

Protocollo TIA in OBI

Dr. Giovanni Pinelli

UO Medicina d'Urgenza e PS
Ospedale NOCSAE – Baggiovara
Azienda USL Modena

Dr. Guido Bigliardi

UO NEUROLOGIA
Ospedale NOCSAE – Baggiovara
Azienda USL Modena

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La definizione di TIA è cambiata

- Episodio transitorio di disfunzione neurologica, causato da un'ischemia nel SNC, senza infarto.
- Il rischio di stroke nel breve periodo aumenta dopo un TIA (3.2 – 18% dopo 1 mese; 4.0 – 17% dopo 3 mesi).

**Il TIA è un'Emergenza
neurologica!!**

Validation and refinement of scores to predict very early stroke risk after transient ischaemic attack

S Claiborne Johnston, Peter M Rothwell, Mai N Nguyen-Huynh, Matthew F Giles, Jacob S Elkins, Allan L Bernstein, Stephen Sidney

Summary

Background We aimed to validate two similar existing prognostic scores for early risk of stroke after transient ischaemic attack (TIA) and to derive and validate a unified score optimised for prediction of 2-day stroke risk to inform emergency management.

Methods The California and ABCD scores were validated in four independent groups of patients (n=2893) diagnosed with TIA in emergency departments and clinics in defined populations in the USA and UK. Prognostic value was quantified with c statistics. The two groups used to derive the original scores (n=1916) were used to derive a new unified score based on logistic regression.

Findings The two existing scores predicted the risk of stroke similarly in each of the four validation cohorts, for stroke risks at 2 days, 7 days, and 90 days (c statistics 0.60–0.81). In both derivation groups, c statistics were improved for a unified score based on five factors (age ≥ 60 years [1 point]; blood pressure $\geq 140/90$ mm Hg [1]; clinical features: unilateral weakness [2], speech impairment without weakness [1]; duration ≥ 60 min [2] or 10–59 min [1]; and diabetes [1]). This score, ABCD², validated well (c statistics 0.62–0.83); overall, 1012 (21%) of patients were classified as high risk (score 6–7, 8.1% 2-day risk), 2169 (45%) as moderate risk (score 4–5, 4.1%), and 1628 (34%) as low risk (score 0–3, 1.0%).

 **Implications** Existing prognostic scores for stroke risk after TIA validate well on multiple independent cohorts, but the unified ABCD² score is likely to be most predictive. Patients at high risk need immediate evaluation to optimise stroke prevention.

ABCD² score

Age

≥60 years	1
<60 years	0

Blood pressure

Systolic ≥140 mm Hg or diastolic ≥90 mm Hg	1
Systolic <140 mm Hg and diastolic <90 mm Hg	0

Clinical features

Unilateral weakness (with or without speech impairment)	2
Speech impairment only without weakness	1
Other	0

