Assessment geriatrico nella definizione del rischio anestesiologico

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SC Geriatria

TABELLA 1 - CLASSIFICAZIONE DEI PAZIENTI SECONDO L'AMERICAN SOCIETY OF ANESTHESIOLOGISTS (ASA) USATA IN ITALIA

Classe	Condizioni del paziente
ASA I	Paziente sano
ASA II	Presenza di una lieve malattia sistemica senza nessuna limitazione funzionale: bronchite cronica; obesità moderata; diabete ben controllato; infarto miocardico di vecchia data; ipertensione moderata
ASA III	Presenza di una malattia sistemica grave con limitazione funzionale di grado moderato: angina pectoris ben controllata dalla terapia; diabete insulino dipendente; obesità patologica; insufficienza respiratoria moderata
ASA IV	Presenza di una malattia sistemica grave che costituisce un pericolo costante per la sopravvivenza: insufficienza cardiaca severa; angina pectoris "instabile" poco sensibile al trattamento; insufficienza respiratoria, renale, epatica o endocrina di grado avanzato
ASA V	Paziente moribondo, la cui sopravvivenza non è garantita per 24 ore, con o senza l'intervento chirurgico come nel caso di shock da rottura di aneurisma; politraumatizzato grave

Cosa può aggiungere il Geriatra?

BMJ

Comprehensive geriatric assessment for older adults admitted to hospital: meta-analysis of randomised controlled trials

Significantly more older patients are likely to survive admission to hospital and return home if they undergo comprehensive geriatric assessment while they are inpatients. Fewer will die or experience deterioration and more will have improved cognitive functioning

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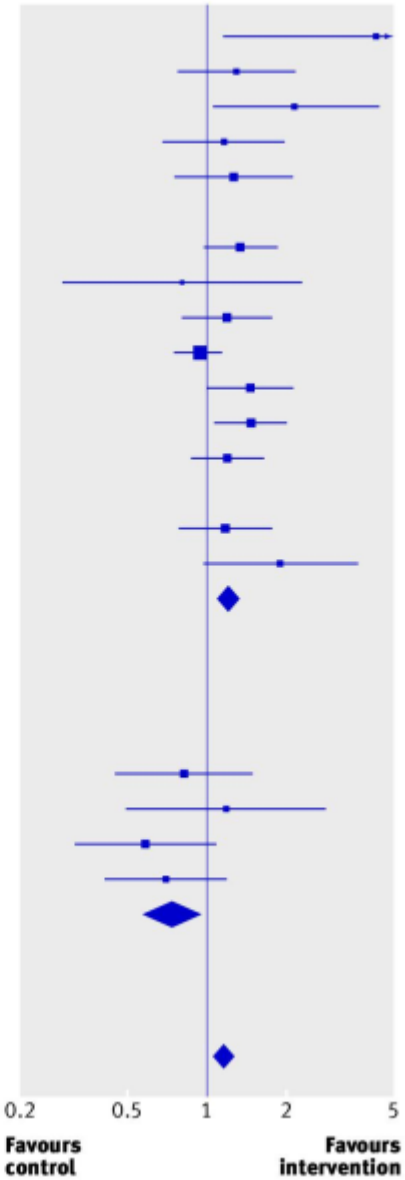
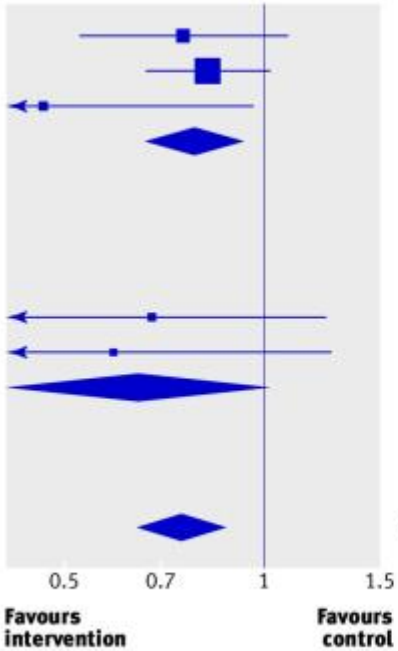
	No of events/total: Comprehensive geriatric assessment	No of events/total: Control	Mantel-Haenszel fixed odds ratio (95% CI)	Weight (%)	Mantel-Haenszel fixed odds ratio (95% CI)
Ward					
White 1994[52]	14/20	7/20		0.3	4.33 (1.15 to 16.32)
Saltvedt 2002[47]	76/127	68/127		3.6	1.29 (0.79 to 2.13)
Rubenstein 1984[45]	35/63	22/60		1.3	2.16 (1.05 to 4.45)
Nikolaus 1999[41] (ward)	114/179	56/93		3.6	1.16 (0.69 to 1.94)
Nikolaus 1999[41] (plus early supported discharge)	118/181	55/92		3.4	1.26 (0.75 to 2.11)
Landefeld 1995[35]	218/327	194/324		8.6	1.34 (0.97 to 1.85)
Kay 1992[31]	16/30	17/29		1.1	0.81 (0.29 to 2.26)
Fretwell 1990[27]	104/221	92/215		6.6	1.19 (0.81 to 1.73)
Counsell 2000[26]	474/767	485/764		24.7	0.93 (0.76 to 1.14)
Collard 1985[25]	163/218	319/477		6.7	1.47 (1.02 to 2.10)
Cohen 2002[22] (usual care, outpatient)	217/348	185/348		9.3	1.46 (1.08 to 1.97)
Cohen 2002[22] (geriatric evaluation and management unit)	200/346	185/346		10.4	1.19 (0.88 to 1.61)
Asplund 2000[21]	121/190	134/223		5.9	1.16 (0.78 to 1.74)
Applegate 1990[19]	55/78	43/77		1.7	1.89 (0.97 to 3.67)
Subtotal (95% CI)	1925/3095	1862/3195		87.1	1.22 (1.10 to 1.35)
Test for heterogeneity: χ^2=17.66, df=13, P=0.17, I^2=26%					
Test for overall effect: z=3.77, P<0.001					
Team					
Winograd 1993[53]	32/99	36/98		3.3	0.82 (0.46 to 1.48)
Naughton 1994[40]	39/51	44/60		1.3	1.18 (0.50 to 2.80)
McVey 1989[38]	51/93	62/92		3.7	0.59 (0.32 to 1.07)
Kircher 2007[32]	98/150	94/129		4.7	0.70 (0.42 to 1.17)
Subtotal (95% CI)	220/393	236/379		12.9	0.75 (0.55 to 1.01)
Test for heterogeneity: χ^2=1.86, df=3, P=0.60, I^2=0%					
Test for overall effect: z=1.90, P=0.06					
Total (95% CI)	2145/3488	2098/3574		100.0	1.16 (1.05 to 1.28)
Test for heterogeneity: χ^2=28.49, df=17, P=0.04, I^2=40%					
Test for overall effect: z=2.96, P=0.003					



