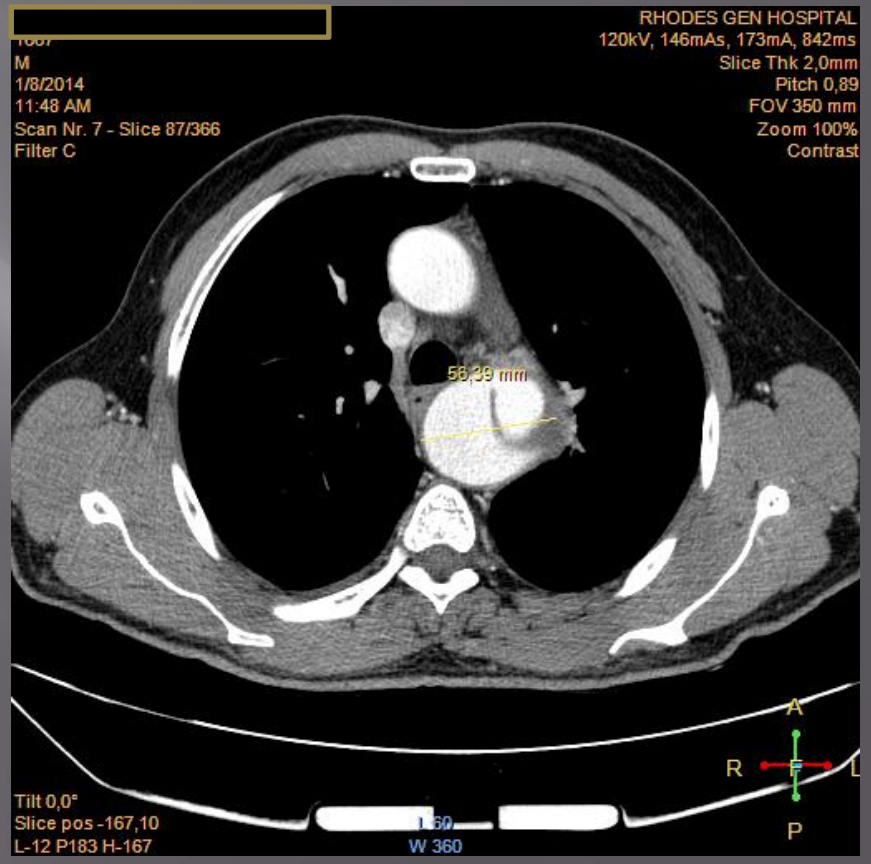
INSTEAD 2 year intention-to-treat analysis

Low mortality in both groups (94.2 vs. 97.0%)

