PROTOCOLLO AIEOP LH-2004 PER BAMBINI E ADOLESCENTI CON LINFOMA DI HODGKIN: RISULTATI FINALI

Angelo Vitullo et al. on behalf of the AIEOP

IRCCS Centro di Riferimento Oncologico (CRO), Aviano

Bologna, 3 Ottobre 2023

XLVIII CONGRESSO NAZIONALE AIEOP

Bologna
2-4 Ottobre 2023

Il sottoscritto Angelo Vitullo

ai sensi dell'art. 3.3 sul Conflitto di Interessi, pag. 17 del Reg. Applicativo dell'Accordo Stato -Regione del 5 novembre 2009,

dichiara

che negli ultimi due anni NON ha avuto rapporti diretti di finanziamento con soggetti portatori di interessi commerciali in campo sanitario

Background

SEPTEMBER CHILDHOOD CANCER AWARENESS MONTH

September 2023 update of AIEOP-LH 2004 protocol

1199 evaluable patients, recruited from March 2004 to June 2017 [1301 registered, 1247 eligible]

- **GR1 (low risk)**: stages IA-IIA, NO bulky (i.e. M/T <0.33), <4 nodal regions and NO lung – hilar adenopathy;
- **GR2 (intermediate risk)**: patients not included in G1 and G3;
- **GR3 (high risk)**: stages IIIB-IV; M/T⩾0.33.

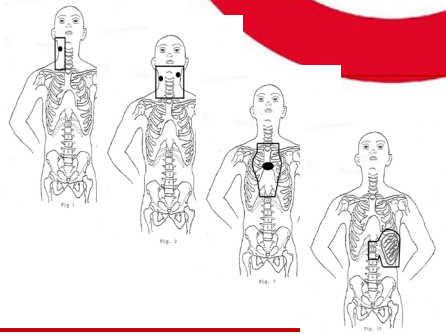
Objectives

GR1 ➡ to reduce toxicity avoiding RT when CR achieved after CT.

GR2, GR3 ➡ <u>if CR* achieved</u> after 4/6 cycles of CT, to reduce toxicity by decreasing RT dose (to 14,4 Gy) delivered after CT. *disappearance of the disease, or ⩾75% reduction of bulky masses and metabolic response

➡ <u>if PR achieved after the initial 4 cycles of CT</u>, to increase CR rates and to improve the FFP rates adding 2 cycles of CT (IEP) + RT (25,2 Gy*). *boost up to 35 Gy if residual disease >50 cc

AIEOP LH 2004 - Protocol outline



GR1

3 x ABVD

- CR → STOP
- PR → 25,2 Gy

RT "local field"

GR2

4 x COPP/ABV

- CR → 14,4 Gy
- PR 2 x IEP → CR: 14,4 Gy; PR: 25,2 Gy

GR3

4 x COPP/ABV

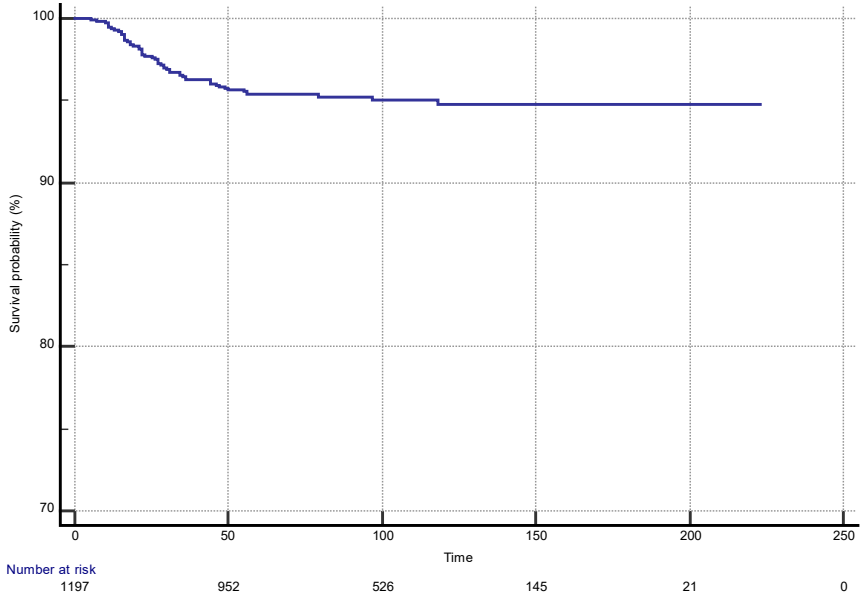
- CR 2 x COPP/ABV → 14,4 Gy
- PR 2 x IEP → CR 14,4 Gy; PR 2 x COPP/ABV → CR: 14,4 Gy; PR: 25,2 Gy

Patients ' characteristics and distribution

Gender M/F (ratio)	659/540 (1,22/1)
Mean age (range)	13,23 years (1,8-17,9)
Median age (IQ)	13,8 years (11,63 – 15,50)
Median FU time	92 months, i.e 7,7 years

