



# SEDUTA MULTIDISCIPLINARE

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**Far luce sulla penombra: nuovi approcci diagnostico-  
terapeutici nella fase acuta dell'ictus ischemico**

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# Corsia d'ospedale: anni '60



Courtesy of Prof. V. Toso

# Stroke Unit



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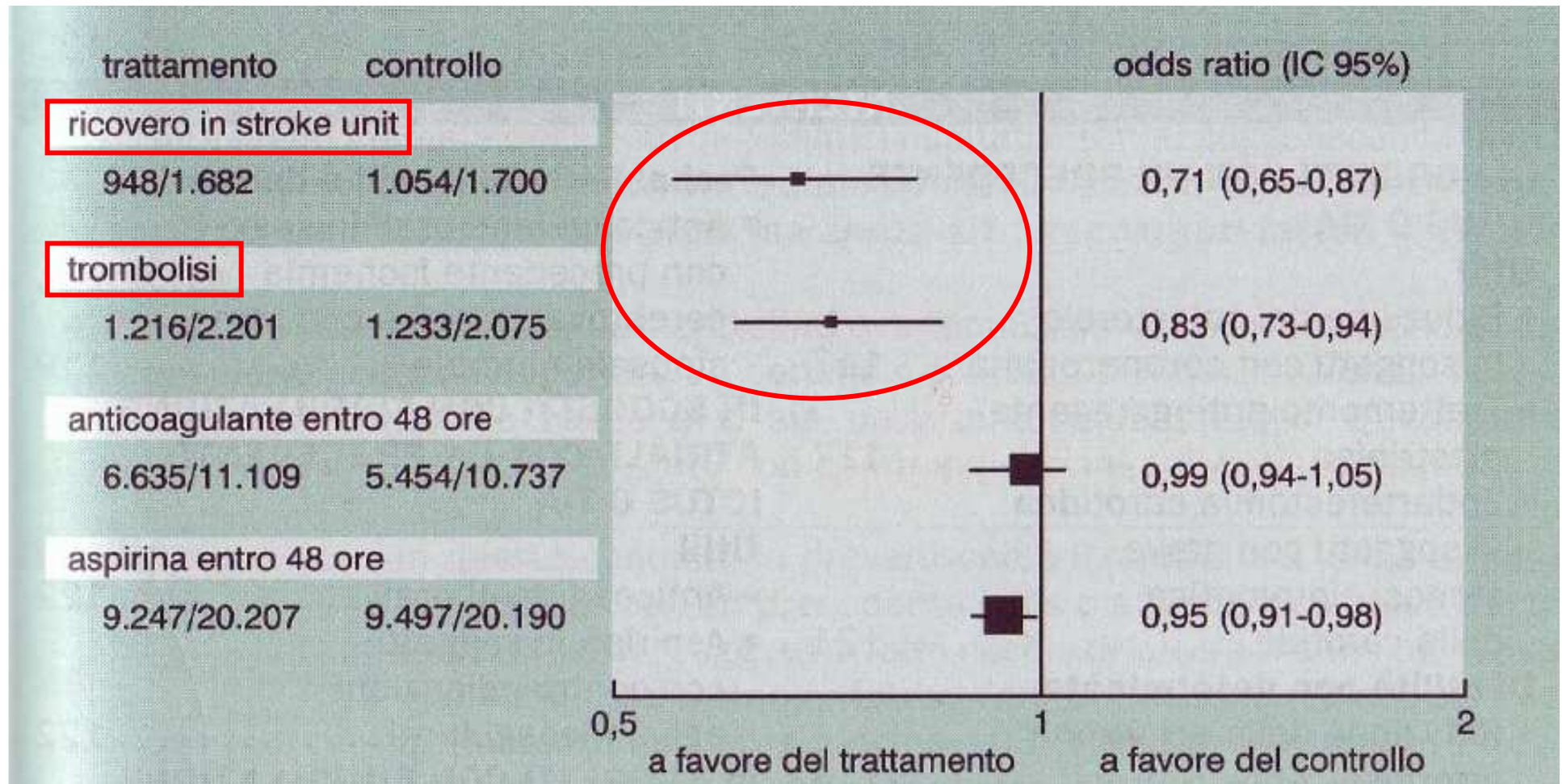
## TISSUE PLASMINOGEN ACTIVATOR FOR ACUTE ISCHEMIC STROKE