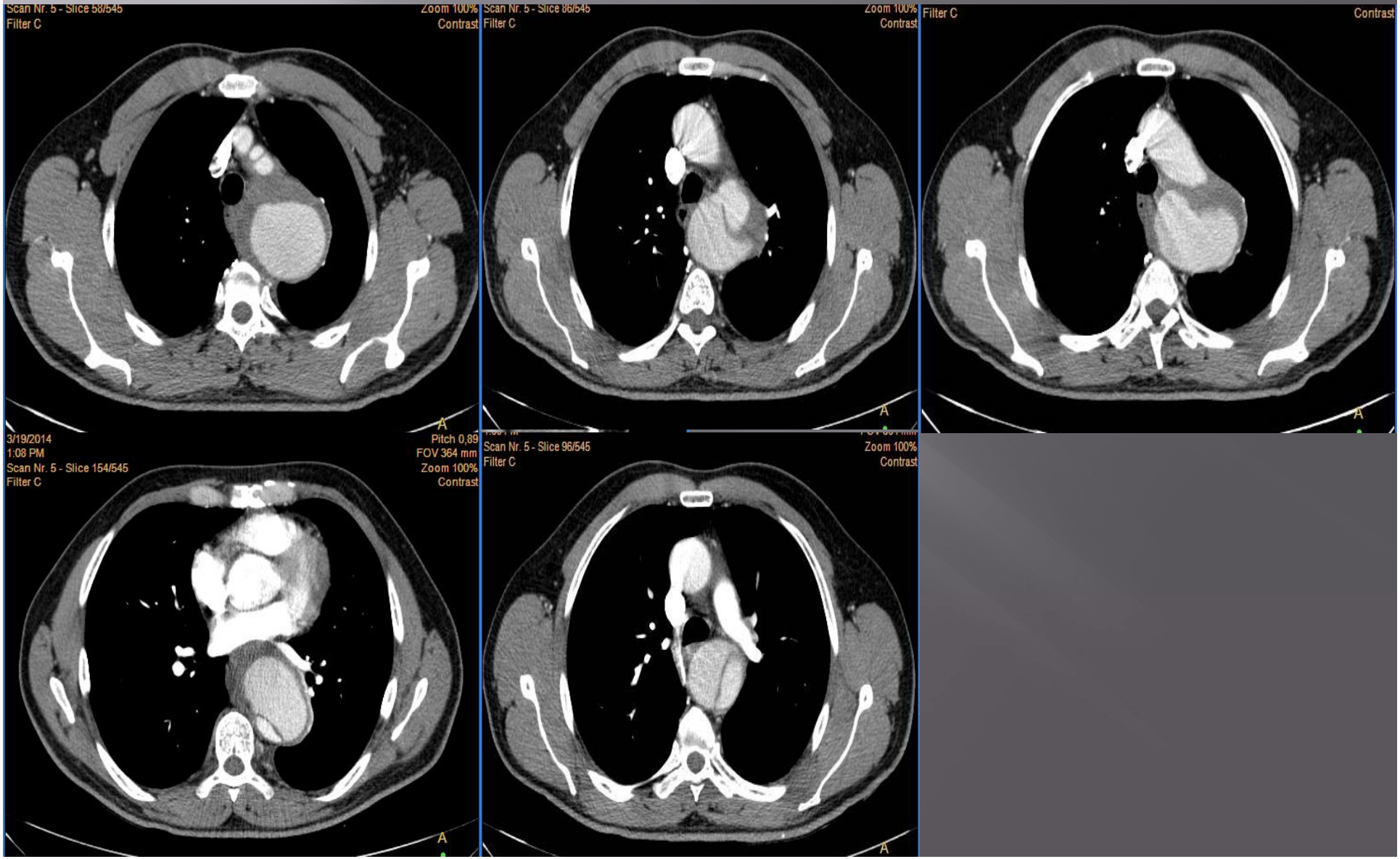
No difference between groups (p = 0.417)