Test for subgroup differences: χ^2=9.06, df=1, P=0.003, I^2=89%

Fig 2 Odds ratios for living at home at end of follow-up (median 12 months) in elderly patients according to comprehensive geriatric assessment after emergency admission

	No of events/total		Mantel-Haenszel fixed odds ratio (95% CI)	Weight (%)	Mantel-Haenszel fixed odds ratio (95% CI)
	Comprehensive geriatric assessment	Control			
Ward					
Landefeld 1995[35]	72/327	88/324		21.5	0.76 (0.53 to 1.08)
Counsell 2000[26]	237/767	269/764		58.0	0.82 (0.66 to 1.02)
Rubenstein 1984[45]	26/63	36/60		6.7	0.47 (0.23 to 0.96)
Subtotal (95% CI)	335/1157	393/1148		86.2	0.78 (0.65 to 0.93)
Test for heterogeneity: χ^2=2.19, df=2, P=0.33, I^2=9%					
Test for overall effect: z=2.76, P=0.006					
Team					
McVey 1989[38]	32/93	40/92		8.2	0.68 (0.38 to 1.24)
Thomas 1993[51]	17/68	23/64		5.5	0.59 (0.28 to 1.26)
Subtotal (95% CI)	49/161	63/156		13.8	0.65 (0.41 to 1.03)
Test for heterogeneity: χ^2=0.08, df=1, P=0.78, I^2=0%					
Test for overall effect: z=1.84, P=0.07					
Total (95% CI)	384/1318	456/1304		100.0	0.76 (0.64 to 0.90)
Test for heterogeneity: χ^2=2.81, df=4, P=0.59, I^2=0%					
Test for overall effect: z=3.24, P=0.001					



Test for subgroup differences: χ^2=0.54, df=1, P=0.46, I^2=0%

Fig 3 Odds ratios for death or deterioration at the end of follow-up (median 12 months) in elderly patients according to comprehensive geriatric assessment after emergency admission at baseline

Table 2| **Costs associated with comprehensive geriatric assessment (intervention) versus usual care (control)**