THE NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE rt-PA STROKE STUDY GROUP\*

*...despite an increased incidence of symptomatic intracerebral hemorrhage, treatment with intravenous tPA within three hours of the onset of ischemic stroke improved clinical outcome at three months.*

Trial	Type of Therapy	Time to Treatment, h	No. of Patients	Plasminogen Activator, mg/kg	Initial Stroke Severity (NIHSS Score)	Minimal to No Disability, %	Slight to No Disability, %	Symptomatic ICH, %	Mortality Due to ICH, %	Mortality at 90 d, %
NINDS <sup>7</sup>	Recombinant tissue plasminogen activator	3	312	0.9	14	43	NA	6	2.90	17
	Placebo	3	312	0.9	15	26	NA	1	0.30	21

# Terapia Stroke - Prove di Efficacia



*Clinical Evidence 2001*

# Unit Setting: Stroke Unit

- **Treatment at a Stroke Unit compared to treatment in a general ward**
  - reduces **mortality** (ARR 3%)
  - reduces **dependency** (ARR 5%)
  - reduces need for **institutional care** (ARR 2%)
- **All types of patients**, irrespective of gender, age, stroke subtype and stroke severity, appear to **benefit from treatment in stroke units**

# SPREAD<sup>TM</sup> Live

Stroke Prevention and Educational Awareness Diffusion

## Raccomandazione 8.15 GRADO

Ictus Ictus acuto Pazienti Stroke Stroke Unit  
Vai al volume: 8.7 Ricovero

**È indicato** che i pazienti con ictus acuto siano ricoverati in una struttura dedicata (*Stroke Unit*).

# SPREAD<sup>TM</sup> Live

Stroke Prevention and Educational Awareness Diffusion

## Raccomandazione 10.2 GRADO

**Ictus Ictus acuto**

Vai al volume: 10.1.1.1.2 Trombolisi con rt-PA

Il trattamento con r-tPA e.v. (0,9 mg/kg, dose massima 90 mg, il 10% della dose in bolo, il rimanente in infusione di 60 minuti) è **indicato** entro 4.5 ore dall'esordio di un ictus ischemico.

Già autorizzato l'uso entro 4,5 ore in Germania e Regno Unito

Imminente l'approvazione AIFA

***... e oltre le 4,5 ore?***

# The benefits and harms of intravenous thrombolysis with recombinant tissue plasminogen activator within 6 h of acute ischaemic stroke (the third international stroke trial [IST-3]): a randomised controlled trial

The IST-3 collaborative group\*

## Interpretation

*“...despite the early hazard, thrombolysis **within 6 hours** improved functional outcome.*