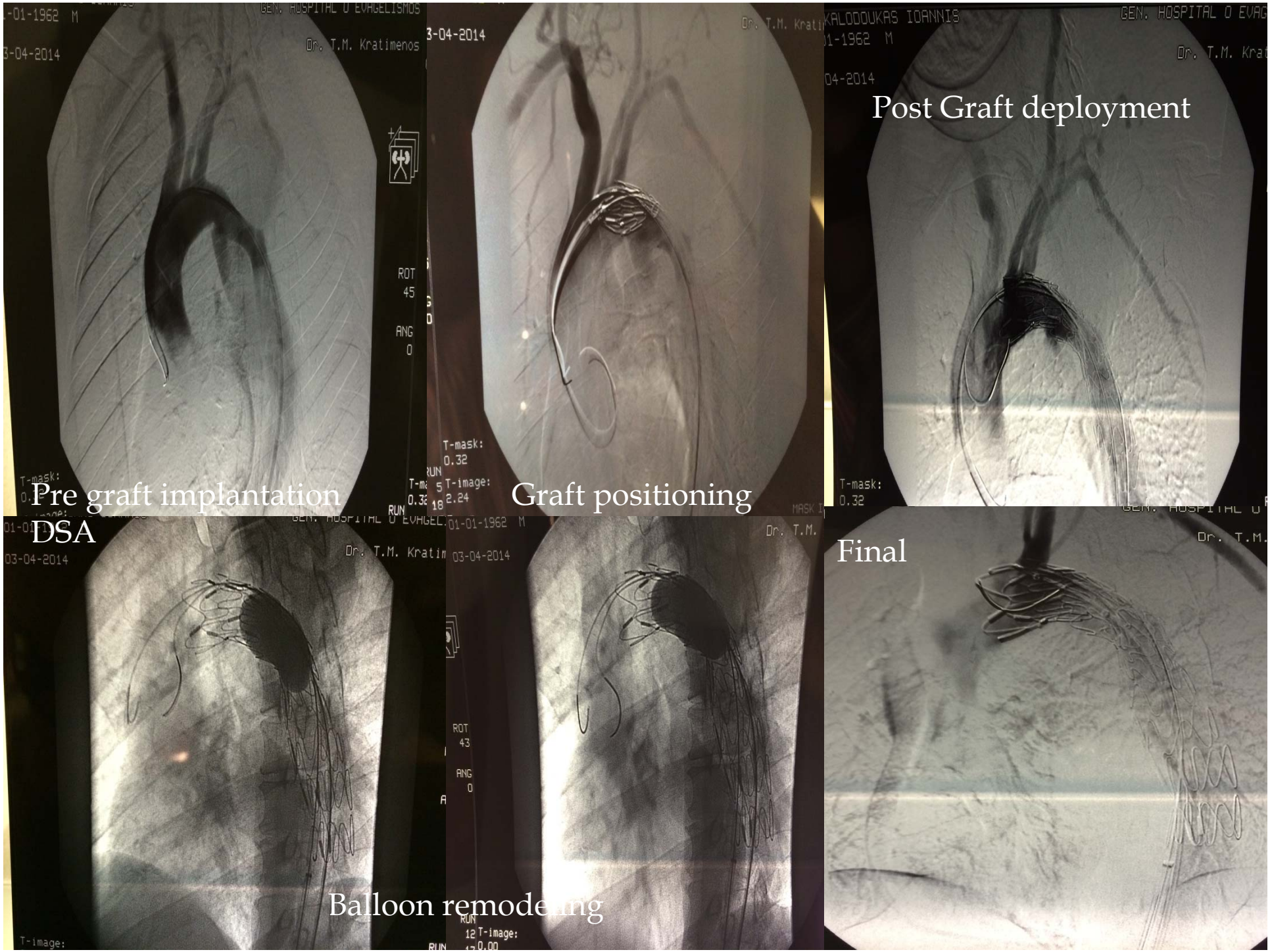
ΠΕΡΙΣΤΑΤΙΚΟ : ΑΝΔΡΑΣ 51 ΕΤΩΝ ΜΕ ΙΣΤΟΡΙΚΟ ΧΡΟΝΙΟΥ ΔΙΑΧΩΡΙΣΜΟΥ ΤΥΠΟΥ Β
CT ΙΑΝΟΥΡΙΟΣ 2014 ΔΙΑΧΩΡΙΣΤΙΚΟ ΑΝΕΥΡΥΣΜΑ ΜΕΓΙΣΤΗΣ ΔΙΑΜΕΤΡΟΥ 6,5 εκ.





