CUORE
Cardiovascular Unique Offer ReEngineered
FONDAZIONE ROMA Gemelli

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Esempi di ottimizzazione di percorsi clinici: Heart Team a distanza

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Collaborazione Hub-Spoke

European Heart Journal Supplements (2020) **22** (Supplement E), E91-E95
The Heart of the Matter
doi:10.1093/eurheartj/suaa069

ESC European Society of Cardiology

The extended heart: cardiac surgery serving more hospitals

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KEYWORDS
Heart Team;
Electronic Heart Team;
Hybrid procedures

The Heart Team is becoming ever more central in delivering cardiovascular care, embodying a modern aspect of medical practice, designed to place the patient at the 'center' of a team with different specialists, all contributing to the definition of the most appropriate therapeutic actions. We prospectively analyzed 200 consecutive patients (2015-2017). Patients were evaluated independently by a cardiologist and a cardiac surgeon, each deciding the most appropriate therapeutic action. At a later time, the same patient, was evaluated by the Heart Team. For the first 100 patients the rate of concurrence between cardiologist and cardiac surgeon as well as among each specialist and the Heart Team, was relatively low (51 and 42% respectively). For the following 100 patients the concurrence rate was significantly higher (75 and 70% respectively). The systematic and collegial discussion of the patients in the contest of the Heart Team, steered toward an evolution of each specialist in the group settings. The Electronic Heart Team (e-Heart Team) employing video conference support, applied to the first 65 patients with promising results, represent a further advancement in the delivery of care, by reducing the *distance* from the 'Hub' center, and the specialist in the 'Spoke' facility, who from simple *source* of the patient, now becomes an essential part of the therapeutic decision process. The Heart Team environment can deeply affect patients management and improve treatment results, by sharing the expertise and overcoming the limitations of the individual disciplines, thus reaching the common goal of the patient's best available treatment.

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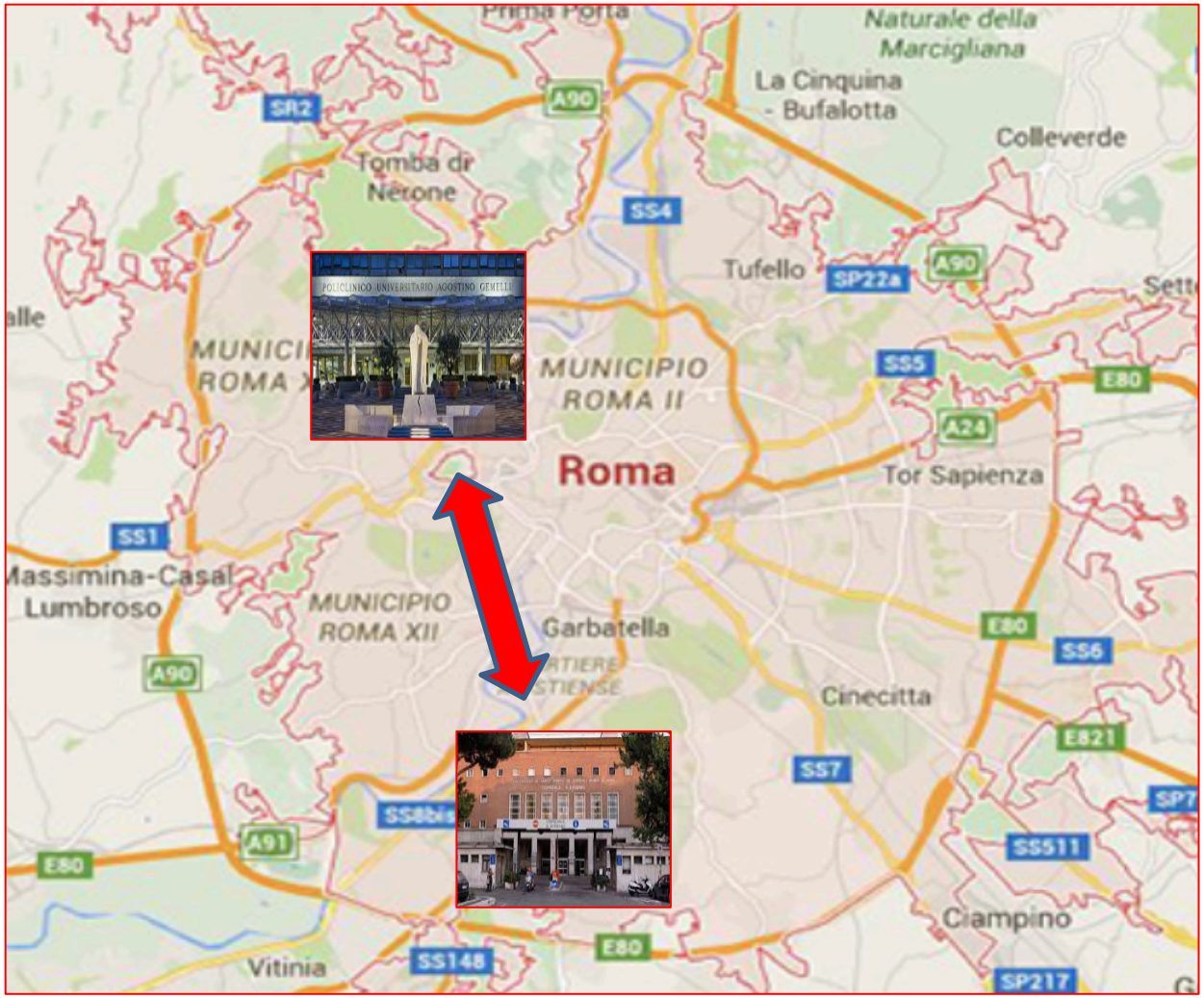
HUB-SPOKE