	Costs		
	Intervention	Control	Comments
Cohen 2002,[22] US:			
Geriatric unit-usual care outpatient *v* usual care inpatient-usual care outpatient	$36 592 (SD 1844)	$38 624 (SD 2037)	Cost-cost analysis separated into institutional costs and costings estimated for nursing home admissions based on standardised HMO rates
Geriatric unit-geriatric outpatient *v* usual care inpatient-geriatric outpatient	$35 935 (SD 1829)	$35 951 (SD 1827)	
Collard 1985,[25] US:			
Choate	$4015.17 (SE 0.03)	$4545.13 (SE 0.03)	Cost-cost analysis (hospital costs only)
Symmes	$3591.42 (SE 0.03)	$4155.54 (SE 0.02)	
Fretwell 1990,[27] US	$3148 (SD 7210)	$4163 (SD 18 406)	Cost-cost analysis (hospital costs only)
Applegate 1990,[19] US:			
Geriatric unit (rehab diagnosis) *v* usual care (rehab diagnosis)	$32 978 (SD 35 130)	$18 409 (SD 16 555)	Health and social care costs up to 1 year after randomisation
Geriatric unit (medical/surgical diagnosis) *v* usual care (medical/surgical diagnosis)	$25 846 (SD 29 628)	$15 248 (SD 13 152)	
Asplund 2000,[21] Sweden (Swedish kroner)	10 800 (IQR 9300-12 300)	12 800 (IQR 11 500-14 100)	Cost-cost analysis (hospital costs only)
Counsell 2000,[26] US	$5640	$5754	Included in experimental group costs are costs of renovation of geriatric unit
Hogan 1987,[30] Canada	$C98.36	$C77.68	Monthly costings for physician services only
Landefeld 1995,[35] US	$6608	$7240	Cost-cost analysis (hospital costs only)
Nikolaus 1999,[41] Germany (deutschmark):			
Geriatric unit-early supported discharge	3 365 000 ($1 922 400)	4 145 000 ($2 368 300)	Costs for hospital care and nursing homes (estimated as costs per 100 people per year)
Geriatric unit only	3 983 000 ($2 276 600)		
Rubenstein 1984,[45] US	$22 597	$27 826	Costs per year survived including hospital and nursing home costs
Naughton 1994,[40] US	$4525 (SD 5087)	$6474 (SD 7000)	Cost-cost analysis (hospital costs only)
White 1994,[52] US	$23 906	$45 189	Cost-cost analysis (hospital costs only)

What is already known on this topic

Older people represent a considerable proportion of hospital admissions and are at greatest risk of acquired disability, cognitive impairment, or admission to residential care

Some subgroups of in-hospital comprehensive geriatric assessment have been shown to be effective

What this study adds

Comprehensive geriatric assessment in hospital is effective and results in an increased likelihood of a patient returning home and avoiding admission to residential care or death and deterioration

The key features of successful comprehensive geriatric assessment seem to be treatment in discrete units, with expertise in the care of older people and control over the delivery of direct care

These benefits seem to be cost effective for hospitals and might be cost avoiding for society

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Effectiveness of a Multidisciplinary Clinical Pathway for Elderly Patients With Hip Fracture: A Multicenter Comparative Cohort Study

Geriatric Orthopaedic Surgery
& Rehabilitation
2016, Vol. 7(2) 81-85

DOI: 10.1177/2151458516645633
gos.sagepub.com
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The multidisciplinary team consisted of a standard surgeon, a geriatrician, an anesthesiologist, a physiotherapist, and other specialists, depending on the comorbidities

The MCP approach reduced the frequency of delirium significantly (30.3% vs 36.6%, P ¼ .02). This could be explained by the use of preoperative consultations with a geriatrician and the standard implementation of screening and preventive measures

Anaesthesia 2014, 69, 259–269 doi:10.1111/anae.12539

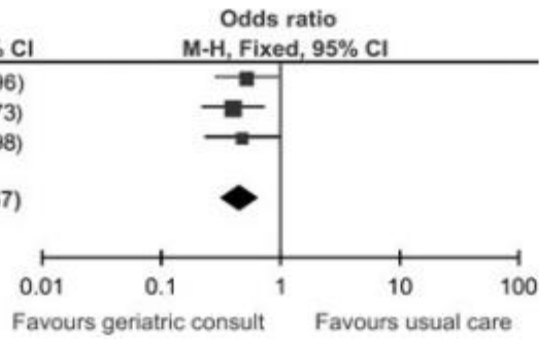
Review Article

The efficacy of peri-operative interventions to decrease postoperative delirium in non-cardiac surgery: a systematic review and meta-analysis.

Geriatric consultation vs standard care, where peri-operative geriatric consultation constituted a proactive, comprehensive geriatric assessment along with management and rehabilitation to decrease the outcome of delirium

Study or subgroup	Geriatric consultation Events	Geriatric consultation Total	Usual care Events	Usual care Total	Weight%	Odds ratio M-H, Fixed, 95% CI
Deschodt 2012	35	94	41	77	33.9	0.52 (0.28, 0.96)
Lundstrom 2007	56	102	73	97	40.5	0.40 (0.22, 0.73)
Marcantonio 2001	20	62	32	64	25.6	0.48 (0.23, 0.98)
Total (95% CI)		**258**		**238**	**100.0**	**0.46 (0.32, 0.67)**
Total events	111		146			

Heterogeneity: $Chi^2 = 0.37$, d.f. = 2 ($p = 0.83$); $I^2 = 0\%$
Test for overall effect: $Z = 4.11$ ($p < 0.0001$)



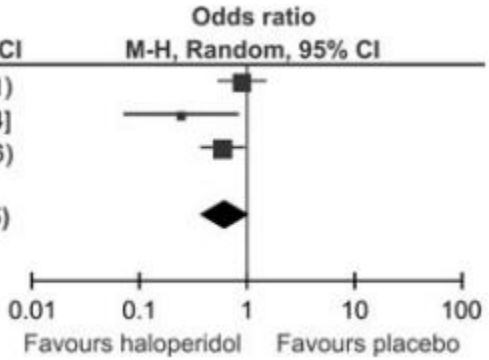
Anaesthesia 2014, 69, 259–269 doi:10.1111/anae.12539

Review Article

The efficacy of peri-operative interventions to decrease postoperative delirium in non-cardiac surgery: a systematic review and meta-analysis.

