Rivalutazione delle indicazioni e della tipologia del device al momento della sostituzione elettiva dell'ICD?

A. Magnani (Novara)

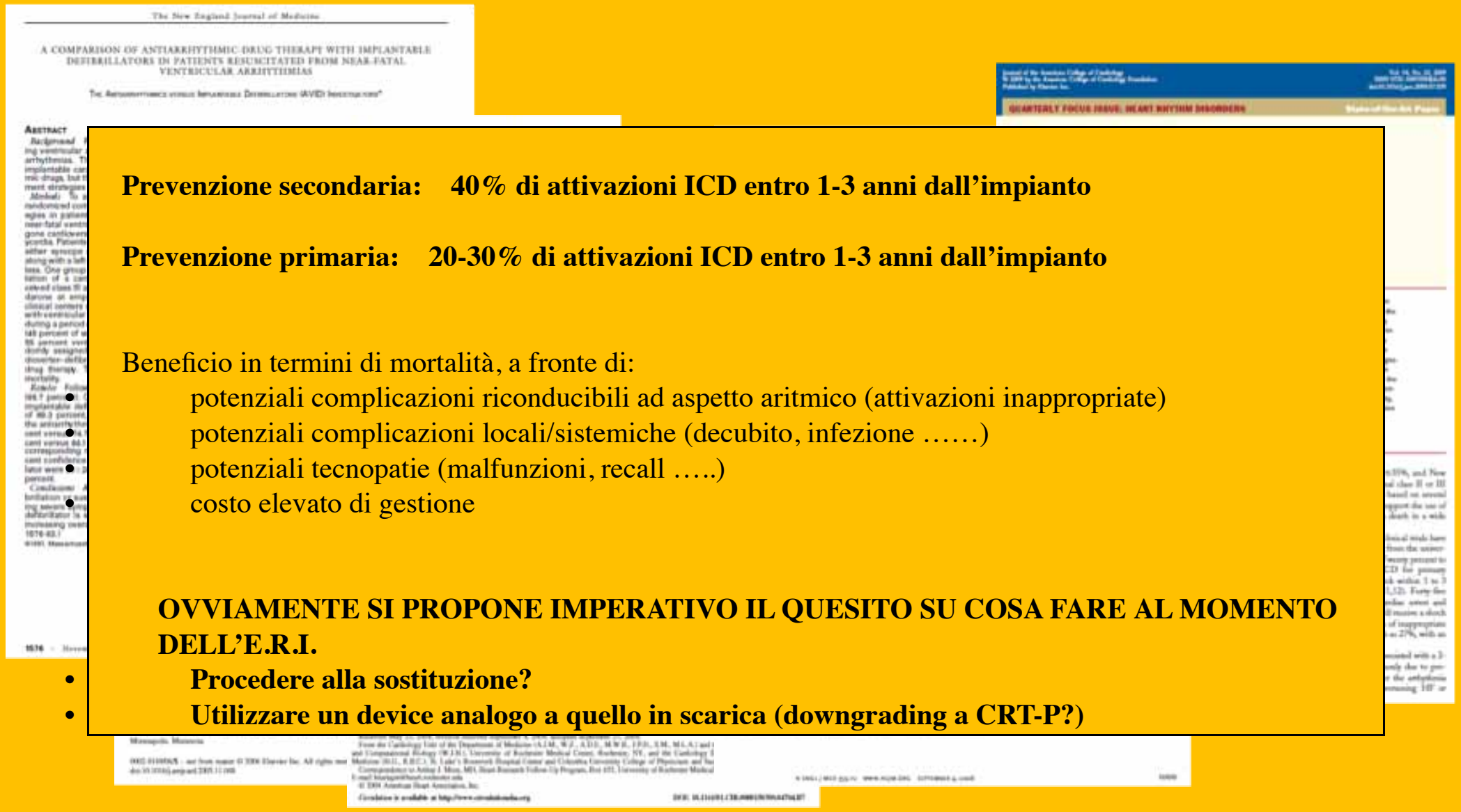
UPO UNIVERSITÀ DEL PIEMONTE ORIENTALE

AZIENDA OSPEDALIERO UNIVERSITARIA MAGGIORE DELLA CARITA' NOVARA

2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

Recommendations	Class [a]	Level [b]	Ref [c]
Secondary prevention An ICD is recommended to reduce the risk of sudden death and all-cause mortality in patients who have recovered from a ventricular arrhythmia causing haemodynamic instability, and who are expected to survive for >1 year with good functional status.	I	A	223–226
Primary prevention An ICD is recommended to reduce the risk of sudden death and all-cause mortality in patients with symptomatic HF (NYHA Class II–III), and an LVEF ≤35% despite ≥3 months of OMT, provided they are expected to survive substantially longer than one year with good functional status, and they have:			
• IHD (unless they have had an MI in the prior 40 days – see below).	I	A	149, 156, 227
• DCM.	I	B	156, 157, 227
ICD implantation is not recommended within 40 days of an MI as implantation at this time does not improve prognosis.	III	A	158, 228
ICD therapy is not recommended in patients in NYHA Class IV with severe symptoms refractory to pharmacological therapy unless they are candidates for CRT, a ventricular assist device, or cardiac transplantation.	III	C	229–233