Due grandi ospedali

UN UNICO GRANDE CENTRO CARDIOVASCOLARE GRANDE COME ROMA

Hub-Spoke network

Policlinico Agostino Gemelli

Bambino Gesù Children Hospital

Gemelli ISOLA

giu. '26

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Hub - Spoke

Percorso assistenziale

Comunicazione Iniziale → Videat Cardiochirurgico Presso centro Spoke → **(e)** Heart team → Decisione condivisa iter diagnostico terapeutico

Preparazione del paziente all'intervento → Trasferimento del paziente presso centro HUB → Comunicazione esito, con continui aggiornamenti

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2023-2025

443 pazienti

- Cardiopatia ischemica 72%
- Valvulopatia aortica 10%
- Valvulopatia mitralica 5%
- Mixoma atriale 1%
- Aorta 2%

Outcome

- 30-day mortality: 0.6%
- Aderenza trattamento alla decisione: 98%
- Giorni degenza media: 6.5 +/- 3
- Revisione mediastinica per sanguinamento: 2%
- PCI post-CABG; stroke; MI; shock; arresto cardiaco; deiscenza ferita chirurgica: 3%

Roberto L.

- 72 anni
- Ipertensione arteriosa, ex fumatore
- Gammopatia monoclonale, grave epatopatia potus-relata
- Insufficienza renale cronica
- BPCO severa
- Dicembre 2021: infezione da COVID
- Febbraio 2022: Embolia polmonare
- 5 Accessi in pronto soccorso sul territorio: Scompenso cardiaco-diuretici-dimissione
- Settembre 2022: Ospedale S. Eugenio

Roberto L.- Vecchio iter

- **UTIC S. EUGENIO**
- **Grave insufficienza respiratoria, scompenso cardiaco ed edema polmonare massivo**
- **Insufficienza valvolare aortica severa**
- **Intubato con supporto inotropo**
- **FE: 45%**
- **Grave dilatazione Vsx**
- **STS score (m/m): 39%**

Valutazione Cardiochirurgica

FAX

INOPERABILE

Roberto L.- Collaborazione Hub-Spoke

- **UTIC S. EUGENIO**
- **Grave insufficienza respiratoria, scompenso cardiaco ed edema polmonare massivo**
- **Insufficienza valvolare aortica severa**
- **Stato settico**
- **Intubato con supporto inotropo**
- **FE: 45%**
- **Grave dilatazione Vsx**
- **STS score (m/m): 39%**

Valutazione Cardiochirurgica in sede del consulente HUB

Heart Team

Inoperabile

AL MOMENTO

ANDIAMO AVANTI

Roberto L.- Collaborazione Hub-Spoke SECONDO TEMPO

- Preparazione del paziente con terapia medica intensiva
- Miglioramento condizioni
- Estubazione
- Aggiornamenti continui Hub e Spoke con valutazioni in sede

→

Nuova Valutazione Cardiochirurgica In sede del consulente HUB E nuova discussione Heart Team