Study or subgroup	Haloperidol Events	Haloperidol Total	Placebo Events	Placebo Total	Weight%	Odds ratio M-H, Random, 95% CI
Kalisvaart 2005	32	212	36	218	41.2	0.90 (0.53, 1.51)
Kaneko 1999	4	38	13	40	14.6	0.24 (0.07, 0.84]
Wang 2012	35	229	53	228	44.2	0.60 (0.37, 0.96)
Total (95% CI)		**479**		**486**	**100.0**	**0.62 (0.36, 1.05)**
Total events	71		102			

Heterogeneity: Tau² = 0.11; Chi² = 4.05, d.f. = 2 (p = 0.13); I² = 51%
Test for overall effect: Z = 1.77 (p = 0.08)



Anaesthesia 2014, 69 (Suppl. 1), 8–16 doi:10.1111/anae.12494

Review Article

The impact of pre-operative comprehensive geriatric assessment on postoperative outcomes in older patients undergoing scheduled surgery: a systematic review

La VMG è un metodo strutturato per valutare e ottimizzare gli aspetti clinici, psicologici, funzionali e sociali dell'anziano con l'obiettivo di migliorare gli outcome a lungo termine

Table 1 Components of comprehensive geriatric assessment.

Domain	Items to be assessed
Medical	Co-morbid conditions and disease severity Medication review Nutritional status Problem list
Mental health	Cognition Mood and anxiety Fears
Functional capacity	Basic activities of daily living Gait and balance Activity/exercise status Instrumental activities of daily living
Social circumstances	Informal support from family or friends Social network such as visitors or daytime activities Eligibility for being offered care resources
Environment	Home comfort, facilities and safety Use or potential use of tele-health technology, etc. Transport facilities Accessibility to local resources

Frailty as a Predictor of Surgical Outcomes in Older Patients

Table 3. Risk of Surgical Complications by Frailty

Adjustment	Intermediately frail patients, odds ratio (95% CI)	Frail patients, odds ratio (95% CI)
Operation category*	2.02 (1.22–3.34)	3.12 (1.48–6.57)
Operation category and ASA score	2.13 (1.27–3.59)	3.15 (1.47–6.72)
Operation category and Lee score†	1.99 (1.19–3.33)	2.68 (1.23–5.87)
Operation Category and Eagle score†	1.78 (1.06–3.02)	2.72 (1.25–5.90)
Adjusted for all factors (parsimonious model)	1.97 (1.16–3.35)	2.48 (1.11–5.56)
Adjusted for all factors (forced model)	2.06 (1.18–3.60)	2.54 (1.12–5.77)

Frailty as a Predictor of Surgical Outcomes in Older Patients

Table 4. Increased Length of Hospital Stay by Frailty

Adjustment	Intermediately frail patients, IRR (95% CI)	Frail patients, IRR (95% CI)
Operation category*	1.53 (1.28–1.83)	1.89 (1.43–2.48)
Operation category and ASA score	1.50 (1.25–1.79)	1.80 (1.36–2.37)
Operation category and Lee score	1.51 (1.26–1.80)	1.74 (1.32–2.30)
Operation category and Eagle score	1.44 (1.2–1.73)	1.65 (1.25–2.18)
Adjusted for all factors (parsimonious model)	1.49 (1.24–1.80)	1.67 (1.27–2.21)
Adjusted for all factors (forced model)	1.49 (1.24–1.80)	1.69 (1.28–2.23)

*See Table 2.
ASA, American Society of Anesthesiologists; IRR, incidence rate ratio.

Table 5. Risk of Discharge to a Skilled or Assisted-Care Facility

Adjustment	Intermediately frail patients, odds ratio (95% CI)	Frail patients, odds ratio (95% CI)
Operation category*	3.41 (1.26–9.20)	27.64 (9.00–84.87)
Operation category and ASA score	3.04 (1.11–8.32)	24.41 (7.88–75.64)
Operation category and Lee score	3.10 (1.13–8.52)	25.04 (7.95–78.93)
Operation category and Eagle score	3.64 (1.26–10.55)	27.56 (8.44–89.95)
Adjusted for all factors (parsimonious model)	3.34 (1.22–9.15)	25.97 (8.29–81.34)
Adjusted for all factors (forced model)	3.16 (1.00–9.99)	20.48 (5.54–75.68)

*See Table 2.
ASA, American Society of Anesthesiologists.