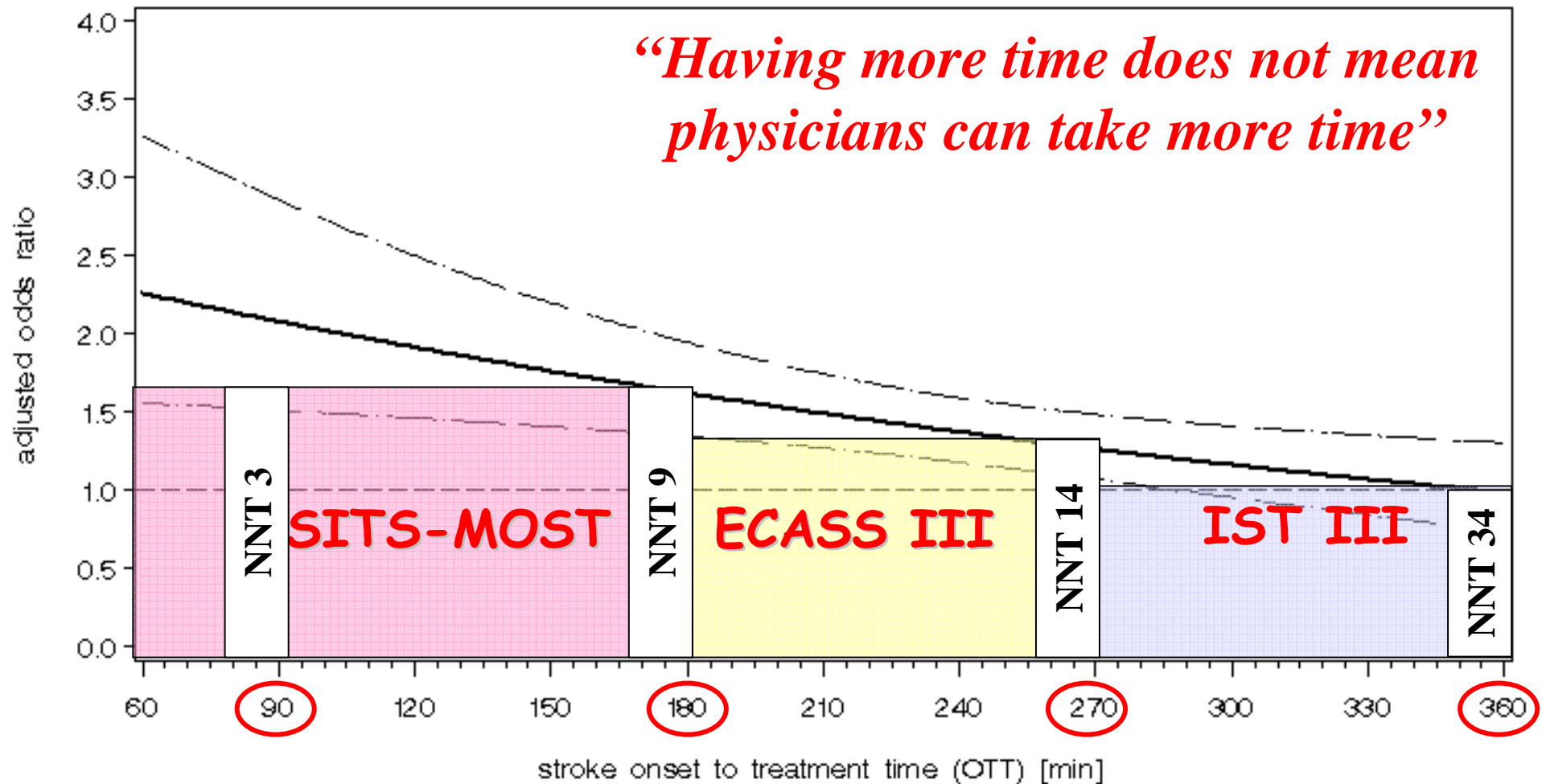
*Benefit did not seem to be diminished in **elderly patients**.”*