→

Paziente **ADESSO** operabile.
Da inoperabile ad Alto rischio

Roberto L.- Collaborazione Hub-Spoke SECONDO TEMPO

Trasferimento
S. Eugenio-Gemelli

Intervento
Cardiochirurgico
AVR con bioprotesi

DECORSO
POSTOPERATORIO
REGOLARE

Edwards Lifesciences
Perimount Magna Ease 23 mm

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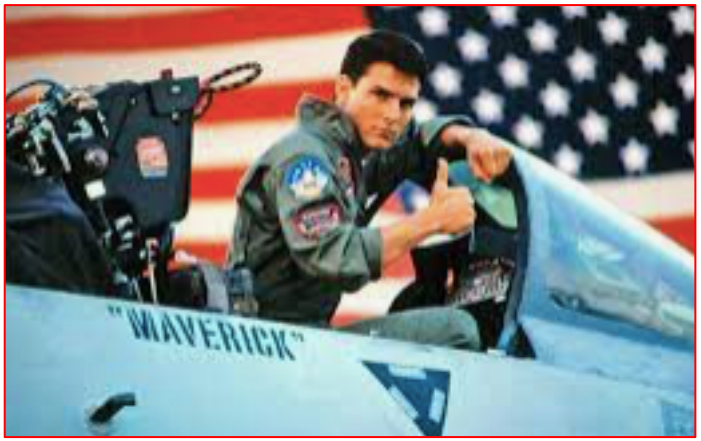
Roberto L.- Collaborazione Hub-Spoke TERZO TEMPO

Controllo ambulatoriale a 3 mesi



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Heart Team

Original article

I.F.C. Italian Federation of Cardiology

The multidisciplinary Heart Team approach for patients with cardiovascular disease: a step towards personalized medicine

Andrea Mazza[a,b,*], Mauro Iafrancesco[a,b,*], Piergiorgio Bruno[a,b], Giovanni Alfonso Chiariello[a,b], Carlo Trani[a,b], Francesco Burzotta[a,b], Federico Cammertoni[a,b], Annalisa Pasquini[a,b], Giovanni Diana[a,b], Raphael Rosenhek[b,c], Giovanna Liuzzo[a,b], Alessia Rabini[a,b], Andrea Flex[a,b], Abdallah Raweh[a,b], Filippo Crea[a,b] and Massimo Massetti[a,b]

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Heart Team

Table 1 Patient characteristics

	Group 1	Group 2	Group 3	*P*
Female sex *n* (%)	29 (29)	25 (25)	37 (37)	0.17
Age (mean ± SD) years	72.86 ± 10.24	69.9 ± 11.2	71.2 ± 11.8	0.17
BMI >30 *n* (%)	19 (19)	21 (21)	18 (18)	0.86
EuroSCORE II (mean ± SD)%	3.3 ± 2.7	4.1 ± 7.5	4 ± 4.1	0.47
STS mortality risk (mean ± SD)%	3.78 ± 3.7	3.3 ± 3	3.5 ± 3.6	0.44
STS morbidity risk (mean ± SD)%	13.6 ± 10.7	14.5 ± 9.6	16.7 ± 9.6	0.08
Hypertension *n* (%)	85 (85)	76 (76)	76 (76)	0.19
Hypercholesterolemia *n* (%)	51 (52)	56 (56)	52 (52)	0.77
Diabetes mellitus *n* (%)	28 (29)	35 (35)	26 (26)	0.34
Active smoking *n* (%)	14 (14)	23 (23)	18 (18)	0.25
NHYA Class III–IV *n* (%)	24 (24)	21 (21)	16 (16)	0.36
EF (mean ± SD)%	51.94 ± 10.8	54.5 ± 11.1	52.1 ± 14.2	0.24
PASP (mean ± SD) mmHg	35.5 ± 12.5	36.5 ± 12.6	39.2 ± 13.7	0.18
Atrial fibrillation *n* (%)	12 (12)	13 (13)	10 (10)	0.79
COPD *n* (%)	6 (6)	2 (2)	3 (3)	0.29
PVD *n* (%)	33 (33)	29 (29)	19 (19)	0.07
Previous stroke *n* (%)	2 (2)	4 (4)	4 (4)	0.66
Previous MI (>3 months) *n* (%)	24 (24)	14 (14)	11 (11)	0.03
Acute coronary syndrome *n* (%)	18 (18)	5 (5)	18 (18)	0.008
Previous PCI *n* (%)	18 (18)	23 (23)	17 (17)	0.51
Previous CABG *n* (%)	7 (7)	6 (6)	9 (9)	0.70
Previous AV/MV surgery *n* (%)	2 (2)	5 (5)	10 (10)	0.04
Valve prosthesis malfunction *n* (%)	2 (2)	2 (2)	5 (5)	0.35

AV, aortic valve; CABG, coronary artery bypass grafting; COPD, chronic obstructive pulmonary disease; EF, ejection fraction; MI, myocardial infarction; MV, mitral valve; PASP, pulmonary artery systolic pressure; PCI, percutaneous coronary intervention; PVD, peripheral vascular disease; STS score, Society of Thoracic Surgery score.