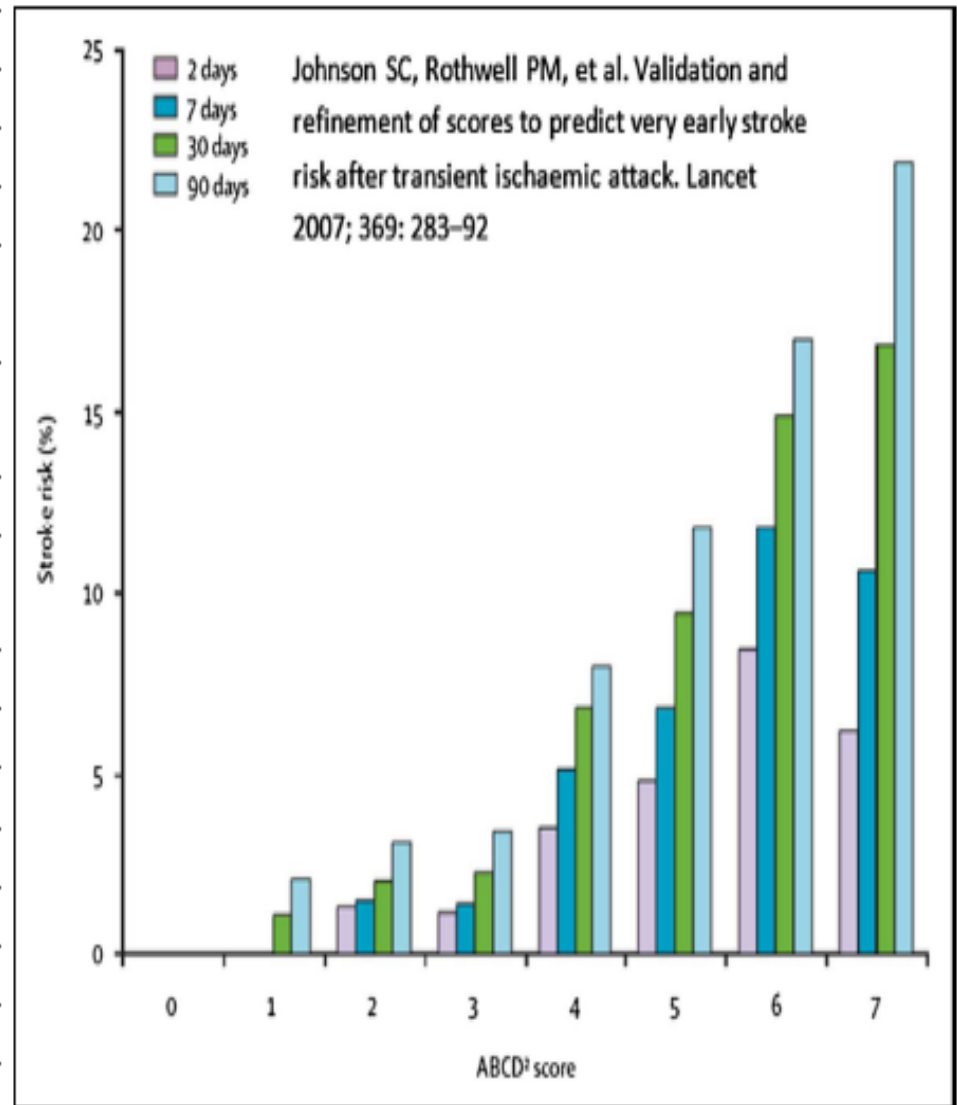
Duration

Duration ≥ 60 minutes	2
Duration 10-59 minutes	1
<10 minutes	0

Diabetes

Yes	1
No	0

The 90-day risk of stroke for scores of 1 and 7 are 2% and 22%, respectively



Short-term risk of stroke by ABCD²

A transient ischaemic attack clinic with round-the-clock access (SOS-TIA): feasibility and effects

Philippa C Lavalée, Elena Meseguer, Halim Abboud, Lucie Cabrejo, Jean-Marc Olivot, Olivier Simon, Mikael Mazighi, Chantal Nfje, Philippe Nidot, Bertrand Lapergue, Isabelle F Klein, Eric Brochet, Philippe Gabriel Steg, Guy Lesèche, Julien Labreuche, Pierre-Jean Touboul, Pierre Amarenco

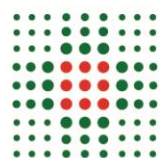
Summary

Background Diagnosis and treatment of cerebral and retinal transient ischaemic attacks (TIAs) are often delayed by the lack of immediate access to a dedicated TIA clinic. We evaluated the effects of rapid assessment of patients with TIA on clinical decision making, length of hospital stay, and subsequent stroke rates.

Methods We set up SOS-TIA, a hospital clinic with 24-h access. Patients were admitted if they had sudden retinal or cerebral focal symptoms judged to relate to ischaemia and if they made a total recovery. Assessment, which included neurological, arterial, and cardiac imaging, was within 4 h of admission. A leaflet about TIA with a toll-free telephone number for SOS-TIA was sent to 15 000 family doctors, cardiologists, neurologists, and ophthalmologists in Paris and its administrative region. Endpoints were stroke within 90 days, and stroke, myocardial infarction, and vascular death within 1 year.

Findings Between January, 2003, and December, 2005, we admitted 1085 patients with suspected TIA; 574 (53%) were seen within 24 h of symptom onset. 701 (65%) patients had confirmed TIA or minor stroke, and 144 (13%) had possible TIA. 108 (17%) of the 643 patients with confirmed TIA had brain tissue damage. Median duration of symptoms was 15 min (IQR 5–75 min). Of the patients with confirmed or possible TIA, all started a stroke prevention programme, 43 (5%) had urgent carotid revascularisation, and 44 (5%) were treated for atrial fibrillation with anticoagulants. 808 (74%) of all patients seen were sent home on the same day. The 90-day stroke rate was 1·24% (95% CI 0·72–2·12), whereas the rate predicted from ABCD² scores was 5·96%.

 **Interpretation** Use of TIA clinics with 24-h access and immediate initiation of preventive treatment might greatly reduce length of hospital stay and risk of stroke compared with expected risk.



GUIDELINES	
ESO, 2008	It is recommended that patients with suspected TIA be referred without delay to a TIA clinic or to a medical centre with a stroke unit that can provide expert evaluation and immediate treatment. Early clinical evaluation, routine blood tests and urgent vascular imaging.
AHA/ASA, 2009	Patients with suspected TIA should be evaluated as soon as possible after an event.
SPREAD, 2012	In patients with suspected TIA is indicated the immediate evaluation in Hospital clinical evaluation (ABCD2 score >4 hospitalization).
NICE, 2008 Pathway last updated: July 2014	People with suspected TIA should be assessed as soon as possible for their risk of stroke using ABCD2 score (>4 or <3).