Patients should be carefully evaluated by an experienced cardiologist before generator replacement, because management goals and the patient's needs and clinical status may have changed.	IIa	B	234–238
A wearable ICD may be considered for patients with HF who are at risk of sudden cardiac death for a limited period or as a bridge to an implanted device.	IIb	C	239–241



Prevenzione secondaria: 40% di attivazioni ICD entro 1-3 anni dall'impianto

Prevenzione primaria: 20-30% di attivazioni ICD entro 1-3 anni dall'impianto

Beneficio in termini di mortalità, a fronte di:

- potenziali complicazioni riconducibili ad aspetto aritmico (attivazioni inappropriate)
- potenziali complicazioni locali/sistemiche (decubito, infezione ……)
- potenziali tecnopatie (malfunzioni, recall …..)
- costo elevato di gestione

OVVIAMENTE SI PROPONE IMPERATIVO IL QUESITO SU COSA FARE AL MOMENTO DELL'E.R.I.

- **Procedere alla sostituzione?**
- **Utilizzare un device analogo a quello in scarica (downgrading a CRT-P?)**

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Ilya Repin
Tiranti sul Volga (1864)

RIVALUTAZIONE INDICAZIONE AD ICD: ESISTONO CONSIDERAZIONI SULLE QUALI IPOTIZZARE UNA DECISIONE?

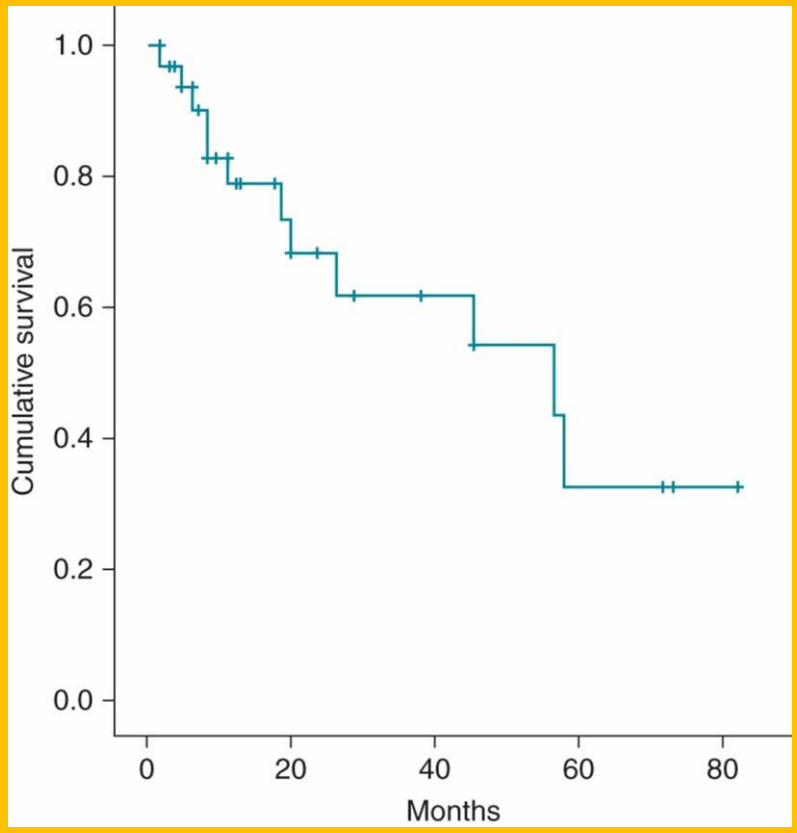
- Età
- Comorbidità
- Complicazioni legate alla procedura di sostituzione
- Modificazione della posizione del pz nei confronti dell'ICD
- Assenza di eventi aritmici/attivazioni dell'ICD impiantato in prevenzione primaria
- Miglioramento del quadro clinico/strumentale con uscita dai criteri di impianto iniziali