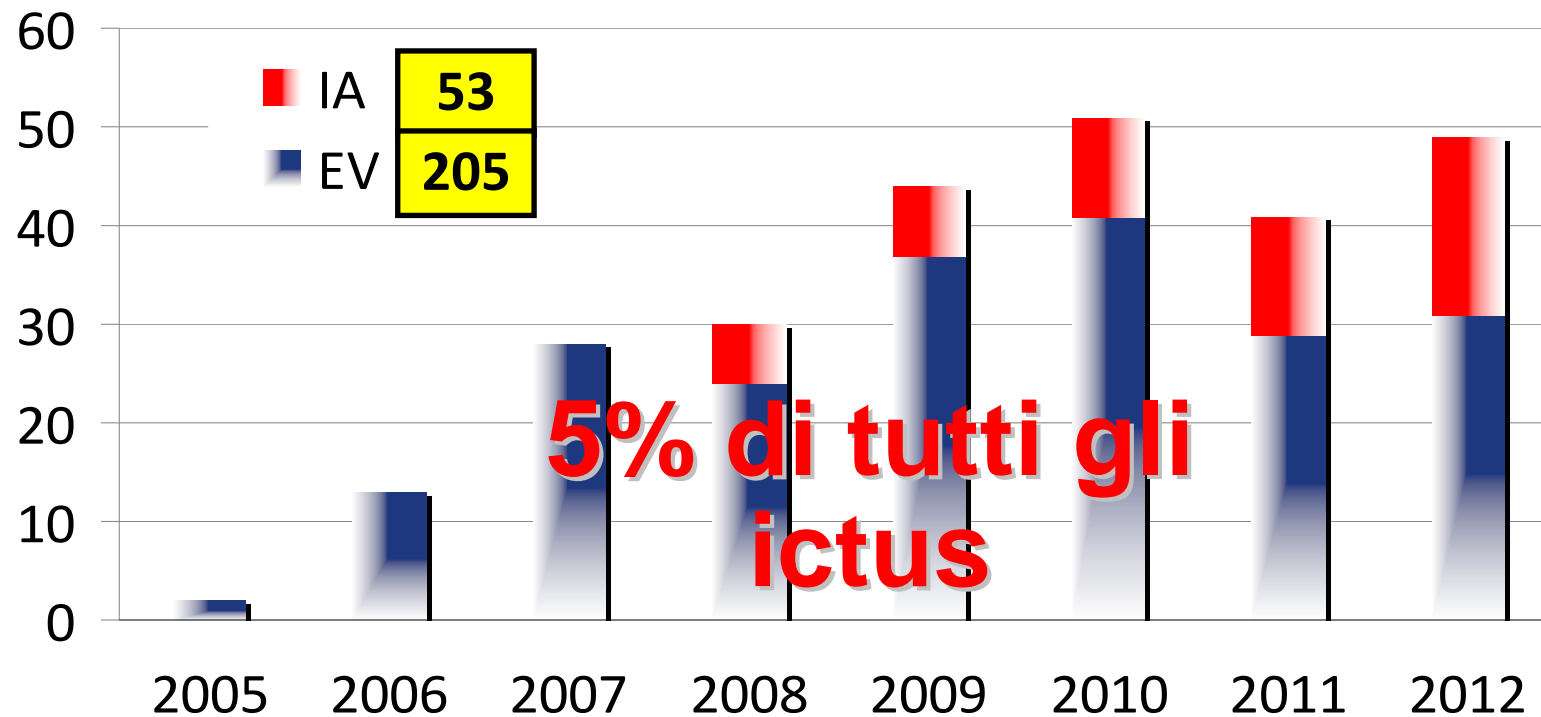
## Alive and Independent at Day 90

### Adjusted odds ratio (95% CI) by stroke onset to