Stroke

JOURNAL OF THE AMERICAN HEART ASSOCIATION



All Patients Should Be Admitted to the Hospital After a Transient Ischemic Attack Brett L. Cucchiara and Scott E. Kasner

Stroke. 2012;43:1446-1447

doi: 10.1161/STROKEAHA.111.636746

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Stroke

JOURNAL OF THE AMERICAN HEART ASSOCIATION



Not All Patients Should Be Admitted to the Hospital for Observation After a Transient Ischemic Attack Pierre Amarenco

Stroke. 2012;43:1448-1449

doi: 10.1161/STROKEAHA.111.636753

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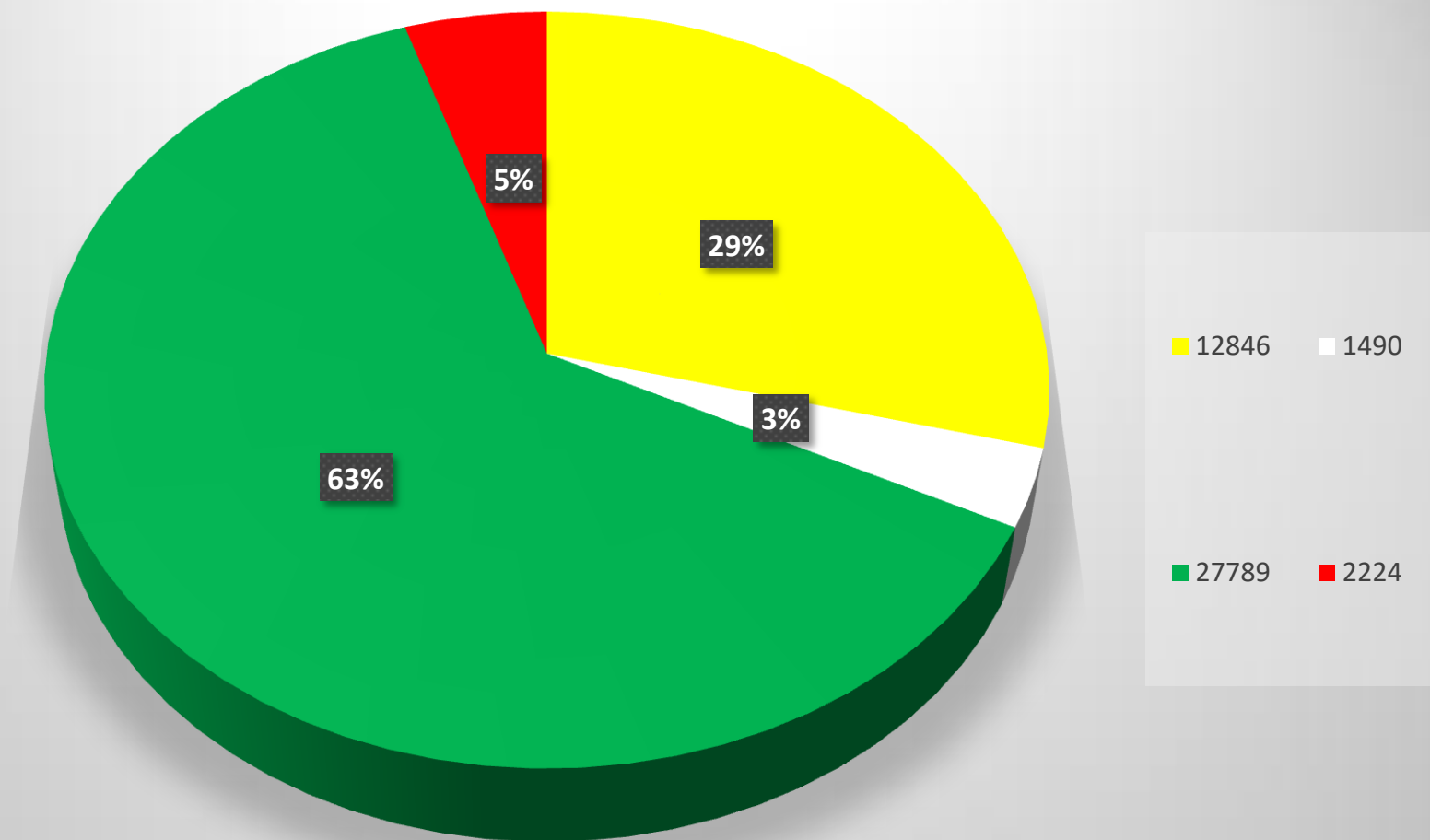
OBI di Modena



- Open-space con 6 posti letto
- Monitoraggio multiparametrico (12leads ECG)
- 1 medico d'urgenza h12
- 1 infermiere dedicato h24
- 1 OSS h24
- Neurologo, cardiologo, chirurgo vascolare a disposizione
- Diagnostica neuroradiologica H 24

439 attivazioni «codice stroke» su oltre 1900 codici «neurologici»