La frailty, da sola, è in grado di predire la LOS e l'istituzionalizzazione dopo una procedura chirurgica

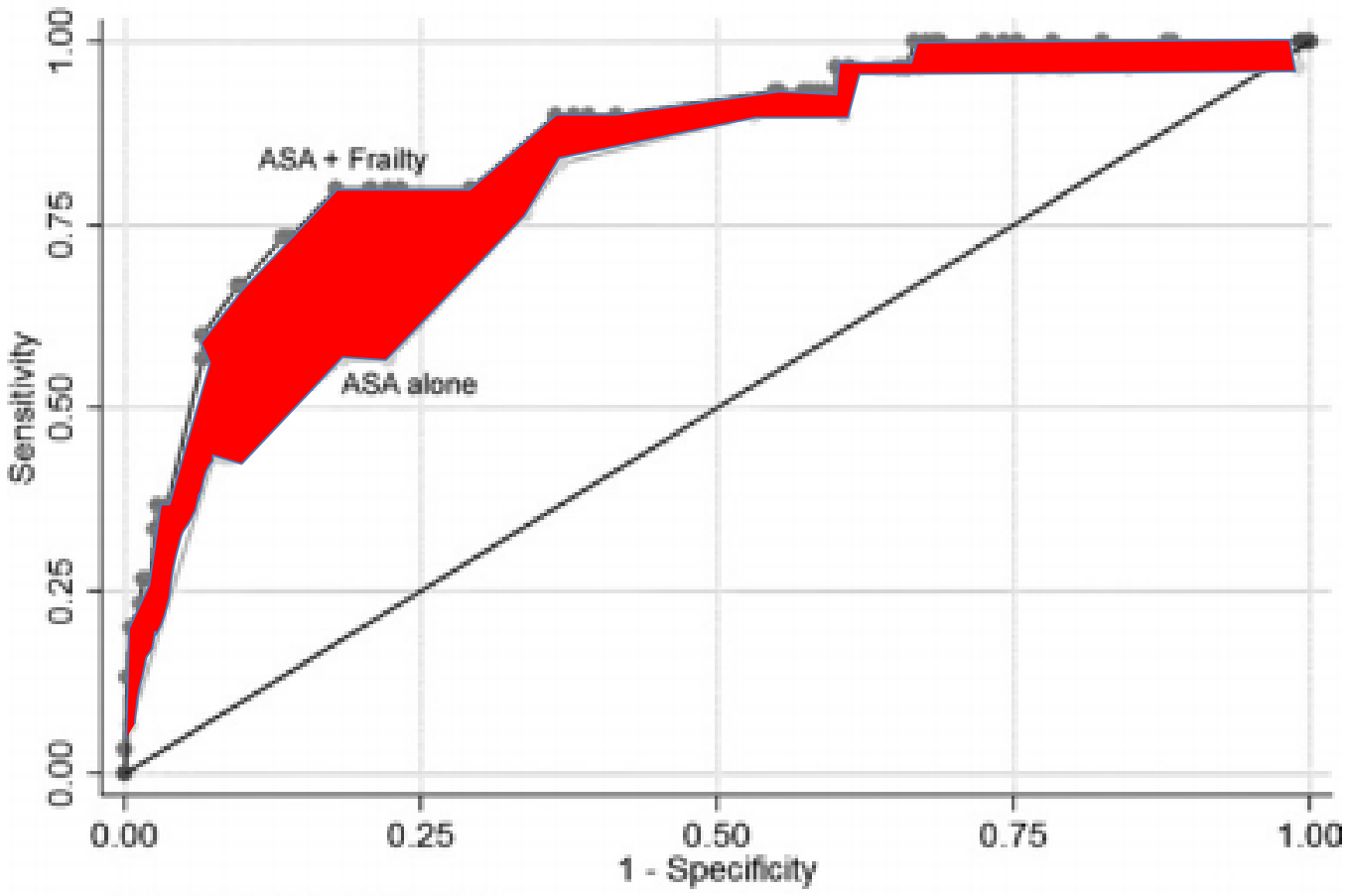
Frailty as a Predictor of Surgical Outcomes in Older Patients

Table 6. Receiver Operating Characteristics Area under the Curve by Predictor

	Surgical complication, ROC statistic				Discharge to an assisted or skilled nursing facility, ROC statistic			
Predictor	**Alone**	**Frailty added**	**Contribution of frailty**	**p Value***	**Alone**	**Frailty added**	**Contribution of frailty**	**p Value***
ASA score (original dataset)	0.708	0.748	0.040	0.040	0.783	0.869	0.086	0.008
ASA score (cross-validation)	0.626	0.699	0.073	<0.001	0.712	0.807	0.095	0.009
Lee score (original dataset)	0.715	0.740	0.025	0.144	0.753	0.862	0.109	0.008
Lee score (cross-validation)	0.618	0.669	0.051	0.004	0.669	0.795	0.126	0.004
Eagle score (original dataset)	0.732	0.753	0.021	0.61	0.768	0.865	0.097	0.009
Eagle score (cross-validation)	0.678	0.714	0.036	0.003	0.661	0.759	0.098	0.013

The predictive ability of models without frailty were 71% (ASA score), 67% (Lee Score), and 66% (Eagle Score); these increased to 81%, 80%, and 76%, respectively, on adding frailty to the risk prediction (p 0.01)

Frailty as a Predictor of Surgical Outcomes in Older Patients



Complicanze: + 7%

Istituzionalizzazione: + 10%

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Evaluation of Multidimensional Geriatric Assessment as a Predictor of Mortality and Cardiovascular Events After Transcatheter Aortic Valve Implantation