treatment time

Time is Brain

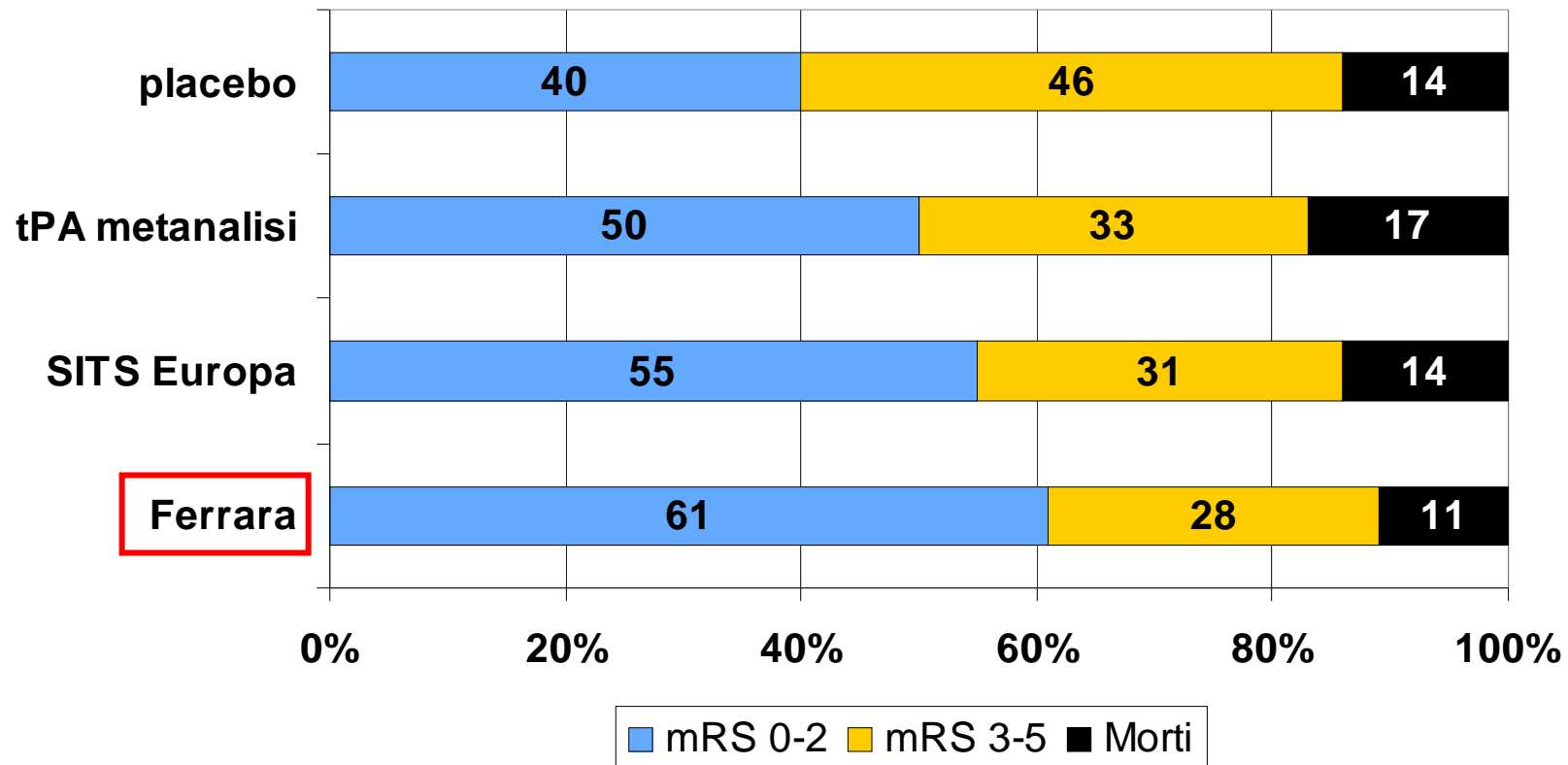


## Trattamenti in acuto – Stroke Unit Ferrara



# OUTCOME