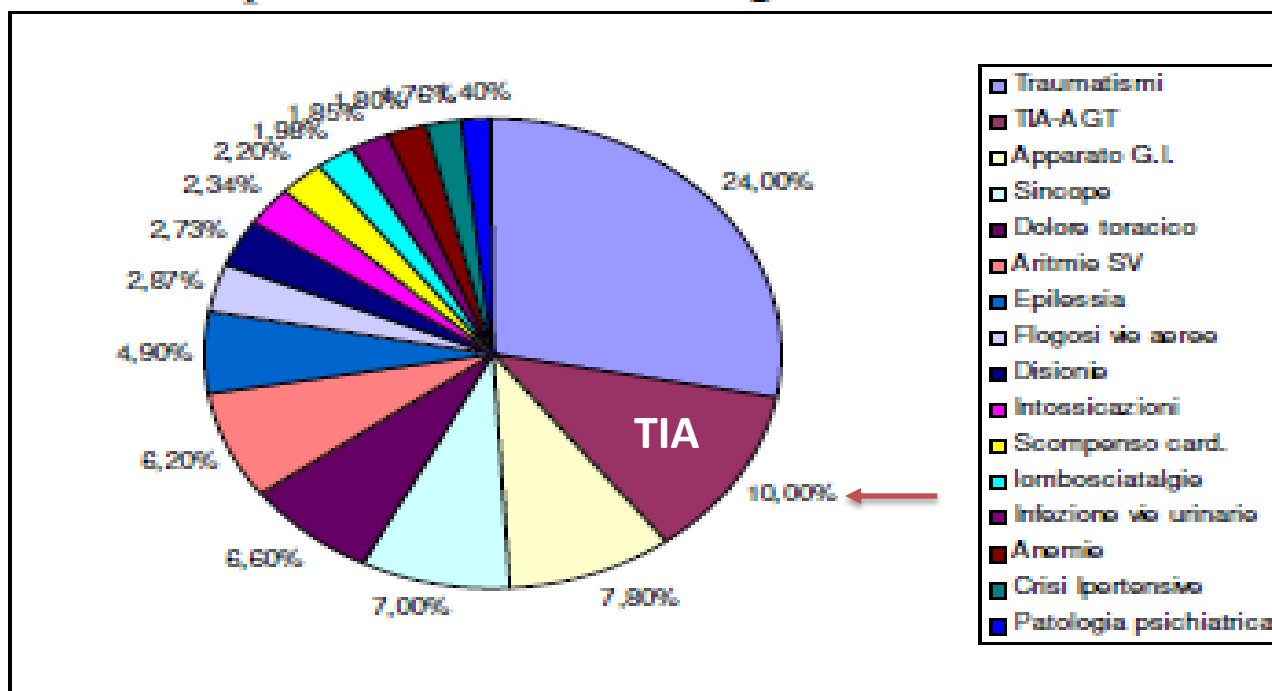
Dati Pronto Soccorso NOCSAE 2014



Report dati attività OBI PS NOCSAE anno 2014

	N° totale	% dimissione
Accessi PS	44236	78,30
OBI	2507 (5.66% accessi)	82,45

Casistiche prevalenti secondo diagnosi ICD 9



Protocollo TIA in OBI (Modena)



1. Sospetto clinico di TIA;

2. Regressione totale dei sintomi neurologici;

3. Esclusione di tutto ciò che non è TIA;

4. Ospedalizzazione urgente in caso di TIA ricorrenti.



Questo non è un TIA!!!

- Sincope
- Sensazione di instabilità
- Astenia generalizzata
- Confusione
- Incontinenza
- Vertigine
- Diplopia
- Disfagia
- Acufeni
- Scotomi
- Amnesia
- Drop attack
- Perdita di equilibrio



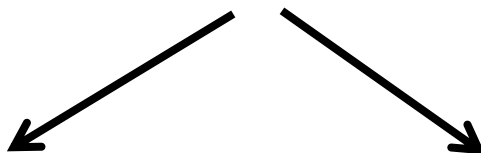
Protocollo TIA

- Valutazione neurologica (SU)
- Diagnostica per immagini (TC)
- ECG
- Monitoraggio multiparametrico (ECG- SaO₂- NBP)
- Esami di laboratorio: emocromo con formula, creatinina, colesterolo, HDL, LDL, Lp (a), glucosio, Hb glicata, omocisteina
- Punteggio ABCD₂



Scenario 1

TC cranio: lesione ischemica acuta



Scenario 1 A

- Pz < 85 anni, senza comorbidità gravi
- Ricovero in UO Neurologia

Scenario 1 B

- Pz > 85 anni o < 85 anni con comorbidità gravi
- Ricovero in UO Medicina Interna/ Geriatria



Scenario 2

Tc cranio: negativa per lesione ischemica acuta

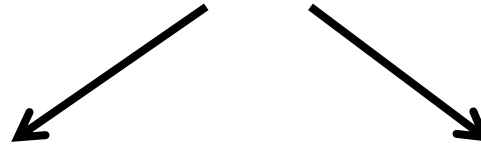
Osservazione per 24 h in OBI

- ✓ Osservazione stretta
- ✓ Monitoraggio ECG , pressione, SaO₂
- ✓ Esami del sangue
- ✓ ECOTSA
- ✓ ECoTCD e ECOcardioTT in casi selezionati
- ✓ Inizio tp farmacologica per la prevenzione secondaria

Dopo il periodo di osservazione di OBI si possono verificare i seguenti scenari...