This study evaluated Multidimensional Geriatric Assessment (MGA) as predictor of mortality and major adverse cardiovascular and cerebral events (MACCE) after transcatheter aortic valve implantation (TAVI)

Table 3. Univariable Associations of Global and MGA-Based Risk Scores for the Prediction of All-Cause Mortality and MACCE 30 Days and 1 Year After TAVI

	30 Days After TAVI				1 Year After TAVI			
	All-Cause Mortality		MACCE		All-Cause Mortality		MACCE	
	OR (95% CI)	p Value	OR (95% CI)	p Value	OR (95% CI)	p Value	OR (95% CI)	p Value
Global risk scores								
STS score								
Linear (OR per 5% increase)	3.16 (1.24–8.06)	0.02	2.34 (0.99–5.50)	0.05	3.63 (1.71–7.71)	0.001	2.66 (1.33–5.34)	0.01
Dichotomized (≥5% vs. <5%)	6.14 (0.73–51.95)	0.08	8.23 (1.00–67.71)	0.04	5.47 (1.48–20.22)	0.01	3.40 (1.14–10.13)	0.03
Logistic EuroSCORE								
Linear (OR per 10% increase)	1.32 (0.87–2.02)	0.20	1.27 (0.86–1.88)	0.23	1.79 (1.27–2.53)	0.001	1.57 (1.15–2.16)	0.01
Dichotomized (≥15% vs. <15%)	2.91 (0.34–24.78)	0.44	1.63 (0.32–8.17)	0.72	4.02 (0.86–18.70)	0.09	2.99 (0.81–11.04)	0.11
MGA-based risk scores								
MMSE								
Linear (OR per 3 points decrease)	2.85 (1.32–6.17)	0.01	3.67 (1.62–8.32)	0.002	2.72 (1.40–5.31)	0.003	3.04 (1.53–6.03)	0.001
Dichotomized (<27 vs. ≥27 points)	7.62 (1.44–40.19)	0.01	6.07 (1.45–25.33)	0.01	2.98 (1.07–8.31)	0.03	3.48 (1.30–9.28)	0.01
MNA								
Linear (OR per 1 point decrease)	1.30 (1.03–1.66)	0.03	1.31 (1.05–1.63)	0.02	1.27 (1.06–1.52)	0.01	1.30 (1.09–1.55)	0.004
Dichotomized (<12 vs. ≥12 points)	10.41 (1.23–88.12)	0.02	3.34 (0.81–13.77)	0.10	6.72 (2.04–22.17)	0.001	6.42 (2.14–19.31)	0.001
TUG								
Linear (OR per 5 s increase)	1.83 (1.10–3.05)	0.02	1.67 (1.08–2.60)	0.02	1.74 (1.24–2.45)	0.001	1.63 (1.19–2.24)	0.002
Dichotomized (≥20 vs. <20 s)	13.77 (1.62–117.01)	0.004	8.00 (1.60–40.03)	0.01	6.65 (2.15–20.52)	0.001	5.12 (1.85–14.22)	0.001
BADL								
Linear (OR per 1 point increase)	1.75 (1.01–3.02)	0.05	2.13 (1.27–3.56)	0.004	1.81 (1.16–2.84)	0.01	1.78 (1.15–2.77)	0.01
Dichotomized (≥1 point)	4.72 (1.05–21.27)	0.04	4.37 (1.13–16.87)	0.03	3.63 (1.29–10.23)	0.01	3.33 (1.24–8.95)	0.01
IADL								
Linear (OR per 1 point increase)	1.39 (0.91–2.11)	0.13	1.06 (0.70–1.62)	0.78	1.25 (0.92–1.70)	0.16	1.19 (0.88–1.59)	0.26
Dichotomized (≥1 point)	1.19 (0.27–5.31)	>0.999	0.53 (0.13–2.12)	0.48	1.52 (0.52–4.45)	0.44	1.55 (0.56–4.25)	0.40
Pre-clinical mobility disability								
dichotomized (present or not)	5.15 (0.61–43.59)	0.14	2.92 (0.59–14.55)	0.31	3.00 (0.92–9.83)	0.07	3.86 (1.20–12.44)	0.03
Frailty index								
Linear (OR per 1 point increase)	2.18 (1.32–3.61)	0.002	1.66 (1.14–2.44)	0.01	1.80 (1.31–2.47)	<0.001	1.80 (1.33–2.45)	<0.001
Dichotomized (≥3 vs. <3 points)	8.33 (0.99–70.48)	0.03	4.78 (0.96–23.77)	0.05	3.68 (1.21–11.19)	0.02	4.89 (1.64–14.60)	0.003

CI = confidence interval; MACCE = major adverse cardiovascular and cerebral event(s); OR = odds ratio; TAVI = transcatheter aortic valve implantation; other abbreviations as in Table 2.