ETA'

76 ultraottuagenari con ICD

- 42 primo impianto ICD: deceduti 65% entro 3 anni
- 34 sostituzione ICD: deceduti 50% entro 1 anno

- bassissimo numero di eventi aritmici



From: Cardioverter-defibrillator implantation and generator replacement in the octogenarian
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Prophylactic implantable cardioverter–defibrillator treatment in the elderly: therapy, adverse events, and survival gain

Johannes B. van Rees[1], C. Jan Willem Borleffs[1], Joep Thijssen[1], Mihály K. de Bie[1], Lieselot van Erven[1], Suzanne C. Cannegieter[2], Jeroen J. Bax[1], and Martin J. Schalij[1]*

Europace 2012; 14: 66-73

1395 pz in prevenzione primaria con follow up 2,9 ± 2,1 anni

35% età fra 65-74 anni
14% età ≥ 75 anni

Incidenza cumulativa di shock appropriati a 5 anni è risultata pari a
19% < 65 anni
23% 65-74 anni
13% ≥ 75 anni

Ad 1 anno dal primo shock incidenza cumulativa di morte
7% < 65 anni
35% ≥ 75 anni

Figure 2 All-cause mortality per age group and for the total population.

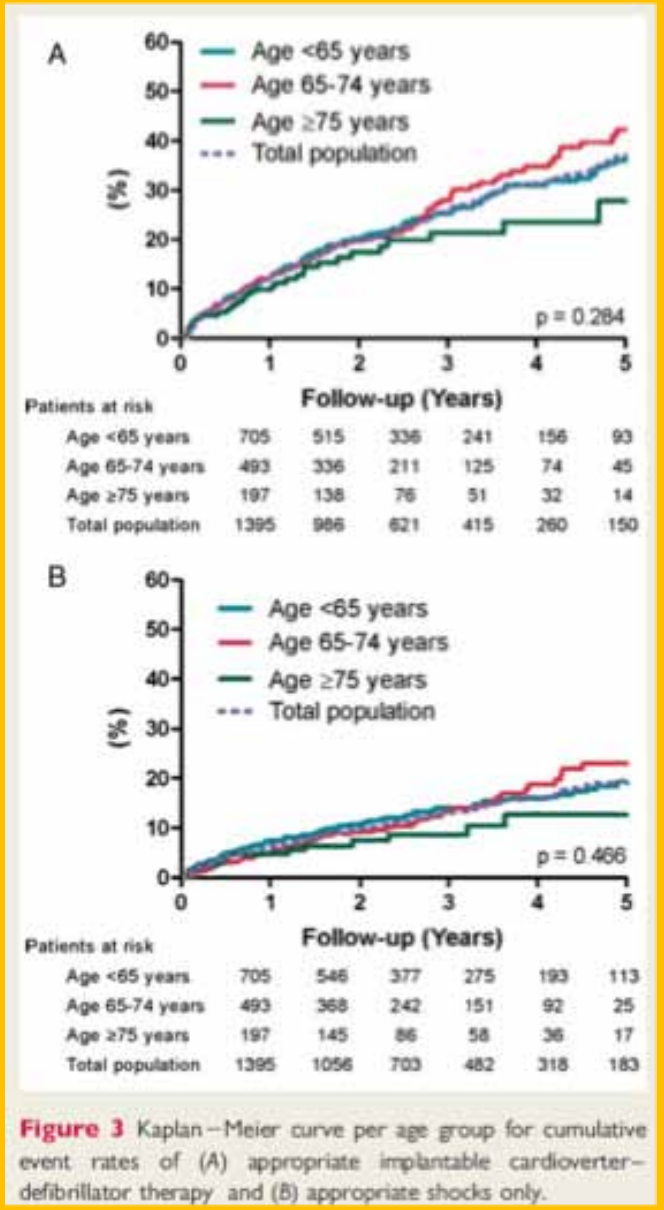


Figure 3 Kaplan–Meier curve per age group for cumulative event rates of (*A*) appropriate implantable cardioverter–defibrillator therapy and (*B*) appropriate shocks only.

Impact of non-cardiac comorbidity on mortality and morbidity in a predominantly elderly heart failure population among different heart failure phenotypes

A. Iorio*, M. Senni*, S. Poli§, E. Zambon§, G. Barbati°, G. Faganello°, G. Sinagra§, L. Tarantini°, G. Cioffi°, A. Di Lenarda°

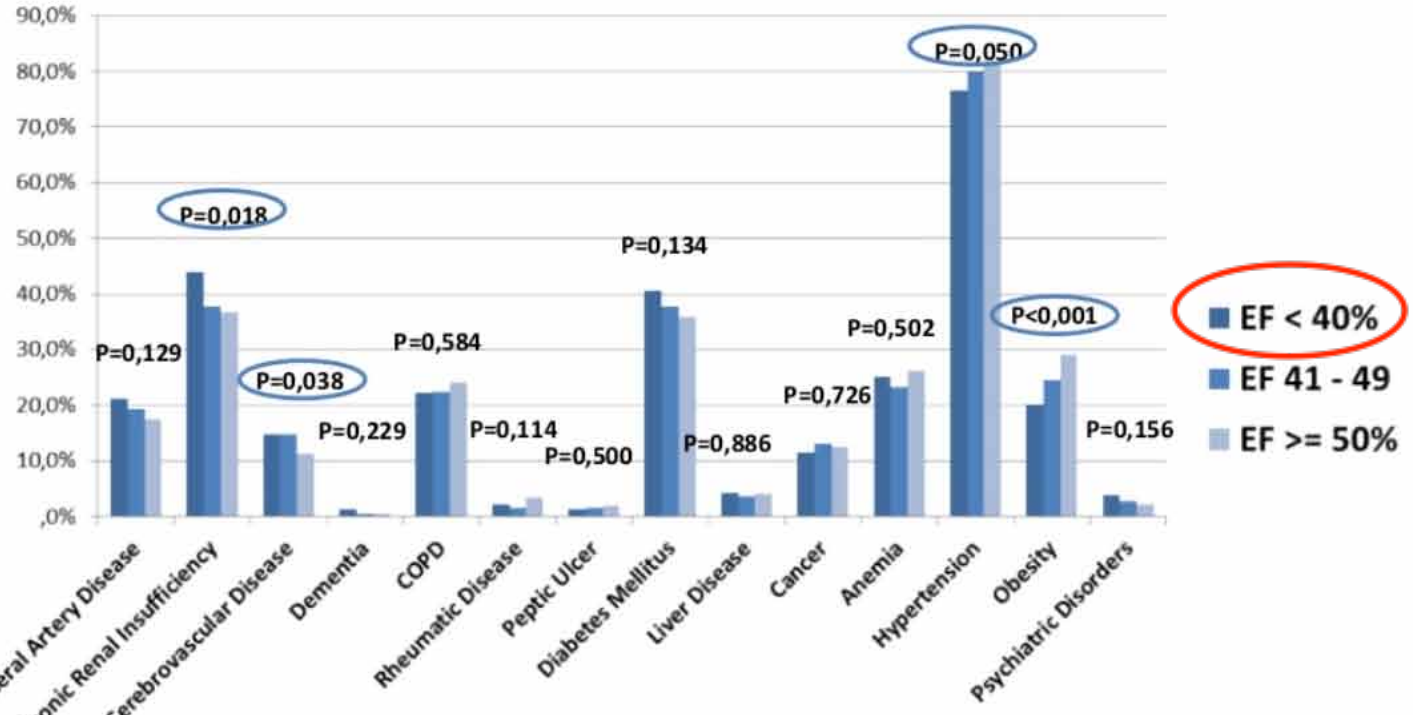
Azienda Ospedaliero – Universitaria "Ospedali Riuniti" Trieste