1) Scenario 2 A (negativo)

nessun rischio vascolare



- Pz < 80 anni

- ABCD₂ > 4 ricovero in Neurologia

- ABCD₂ < 4 day Service Neurologia

Pz > 80 anni

ABCD₂ > 4 → ricovero UO Medicina Interna

ABCD₂ < 4 **dimissione con lettera per medico curante e controllo ambulatoriale a 30 gg da parte di neurologo S.U.**

2) Scenario 2B (negativo) con fattori di rischio vascolari

```
graph TD; A["2) Scenario 2B (negativo)  
con fattori di rischio vascolari"] --> B["•ABCD2 < 6  
  
•Tp farmacologica per la  
prevenzione secondaria  
  
•Dimissione con lettera per  
medico curante e controllo  
ambulatoriale a 30 gg da  
parte di SU neurologo"]; A --> C["•ABCD2 > 6  
  
•Ricovero UO Medicina  
Interna"];
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- ABCD₂ < 6

- Tp farmacologica per la prevenzione secondaria

- Dimissione con lettera per medico curante e controllo ambulatoriale a 30 gg da parte di SU neurologo

- ABCD₂ > 6

- Ricovero UO Medicina Interna

3) Scenari ad alto rischio



- Scenario 2 C
- Stenosi carotidea significativamente sintomatica
- Endoarteriectomia carotidea urgente (UO Chirurgia Vascolare)

- Scenario 2 D
- Comparsa di FA
- Ricovero UO Medicina Interna

Scenario 3

pazienti con grave disabilità (mRS 4-5)
TC cranio senza lesioni ischemiche acute

- Osservazione < 24 ore
- Monitoraggio ECG, Pressione, SaO₂
- Esami del sangue
- ECOTSA/TCD – ECOTT/TE in casi selezionati
- Tp farmacologica per la prevenzione secondaria

Se le indagini risultano negative dimissione con lettera al MMG

LETTERA AL MEDICO CURANTE

Preg.mo Dott.

Medico Curante di

Caro Collega,
Il tuo paziente, Sig/ra _____ è stato ricoverato presso l'Osservazione Breve Intensiva (OBI) del Pronto Soccorso di questo Ospedale per comparsa di TIA in territorio:
= Carotideo destro
= Carotideo sinistro
= Vertebro-basilar.