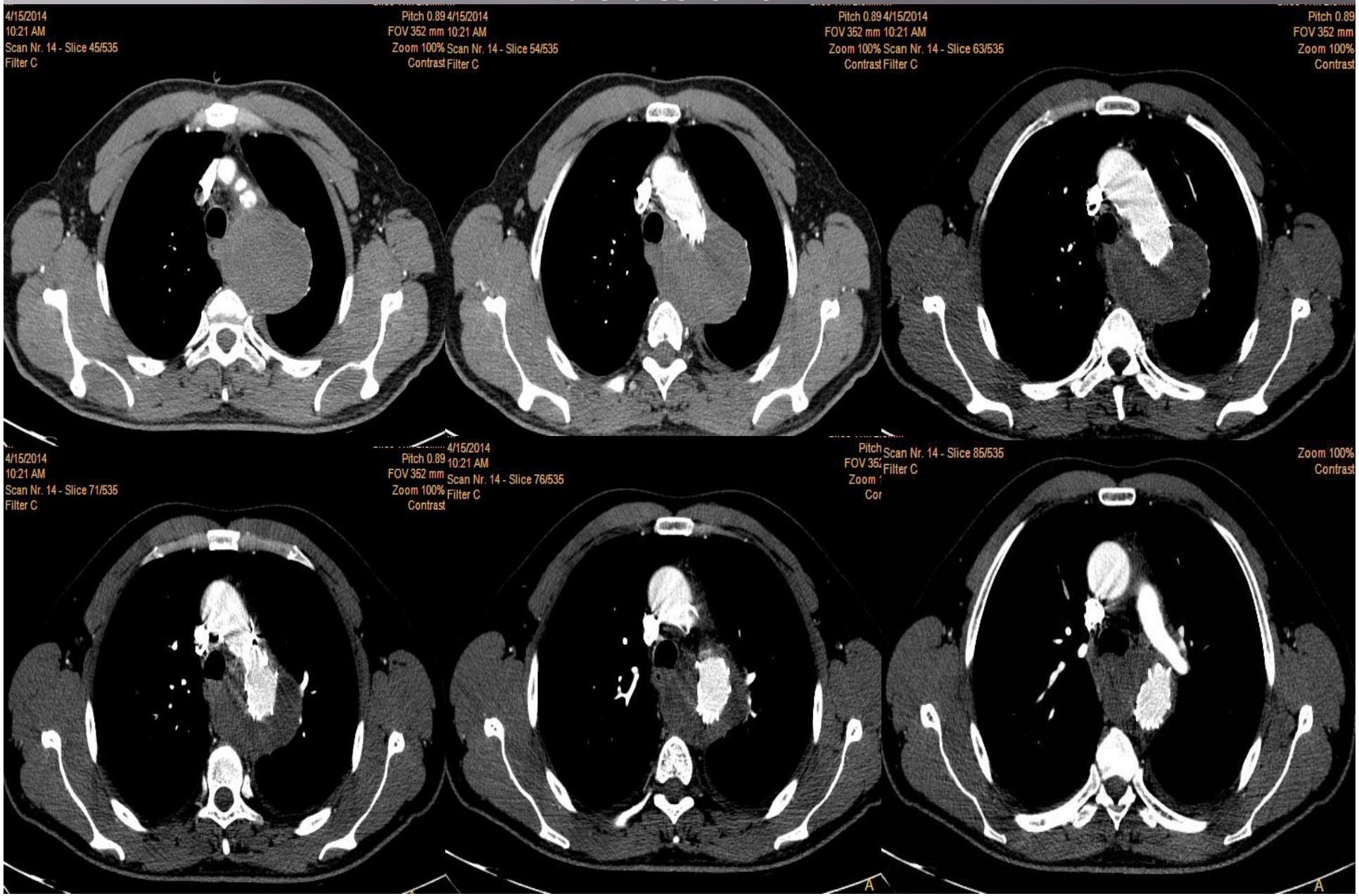
CT 30-3- 2014 : ΔΙΑΧΩΡΙΣΤΙΚΟ ΑΝΕΥΡΥΣΜΑ ΜΕΓΙΣΤΗΣ ΔΙΑΜΕΤΡΟΥ 7,7 εκ., ΜΕ ΣΥΝΟΔΟ PROX. TEAR ΕΥΡΟΥΣ 13mm, ΣΥΝΥΠΑΡΧΕΙ DISTAL TEAR ΣΤΟ ΥΨΟΣ ΤΟΥ ΑΛΛΕΙΡΙΟΥ




Pre graft implantation
DSA
Graft positioning
Post Graft deployment
Final
Balloon remodeling