Table 4. Selection of Bivariable Associations of Global and MGA-Based Risk Scores for the Prediction of All-Cause Mortality and MACCE 1 Year After TAVI

Model	Components of Model*	All-Cause Mortality		MACCE	
		OR (95% CI)	p Value	OR (95% CI)	p Value
Models with STS score					
Model 1	STS score	5.27 (1.40–19.81)	0.01	3.26 (1.06–9.97)	0.04
	MMSE	2.83 (0.97–8.23)	0.06	3.34 (1.22–9.15)	0.02
Model 2	STS score	4.01 (1.03–15.56)	0.05	2.43 (0.77–7.69)	0.13
	MNA	5.33 (1.57–18.11)	0.01	5.41 (1.76–16.64)	0.003
Model 3	STS score	4.46 (1.15–17.31)	0.03	2.75 (0.88–8.59)	0.08
	TUG	5.70 (1.79–18.14)	0.003	4.48 (1.58–12.69)	0.01
Model 4	STS score	4.40 (1.16–16.78)	0.03	2.73 (0.89–8.44)	0.08
	BADL	2.71 (0.92–7.99)	0.07	2.67 (0.96–7.42)	0.06
Model 5	STS score	4.55 (1.20–17.21)	0.03	2.68 (0.86–8.33)	0.09
	Frailty index	2.93 (0.93–9.24)	0.07	4.17 (1.37–12.72)	0.01
Models with logistic EuroSCORE					
Model 6	Logistic EuroSCORE	4.98 (1.02–24.23)	0.05	3.82 (0.97–15.00)	0.06
	MMSE	3.57 (1.22–10.42)	0.02	4.12 (1.48–11.51)	0.01
Model 7	Logistic EuroSCORE	3.68 (0.75–18.04)	0.11	2.71 (0.69–10.65)	0.15
	MNA	6.45 (1.93–21.56)	0.002	6.18 (2.03–18.78)	0.001
Model 8	Logistic EuroSCORE	3.18 (0.64–15.66)	0.16	2.39 (0.61–9.31)	0.21
	TUG	6.02 (1.92–18.82)	0.002	4.69 (1.67–13.17)	0.003
Model 9	Logistic EuroSCORE	3.42 (0.72–16.35)	0.12	2.56 (0.67–9.72)	0.17
	BADL	3.23 (1.13–9.29)	0.03	3.02 (1.11–8.23)	0.03
Model 10	Logistic EuroSCORE	3.40 (0.71–16.23)	0.13	2.44 (0.63–9.44)	0.20
	Frailty index	3.29 (1.06–10.15)	0.04	4.48 (1.48–13.53)	0.01

This analysis of a prospective cohort study of elderly high-risk patients undergoing TAVI shows that MGA based risk scores perform similar to global risk scores for the prediction of all-cause mortality and MACCE 30 days and 1 year after TAVI.

Questo studio dimostra come sia possibile sviluppare migliori indici di rischio operatorio

Effect of Preoperative Geriatric Evaluation on Outcomes After Elective Surgery: A Population-Based Study

JAGS 2017

0002-8614/17/$15.00

Most participants who had a preoperative geriatric evaluation had a joint replacement. Rates of frailty dementia and mean participant age were higher in the preoperative geriatric evaluation group

Outcome	Geriatric Evaluation, n = 7,352	No Geriatric Evaluation, n = 259,147	Relative Association[a] (95% Confidence Interval) Unadjusted	Relative Association[a] (95% Confidence Interval) Adjusted
Length of stay, mean ± SD[b]	6.0 ± 7.3	7.1 ± 10.3	1.19 (1.17–1.22)	1.03 (0.89–1.19)
Readmission, n (%)	643 (8.7)	20,656 (8.0)	1.10 (1.01–1.19)	1.13 (1.02–1.24)
Costs of care, mean ± SD[c]	22,571 ± 14,643	22,333 ± 19,614	1.01 (1.00–1.01)	1.03 (1.01–1.05)
In-hospital complication, n (%)	1,129 (15.4)	50,256 (19.4)	0.75 (0.71–0.80)	0.99 (0.92–1.08)
Supported discharge, n (%)	5,264 (71.6)	145,822 (56.3)	1.96 (1.86–2.06)	1.32 (1.23–1.41)

Effect of Preoperative Geriatric Evaluation on Outcomes After Elective Surgery: A Population-Based Study

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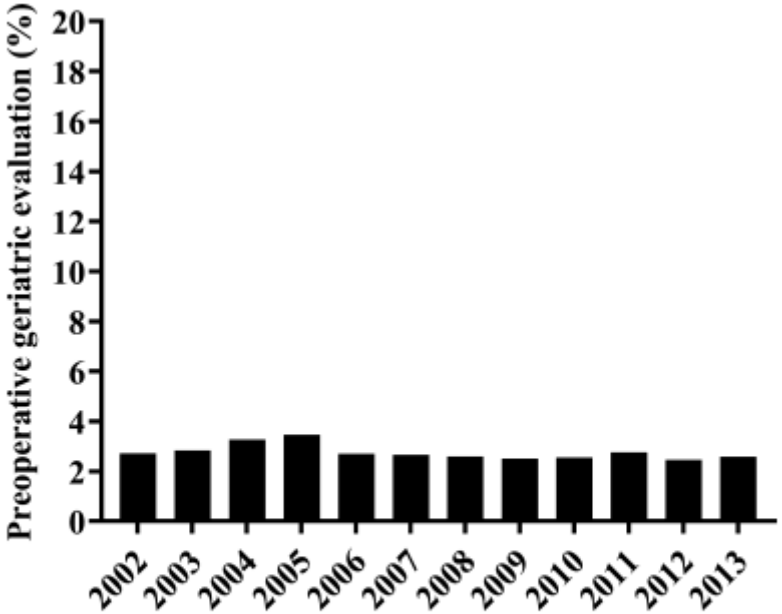

Figure 2. Proportion of participants receiving a preoperative geriatric evaluation in each study year. Data were organized according to fiscal year, so, for example, participants in 2002 had surgery between April 1, 2002, and March 31, 2003.