I Colleghi dell'OBI hanno provveduto all'esecuzione di esami ematici, strumentali oltre che controllo ECG e parametri pressori nelle 24-48 ore successive all'episodio ischemico transitorio cerebrale, di cui verranno allegati i referti.

E' stata inoltre modificata la terapia in atto introducendo i seguenti farmaci:

Il tuo paziente presenta i seguenti fattori di rischio per patologia cerebrovascolare:

- = diabete
- = Ipertensione
- = cardiopatia
- = fibrillazione atriale
- = Ipercolesterolemia
- = Abitudine tabagica
- = Altro:

che spiegano la genesi dell'episodio ischemico transitorio cerebrale. Numerosi studi hanno dimostrato che pazienti con TIA hanno un rischio >10% di ischemia cerebrale nei 90 giorni successivi alla sintomatologia ischemica transitoria cerebrale, oltre ad un aumentato rischio di eventi vascolari in altri distretti, essendo tali pazienti frequentemente portatori di vasculopatie pluridistrettuali. La prevenzione di tali eventi vascolari ischemici cerebrali e non, si basa ancora una volta sul controllo dei fattori di rischio cerebrovascolari.

Si consiglia pertanto stretto monitoraggio dei valori pressori (due volte al giorno per 3 mesi, compilando diario dei valori pressori) ai fini di mantenere i livelli di PAS <120 e di PAD<80; stretto controllo dei valori glicemici; controllo dell'ipercolesterolemia mediante dieta e terapia farmacologica. Attività fisica regolare. E' indicato nei pazienti cardiopatici controllo cardiologico ambulatoriale a breve.

E' indicato inoltre controllo fra 3 mesi degli esami ematochimici (assetto lipidico, emocromo, CPK, omocisteinemia, funzionalità epatica e renale).

In caso di riscontro di iperomocisteinemia è indicata la seguente terapia: complesso vitaminico B (B1-B6-B12) ed acido folico per 30 giorni e successivo controllo, se i valori rientrano nei limiti di norma il paziente potrà effettuare cicli di una settimana

al mese, altrimenti proseguire la terapia).