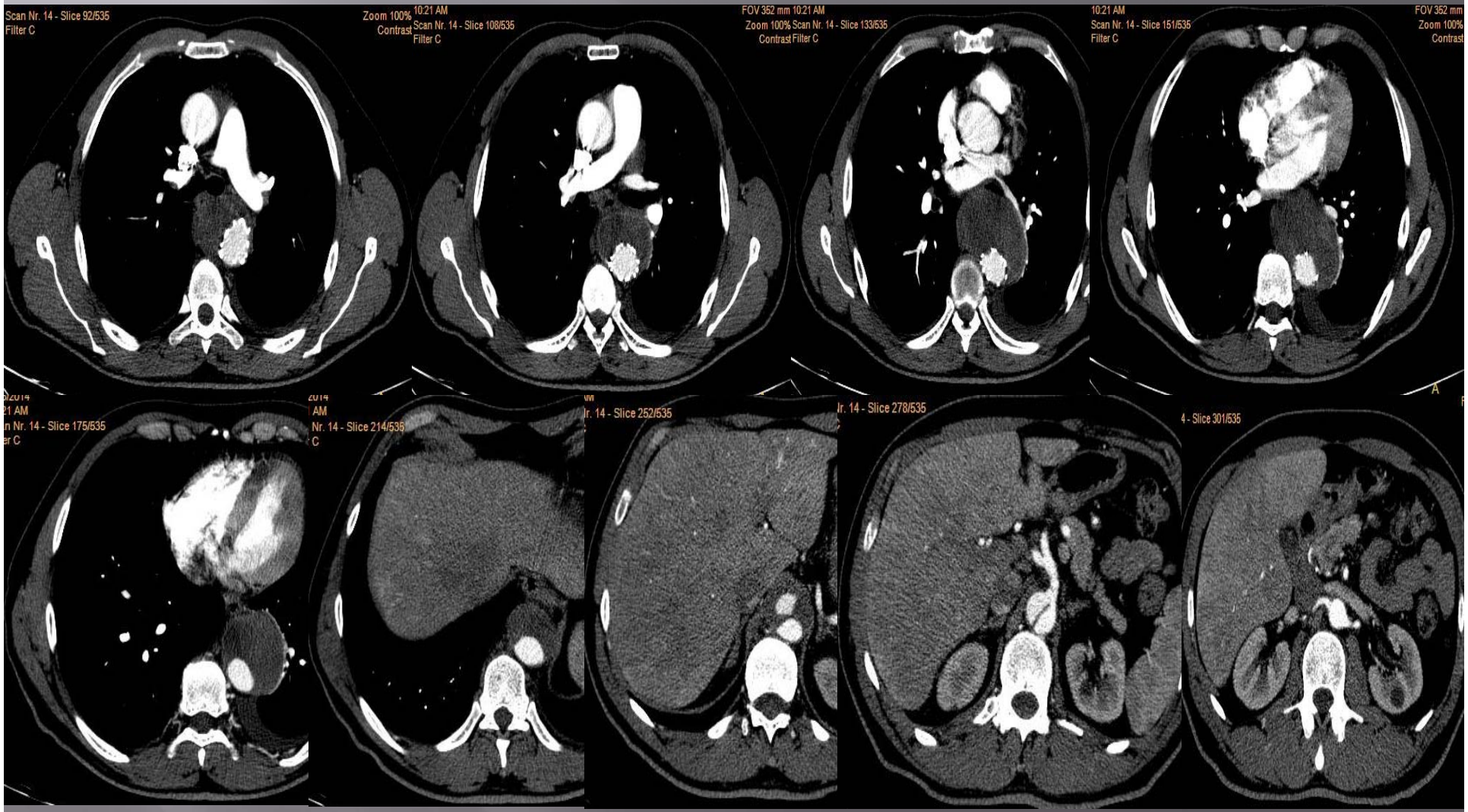
One Month Post Operation Follow up.

CT images: Exclusion of the dissecting aneurysm , total thrombosis of the false lumen



One Month Post Operation Follow up.