Azienda Ospedaliera Papa Giovanni XXIII Bergamo

COMORBILITA'

RESULTS

Population Characteristics : Comorbidities



Heart Rhythm 2014; 11: 216–221

Mortality risk following replacement implantable cardioverter-defibrillator implantation at end of battery life: Results from the NCDR®

John A. Spertus, MD, MPH,[¶]
, MD,[†‖] Alfred E. Buxton, MD,[*†]
,[*†] Susan L. Mitchell, MD, MPH,[*†‡]

Table 2 Unadjusted and adjusted predictors of death among patients following ICD replacement

	Unadjusted associations		"Saturated" adjusted associations	
	HR (CI)	*P* value	HR (CI)	*P* value
Age (10 years)	1.583 (1.564, 1.602)	<.0001	1.429 (1.408, 1.449)	<.0001
Male gender	1.258 (1.221, 1.296)	<.0001	1.176 (1.137, 1.217)	<.0001
Congestive heart failure	2.237 (2.164, 2.313)	<.0001	1.213 (1.161, 1.267)	<.0001
NYHA class		<.0001		<.0001
I	Reference		Reference	
II	1.638 (1.573, 1.706)		1.125 (1.072, 1.18)	
III	2.725 (2.620, 2.834)		1.457 (1.386, 1.532)	
IV	5.130 (4.805, 5.477)		2.244 (2.081, 2.42)	
Atrial fibrillation	1.685 (1.645, 1.726)	<.0001	1.232 (1.200, 1.266)	<.0001
Ventricular tachycardia	0.988 (0.964, 1.013)	0.3512	1.073 (1.043, 1.105)	<.0001
Prior myocardial infarction	1.317 (1.284, 1.35)	<.0001	0.986 (0.957, 1.016)	.3700
Prior CABG	1.503 (1.467, 1.54)	<.0001	1.076 (1.046, 1.107)	<.0001
Prior percutaneous coronary intervention	1.035 (1.009, 1.062)	.0093	0.938 (0.911, 0.966)	<.0001
Cerebrovascular disease	1.603 (1.557, 1.651)	<.0001	1.276 (1.236, 1.318)	<.0001
Chronic lung disease	1.798 (1.751, 1.846)	<.0001	1.529 (1.486, 1.573)	<.0001
Diabetes mellitus	1.46 (1.425, 1.497)	<.0001	1.269 (1.234, 1.304)	<.0001
Hypertension	1.227 (1.193, 1.262)	<.0001	0.986 (0.956, 1.018)	.3953
LVEF (decreasing 10 units)	0.746 (0.738, 0.755)	<.0001	1.186 (1.172,1.202)	<.0001
QRS duration (increasing 5 units)	1.037 (1.036, 1.039)	<.0001	1.007 (1.005, 1.008)	<.0001
GFR (decreasing 10 units)	0.795 (0.79, 0.799)	<.0001	1.149 (1.141, 1.157	<.0001
Primary prevention	1.138 (1.109, 1.167)	<.0001	0.945 (0.917, 0.974)	.0002
ICD type				<.0001
Single chamber	Reference	<.0001	Reference	
Dual chamber	1.024 (.986, 1.064)		.864 (.828, .902)	
Biventricular	1.639 (1.580, 1.700)		.798 (.763, .835)	

CABG = coronary artery bypass grafting; CI = confidence interval; GFR = glomerular filtration rate; HR = hazard ratio; ICD = implantable cardioverter-defibrillator; LVEF = left ventricular ejection fraction; NYHA = New York Heart Association.