In caso il paziente DOVESSE RIPRESENTARE LA SINTOMATOLOGIA NEUROLOGICA E' INVITATO A PRESENTARSI RAPIDAMENTE PRESSO QUESTO PRONTO SOCCORSO.

Il paziente verrà contattato telefonicamente fra 6 mesi dal personale della Neurologia o Medicina d'Urgenza per follow-up.

Rimaniamo a disposizione per ogni eventuale chiarimento.

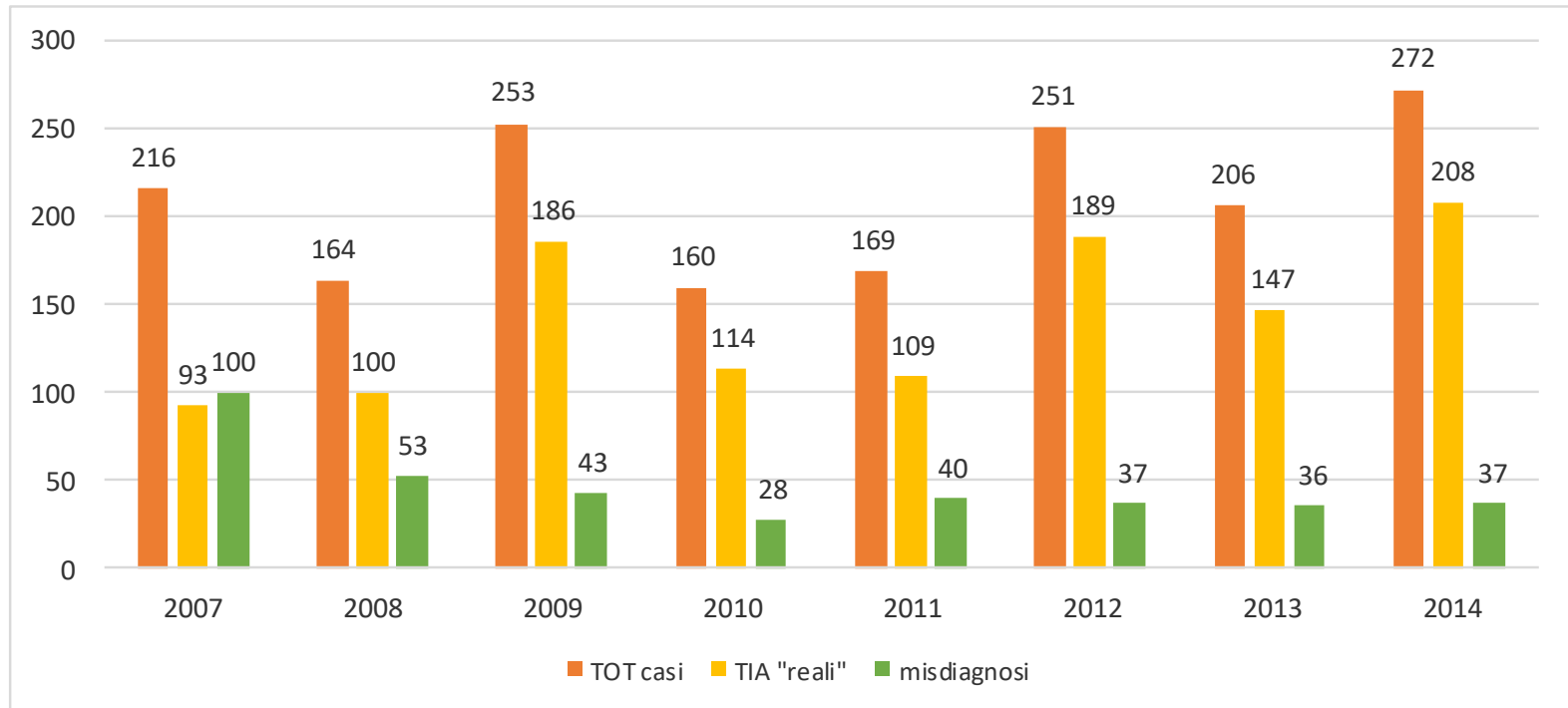
Cordiali saluti

Dott.

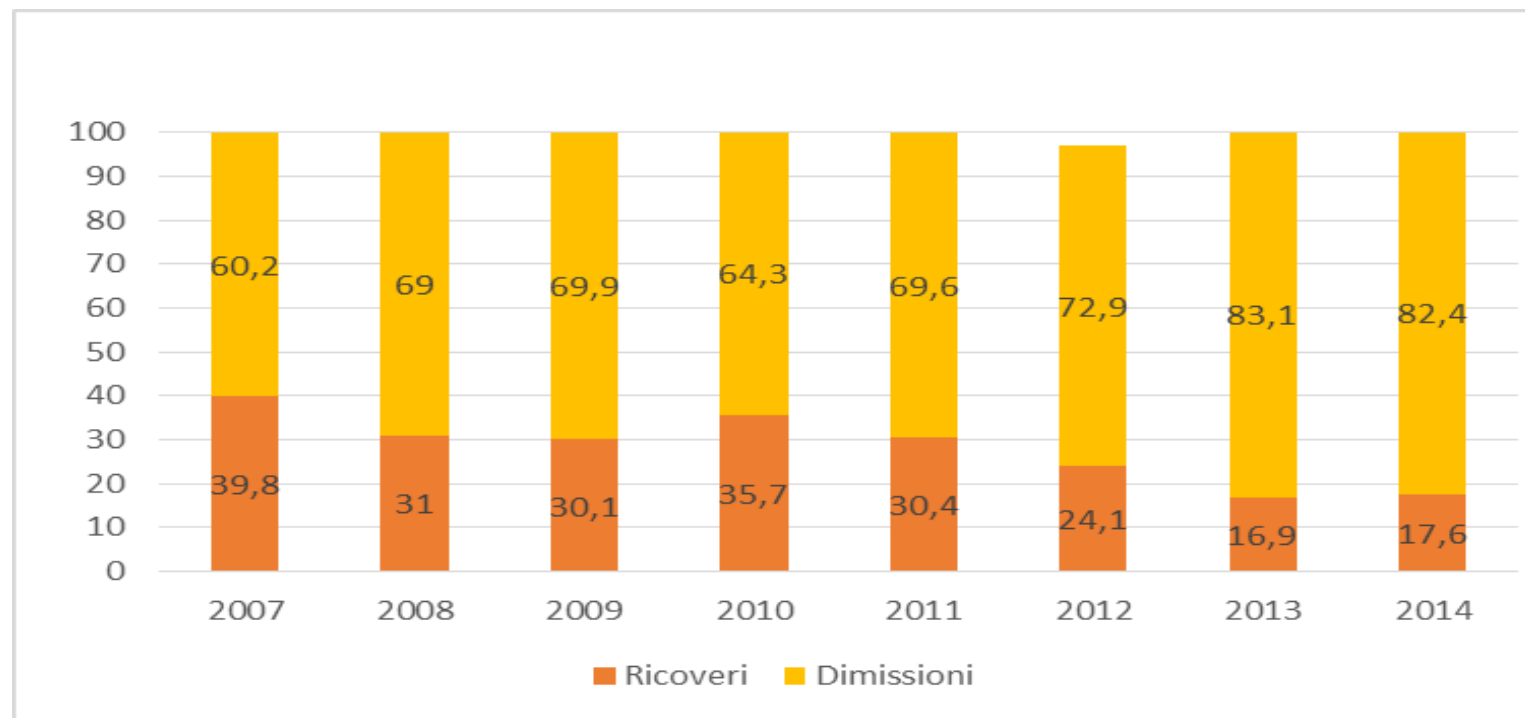
Tel.

Lettera per MMG

Accuratezza diagnostica



Ricoveri ospedalieri per TIA



Recidive

		N pts	Recurrences (%)	HR (95%CI)
YEAR of TIA				
	2007*	93	27 (29.03)	
	2011-2014	511	65 (12.72)	0.35 (0.20; 0.52)
YEAR of TIA				
	2007*	93	27 (29.03)	
	2011	109	14 (12.84)	0.23 (0.11; 0.47)
	2012	189	24 (12.70)	0.21 (0.11; 0.40)
	2013	147	18 (12.24)	0.46 (0.25; 0.83)
	2014	66	9 (13.64)	0.75 (0.35; 1.62)

Nessuna differenza di recidiva tra dimessi e ricoverati

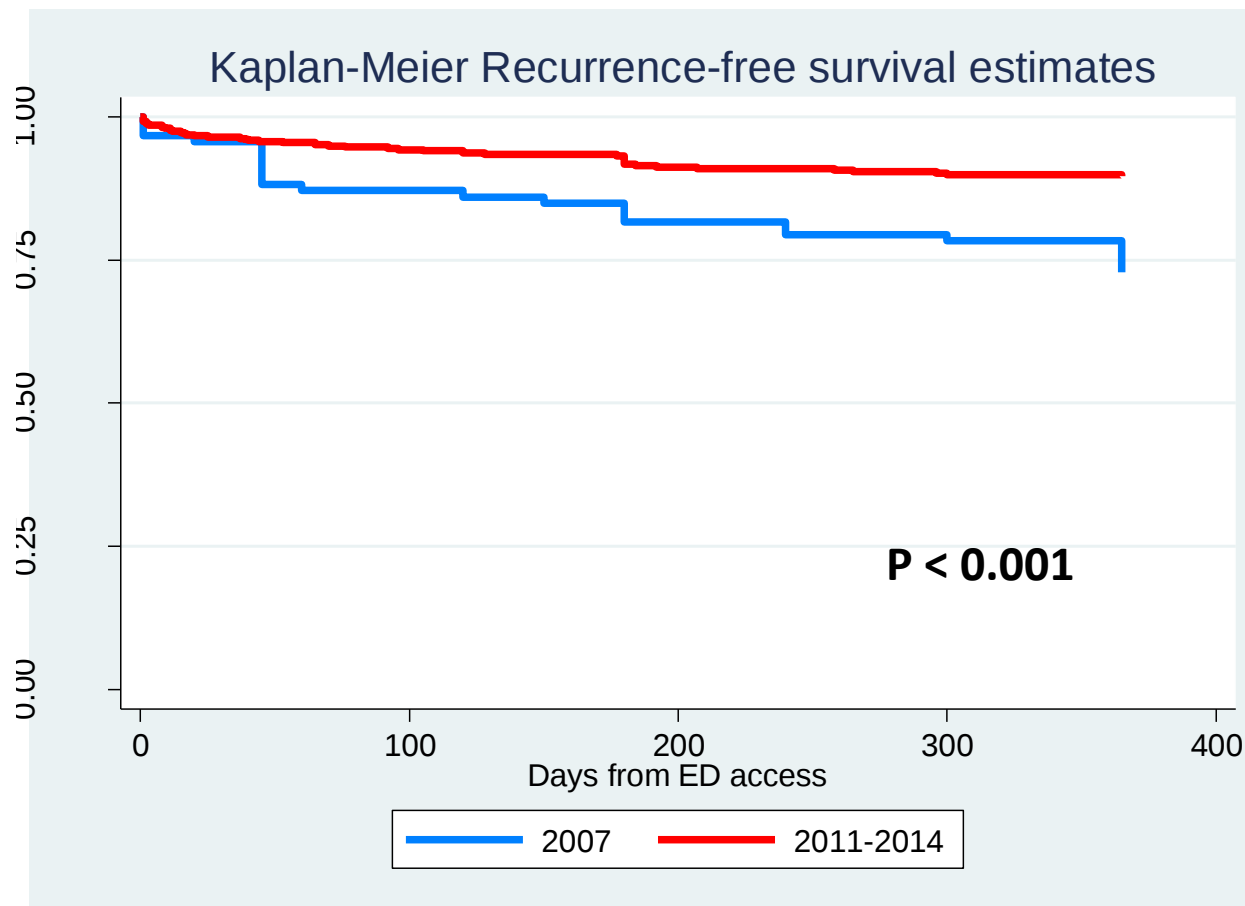


Table 3. Medication Use.

Medication	Before Admission (N=4583)	At Discharge (N=4583)	At 3 Months (N=4086)	At 12 Months (N=3960)
	<i>number/total number (percent)</i>			
≥1 Antiplatelet agent	1225/4555 (26.9)	4046/4486 (90.2)	3293/4043 (81.4)	3052/3872 (78.8)
Aspirin	1069/4550 (23.5)	3015/4437 (68.0)	2445/3996 (61.2)	2239/3863 (58.0)
Other antiplatelet agent	272/4550 (6.0)	1542/4437 (34.8)	1274/3996 (31.9)	1141/3863 (29.5)
Aspirin and other antiplatelet agent	121/4550 (2.7)	593/4437 (13.4)	473/3996 (11.8)	336/3863 (8.7)
≥1 Anticoagulant agent	230/4552 (5.1)	791/4501 (17.6)	673/4035 (16.7)	672/3859 (17.4)
≥1 Antihypertensive agent	2495/4564 (54.7)	3075/4544 (67.7)	2779/4009 (69.3)	2739/3835 (71.4)
1	1048/4518 (23.2)	1416/4438 (31.9)	1210/3998 (30.3)	1147/3823 (30.0)
2	802/4518 (17.8)	904/4438 (20.4)	873/3998 (21.8)	920/3823 (24.1)
≥3	599/4518 (13.3)	609/4438 (13.7)	685/3998 (17.1)	662/3823 (17.3)
≥1 Lipid-lowering agent	1213/4559 (26.6)	3156/4521 (69.8)	2797/4006 (69.8)	2591/3838 (67.5)
Statin	1125/4551 (24.7)	3022/4490 (67.3)	2707/3995 (67.8)	2497/3829 (65.2)