CT images: Thrombosis of the false lumen even peripherally of the stent graft



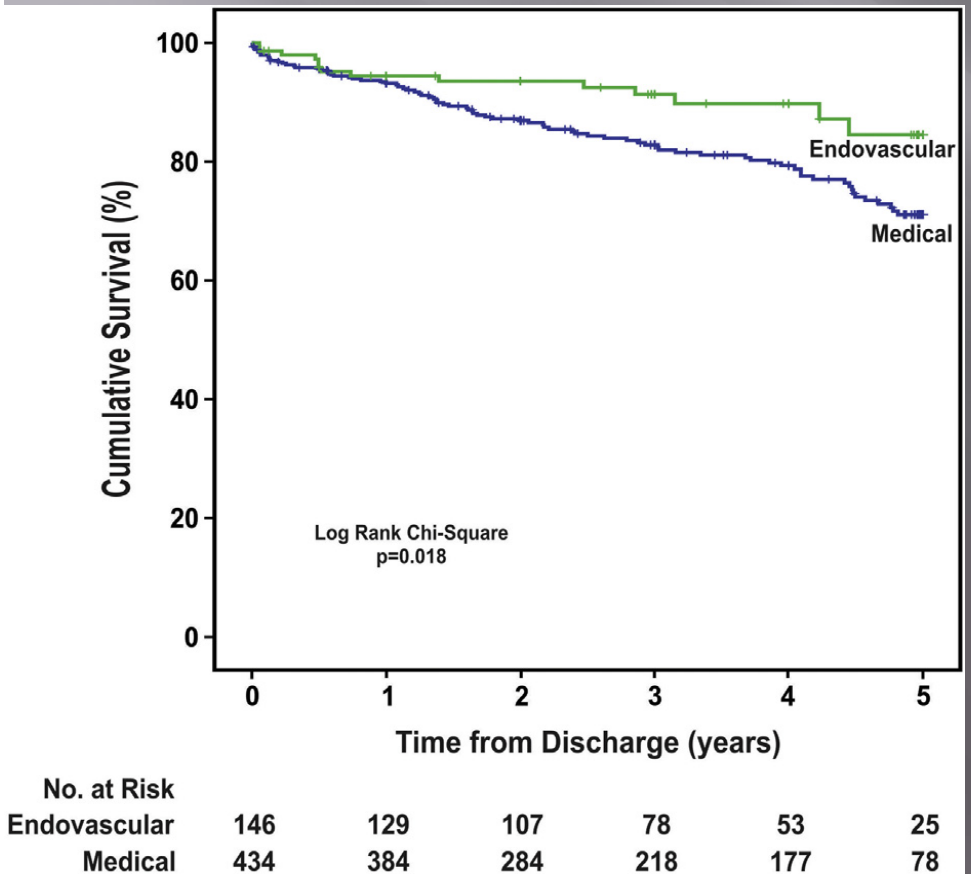
Survival After Endovascular Therapy in Patients With Type B Aortic Dissection

A Report From the International Registry of Acute Aortic Dissection (IRAD)

Rossella Fattori, MD,* Daniel Montgomery, BS,† Luigi Lovato, MD,‡ Stephan Kische, MD,§
Marco Di Eusanio, MD,‡ Hüseyin Ince, MD,§ Kim A. Eagle, MD,†
Eric M. Isselbacher, MD,‖ Christoph A. Nienaber, MD§

JACC: CARDIOVASCULAR INTERVENTIONS, VOL. 6, NO. 8, 2013
AUGUST 2013:876–82

1,129 consecutive patients with type B acute aortic dissection (TBAAD) enrolled in IRAD (International Registry of Acute Aortic Dissection) between 1995 and 2012 who received medical (n ‘O 853, 75.6%) or TEVAR (n ‘O 276, 24.4%) therapy.



Kaplan-Meier survival estimates showed that

patients undergoing TEVAR had a

lower death rate (15.5%) vs.

patients treated with OMT (29.0%) (p ‘O 0.018)

at 5 years.

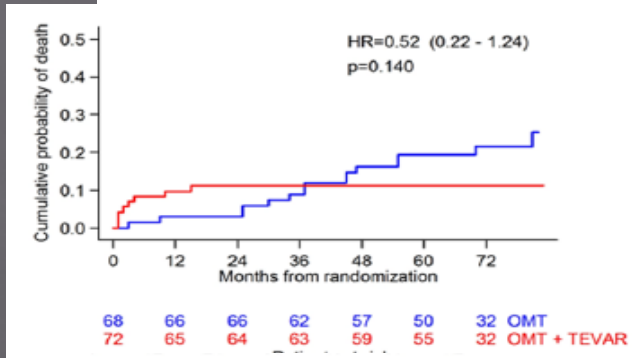
Endovascular Repair of Type B Aortic Dissection
Long-term Results of the Randomized Investigation of Stent Grafts in Aortic Dissection Trial