a 3 mesi

pz trattati con trombolisi ev

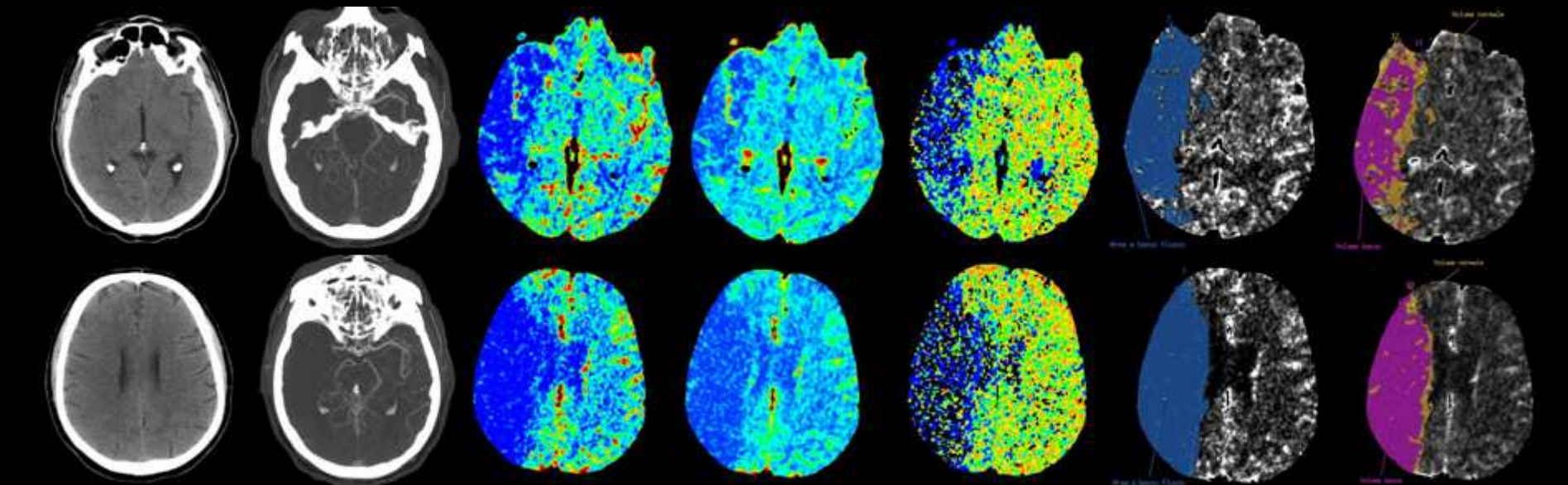
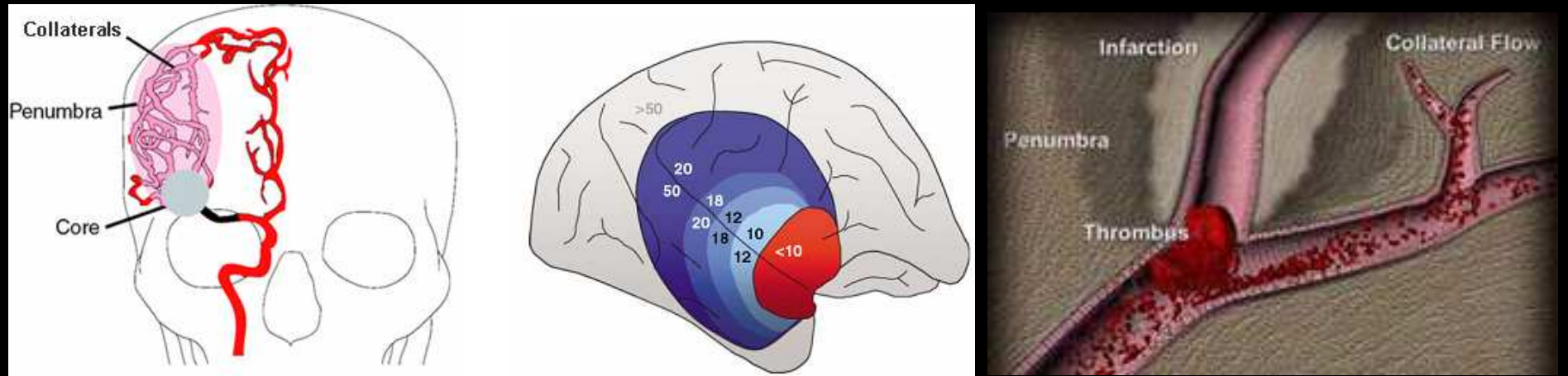