Mazza et al. J Cardiovasc Med 2023

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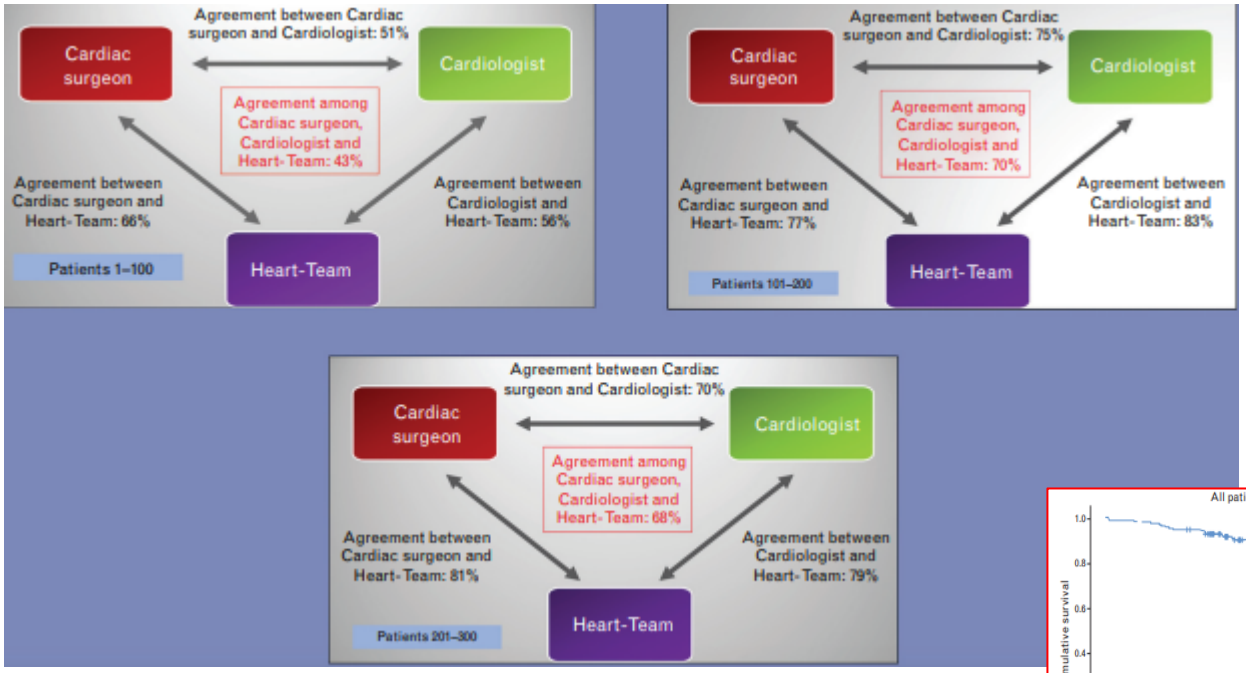
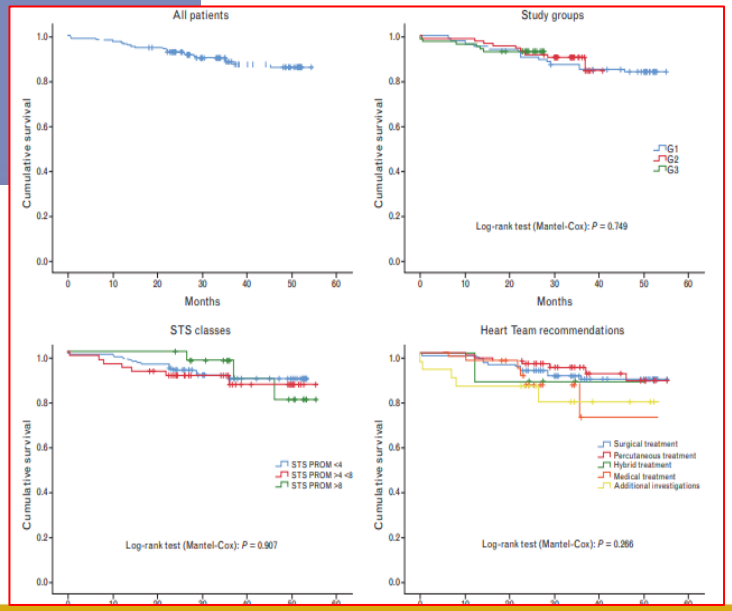
Heart Team





- Continuare così nel nostro disegno di percorso assistenziale

- Procedure interventistiche strutturali (TAVI) condivisi presso centro HUB, o con stand-by cardiochirurgico presso il centro SPOKE

- Progetti di ricerca e didattici condivisi

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Grazie a tutti