Christoph A. Nienaber, MD, PhD; Stephan Kische, MD; Hervé Rousseau, MD, PhD; Holger Eggebrecht, MD; Tim C. Rehders, MD; Guenther Kundt, MD, PhD; Aenne Glass, MA; Dierk Scheinert, MD, PhD; Martin Czerny, MD, PhD; Tilo Kleinfeldt, MD; Burkhart Zipfel, MD; Louis Labrousse, MD; Rossella Fattori, MD, PhD; Hüseyin Ince, MD, PhD; for the INSTEAD-XL trial

Circ Cardiovasc Interv August 2013

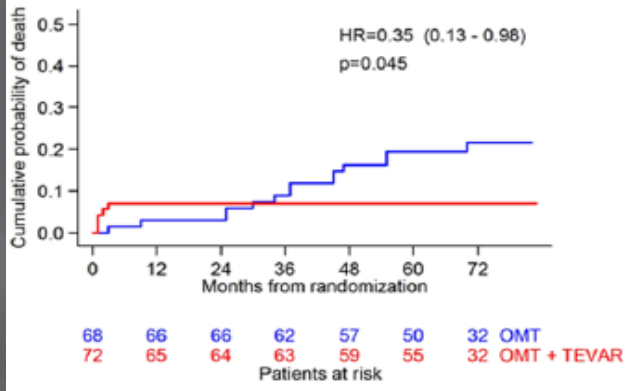
All-Cause Mortality

>5 years all-cause mortality trended lower in patients randomized to TEVAR than with OMT alone (11.1±3.7% versus 19.3±4.8%)



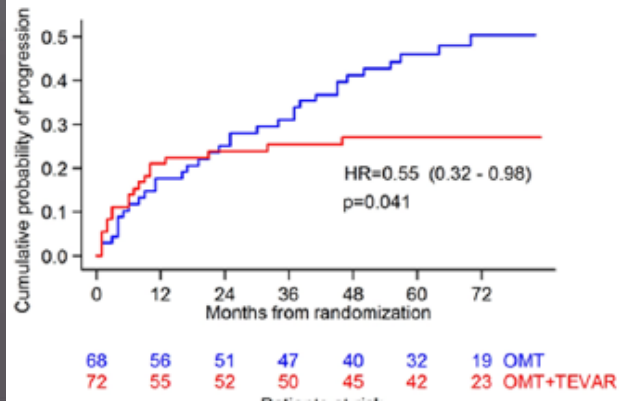
Aorta-Specific Mortality

At 5 years, the aorta-specific mortality was 6.9±3.0% with TEVAR, and 19.3±4.8% with OMT alone



Progression of Disease and Aorta-Specific Events

At 5 years of follow-up cumulative freedom from this cluster end point was 53.9±6.1% with OMT alone and 73.0±5.3% with TEVAR



Predictors of aortic growth in uncomplicated type B aortic dissection

Guido H. W. van Bogerijen, MD,[a,b,c] Jip L. Tolenaar, MD,[a,b] Vincenzo Rampoldi, MD,[a]
Frans L. Moll, MD, PhD,[b] Joost A. van Herwaarden, MD, PhD,[b] Frederik H. W. Jonker, MD, PhD,[d]
Kim A. Eagle, MD,[c] and Santi Trimarchi, MD, PhD,[a] *Milan, Italy; Utrecht and Rotterdam, The Netherlands;*

J Vasc Surg 2014;59:1134-43.

Clinical predictors.

- age <60 years was associated with significantly increased aortic growth rate
- men experienced a higher growth rate than women
- Marfan syndrome is a clinical predictor for aortic enlargement and related death.
- patients with calcium channel antagonists exhibit less aortic growth

Predictors of aortic growth in uncomplicated type B aortic dissection

Guido H. W. van Bogerijen, MD,[a,b,c] Jip L. Tolenaar, MD,[a,b] Vincenzo Rampoldi, MD,[a]
Frans L. Moll, MD, PhD,[b] Joost A. van Herwaarden, MD, PhD,[b] Frederik H. W. Jonker, MD, PhD,[d]
Kim A. Eagle, MD,[c] and Santi Trimarchi, MD, PhD,[a] *Milan, Italy; Utrecht and Rotterdam, The Netherlands;*

J Vasc Surg 2014;59:1134-43.

Radiologic predictors.