# Limiti trombolisi ev

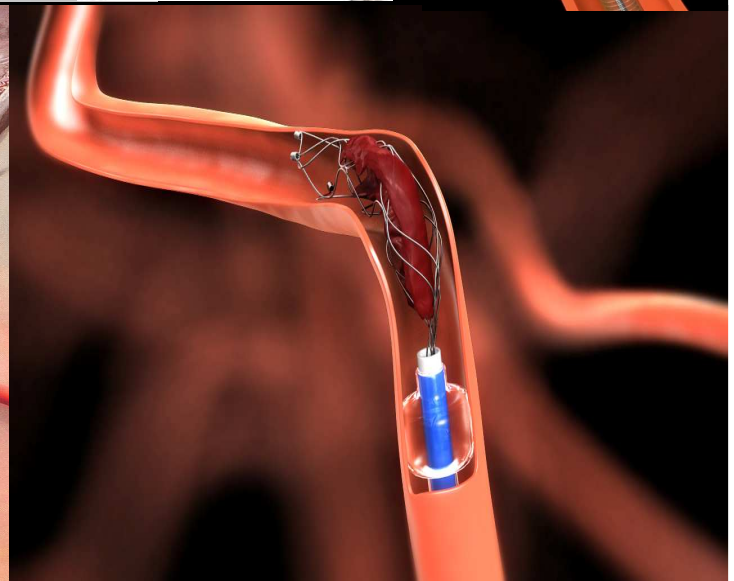
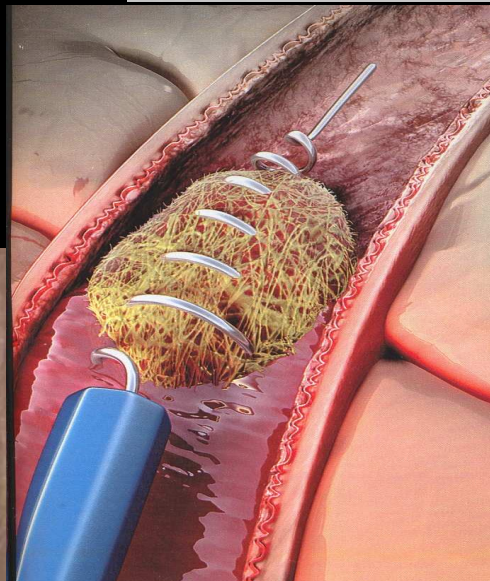
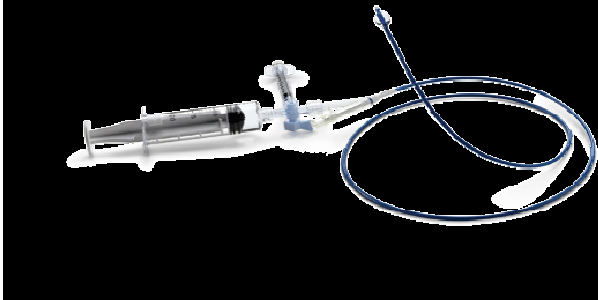
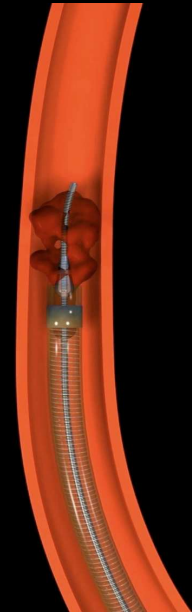
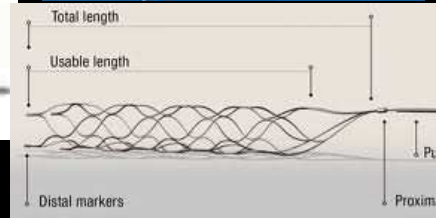
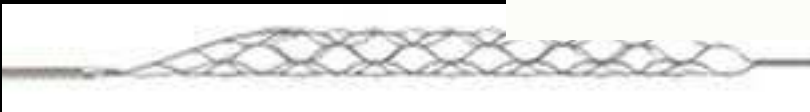
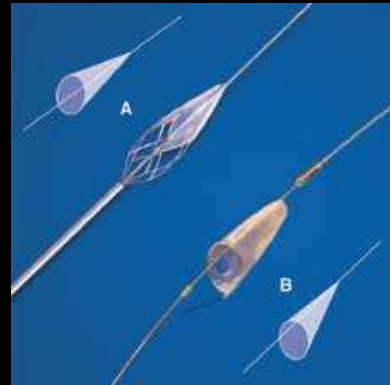
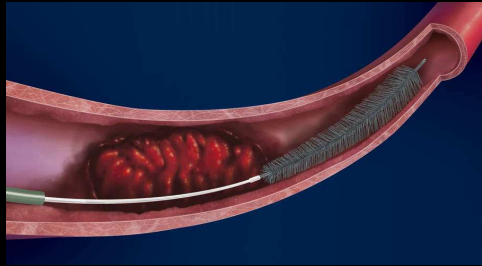
- Finestra temporale rigida
  - Numerosi criteri di esclusione
  - Basso tasso ricanalizzazione in occlusione  
grosso vaso
  - Rischio emorragico sistemico
- } Basso tasso pz  
trattabili/tot. ictus