Other lipid-lowering agent	125/4551 (2.7)	151/4490 (3.4)	127/3995 (3.2)	145/3829 (3.8)

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Problemi aperti

An assessment of the cost-effectiveness of magnetic resonance, including diffusion-weighted imaging, in patients with transient ischaemic attack and minor stroke: a systematic review, meta-analysis and economic evaluation

Joanna Wardlaw,^{1*} Miriam Brazzelli,¹ Hector Miranda,¹
Francesca Chappell,¹ Paul McNamee,² Graham Scotland,²
Zahid Quayyum,² Duncan Martin,¹ Kirsten Shuler,¹
Peter Sandercock¹ and Martin Dennis¹

¹Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, UK

²Health Economics Research Unit, University of Aberdeen, Aberdeen, UK



**National Institute for
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The cost-effectiveness evidence would suggest that MRI does not appear to be a cost-effective use of resources for the routine diagnosis and management of TIA and minor stroke. However, in the subpopulation of patients who present at > 1 week after stroke and in whom CT will not be able reliably to identify haemorrhage, MR with T2* sequence is better than CT (thought to be still more expensive) and should be reserved for these patients. MR DWI might also help in the occasional patient in whom it is not clear if the symptoms are due to a tight carotid stenosis or are unrelated in the posterior circulation. Separately, patients with suspected unusual causes of TIA/minor stroke (dissection, rare genetic variants, etc., as are more common in young patients) are also more likely to benefit from MR. However, even the use of MR in these minority subpopulations is limited as the advantage in terms of added QALYs remains quite limited.

Grazie per l'attenzione

Dr. Giovanni Pinelli



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simeu

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