1. a maximum aortic diameter of >40 mm in the acute phase
2. FL diameter of >22 mm in the upper thoracic descending aorta on the initial CT imaging (independent predictor)
3. Elliptical configuration of the TL in combination with a circular formation of the FL
4. Partially thrombosed FL
5. The presence of only one patent entry tear
6. Primary entry tear>10 mm

Combining these clinical and radiologic predictors may be essential to identify patients with uncomplicated type B AD at higher risk for aortic enlargement and rupture during follow-up.

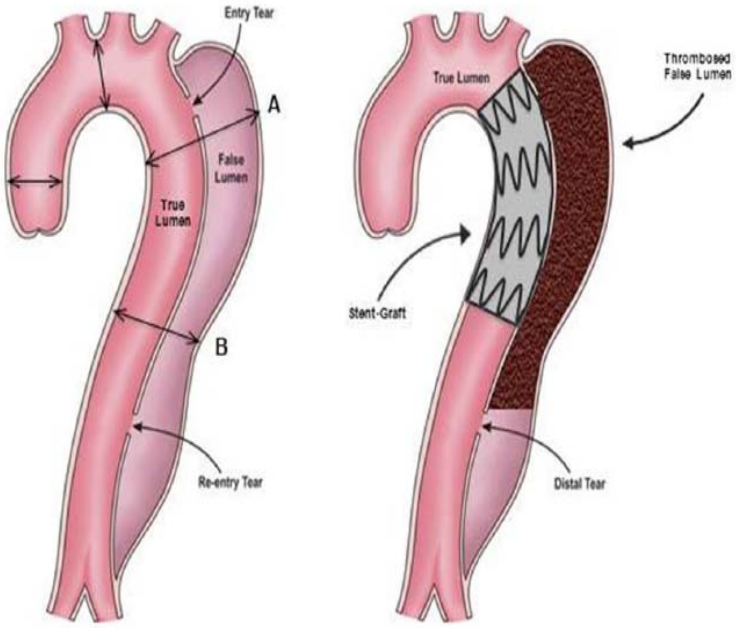
Endovascular Repair of Type B Aortic Dissection

Long-term Results of the Randomized Investigation of Stent Grafts in Aortic Dissection Trial

Christoph A. Nienaber, MD, PhD; Stephan Kische, MD; Hervé Rousseau, MD, PhD; Holger Eggebrecht, MD; Tim C. Rehders, MD; Guenther Kundt, MD, PhD; Aenne Glass, MA; Dierk Scheinert, MD, PhD; Martin Czerny, MD, PhD; Tilo Kleinfeldt, MD; Burkhart Zipfel, MD; Louis Labrousse, MD; Rossella Fattori, MD, PhD; Hüseyin Ince, MD, PhD; for the INSTEAD-XL trial

Circ Cardiovasc Interv **August 2013**

Conclusions—In this study of survivors of type B aortic dissection, TEVAR in addition to optimal medical treatment is associated with improved 5-year aorta-specific survival and delayed disease progression. In stable type B dissection with suitable anatomy, preemptive TEVAR should be considered to improve late outcome.



With safer procedures attributable to improved operator skills and better technology, TEVAR may emerge as first-line therapy of type B dissection;

the attempt to heal and remodel dissected aorta may replace the current complication specific strategy.

INTERVENTIONAL RADIOLOGY UNIT / RADIOLOGY DEPARTMENT
EVANGELISMOS HOSPITAL

New Angio-suite / GE Innova
More than 1250 pts/year

Σε συνεργασία με την Κλινική Καρδιάς, Θώρακος και Αγγείων τα τελευταία 3 χρόνια:

>70 standard TEVAR cases/ year
>55 standard EVAR cases / year

In addition on 2017:

- 4 scalloped TEVAR cases (prox. or distal)
- 3 BR-EVAR+TEVAR (thoraco-abdominal aneurysm cases)
- 3 F-EVAR (3-4 fenestrations, Pararenal aneurysm cases)
- 2 IBD EVAR cases (1 single 1 double)
- 3 Ch-EVAR cases (1 single and 2 double chimneys)

“FAIL TO PLAN……

IS PLANNING TO FAIL!!!”