The proportion of participants receiving geriatric evaluations did not increase over time

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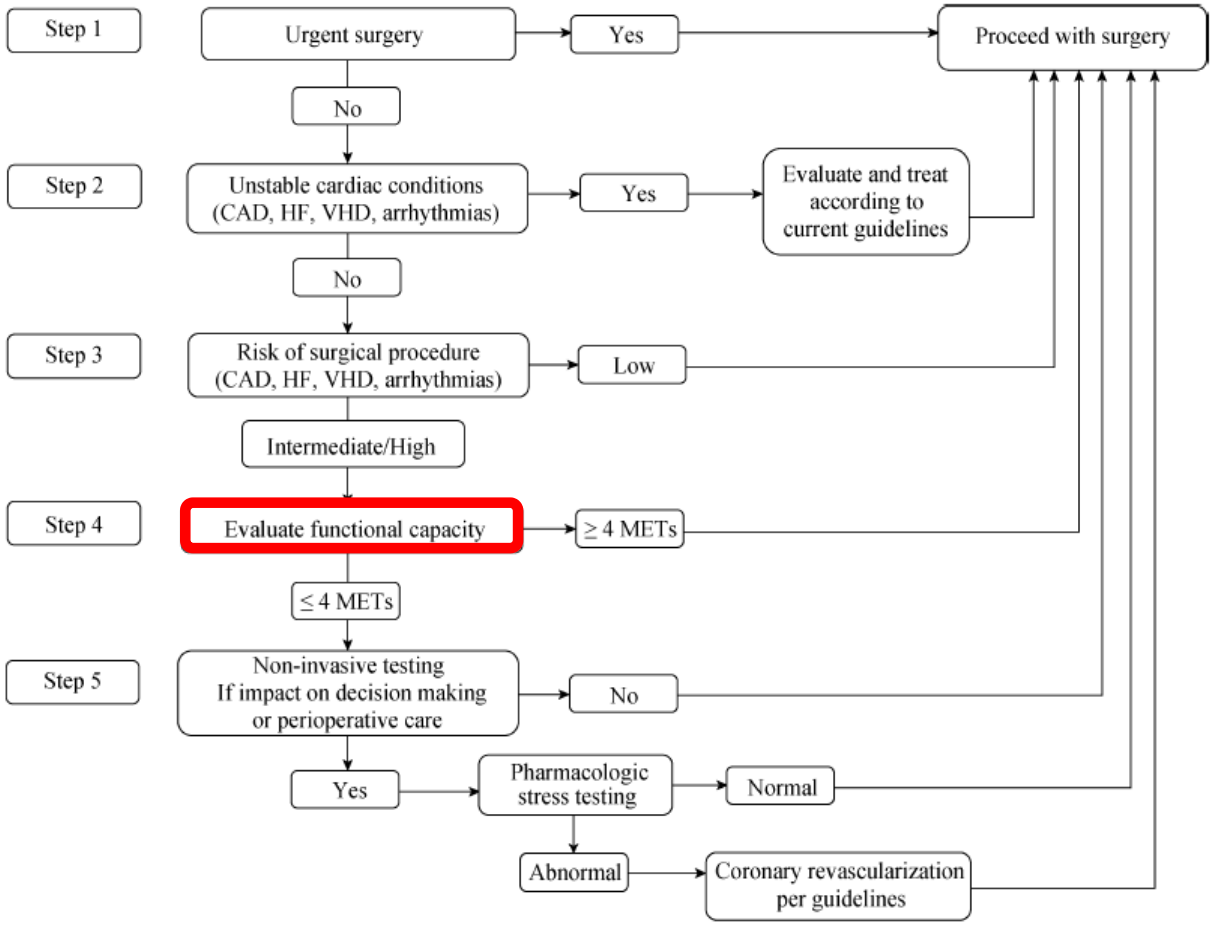
Perioperative care in older adults



Clinical Interventions in Aging

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REVIEW

Preoperative assessment of the older surgical patient: honing in on geriatric syndromes

«La valutazione preoperatoria dell'anziano dovrebbe differire da quella del giovane-adulto in particolare perché le attuali valutazioni si concentrano su un solo sistema, mentre l'anziano spesso presenta un difetto multisistemico»

Conclusioni

La VMG è in grado di aumentare la sensibilità dell'ASA score

Sono necessari ulteriori studi per meglio definire quali items della VMG siano maggiormente predittivi

Talvolta però i Geriatri non lo sanno o non sanno spiegarlo agli amministratori

Grazie