# ... oltre la trombolisi ev

## Studio penombra ischemica in acuto e ...



# ... ricanalizzazione endovascolare





Registro Endovascolare Ictus  
[www.registroendovascolare.it](http://www.registroendovascolare.it)

Centro	2008	2009	2010	2011	2012	Totale
AOU Careggi Firenze	14	22	23	35	45	139
Nuovo Ospedale Civile S. Agostino Estense Modena	9	18	28	25	38	118
Ospedale Le Molinette Torino	6	8	16	10	42	82
Ospedale di Teramo		7	24	27	22	80
UTN Policlinico Tor Vergata Roma		5	20	25	29	79
Policlinico Milano	14	17	22	9	11	73
AOU Senese	9	11	5	6	25	56
Arcispedale S. Anna Ferrara	6	7	10	12	18	53
Policlinico Universitario Padova		6	13	10	12	41
Spedali Civili Brescia	1			17	20	38
Az. Univ. Osp. di Circolo e Macchi, Varese	2	5	1	15	14	37
Ospedale Umberto I Mestre	5	5	5	10	5	30
Università Aquila	20	1	4	1		26
Ospedale Regionale della Valle d'Aosta	3	5	4	6	2	20
Fondazione IRCCS Mondino Pavia	8	9	3			20
Ospedale Civile Maggiore Borgo Trento Verona		1	5	6	6	18
Ospedale S. Corona Pietra Ligure	3	1	1	6	5	16
Policlinico San Matteo Pavia				12	4	16
AO Sant'Anna Como					13	13
Ospedale di Lecco				5	7	12
Azienda Ospedaliero Universitaria Pisana	1	5	1	2	1	10
AOU Parma			4	2	4	10
Istituto Scientifico San Raffaele Milano	2	1	6			9
Ospedale Maggiore Bologna				1	7	8
Ospedale Cardarelli Napoli				4	1	5
Arcispedale Santa Maria Nuova Reggio Emilia		2	2			4
AO S. Andrea Roma	2		1			3
Ospedale San Giovanni Bosco Torino				1		1
Policlinico Umberto I Roma			1			1
<b>TOTALI</b>	<b>105</b>	<b>136</b>	<b>199</b>	<b>247</b>	<b>331</b>	<b>1018</b>