Group	N°	%
GR1	181	15,10
GR2	273	22,77
GR3	745	62,14
Total	1199	100

Results – Overall survival



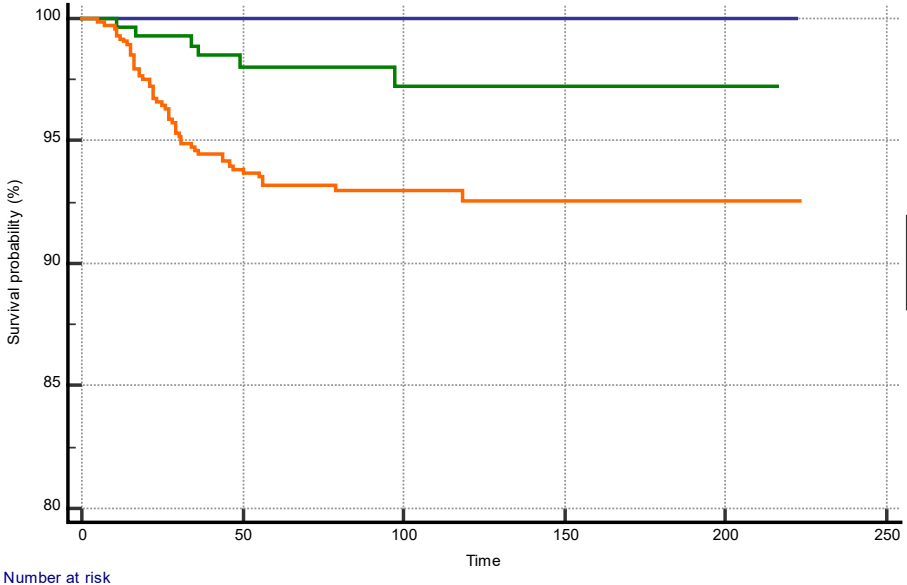
5 years 95,3%

10 years 94,8%

GR1: 100% 5 and 10 years;

GR2: 98% 5 years, 97,2% 10 years;

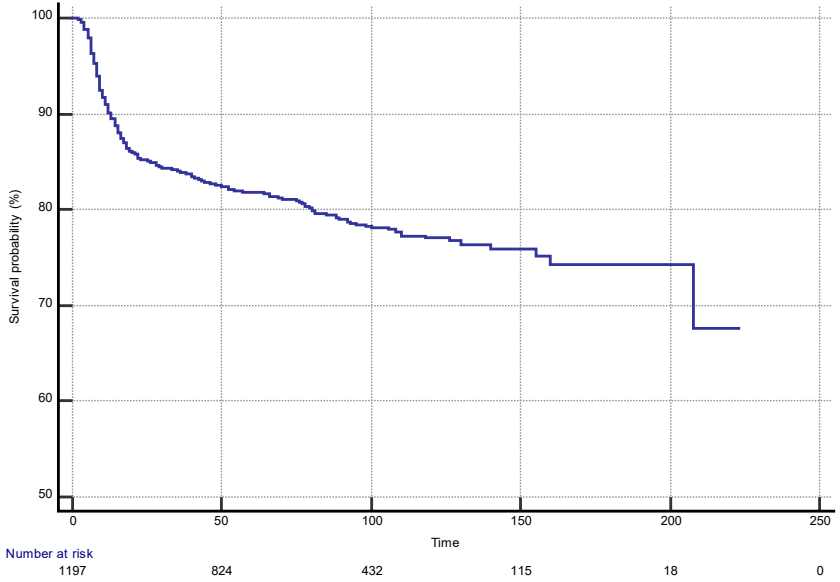
GR3: 93,2% 5 years, 92,5% 10 years.

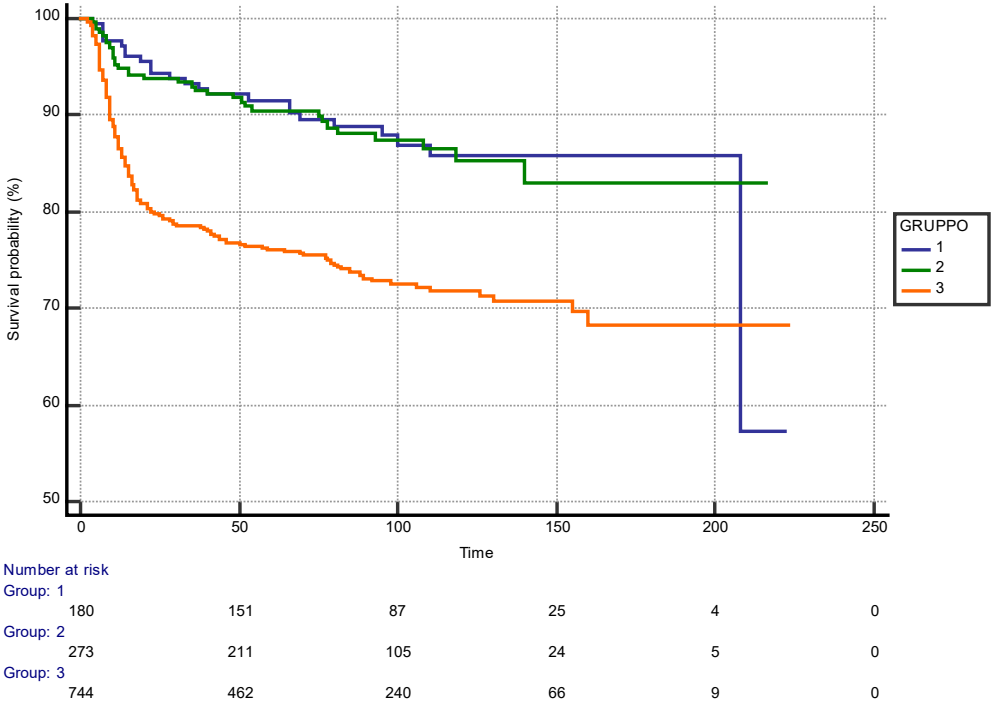


Number at risk

Group: 1						
	180	164	105	31	5	0
Group: 2						
	273	222	116	31	7	0
Group: 3						
	744	566	305	83	9	0

Results – Event free survival



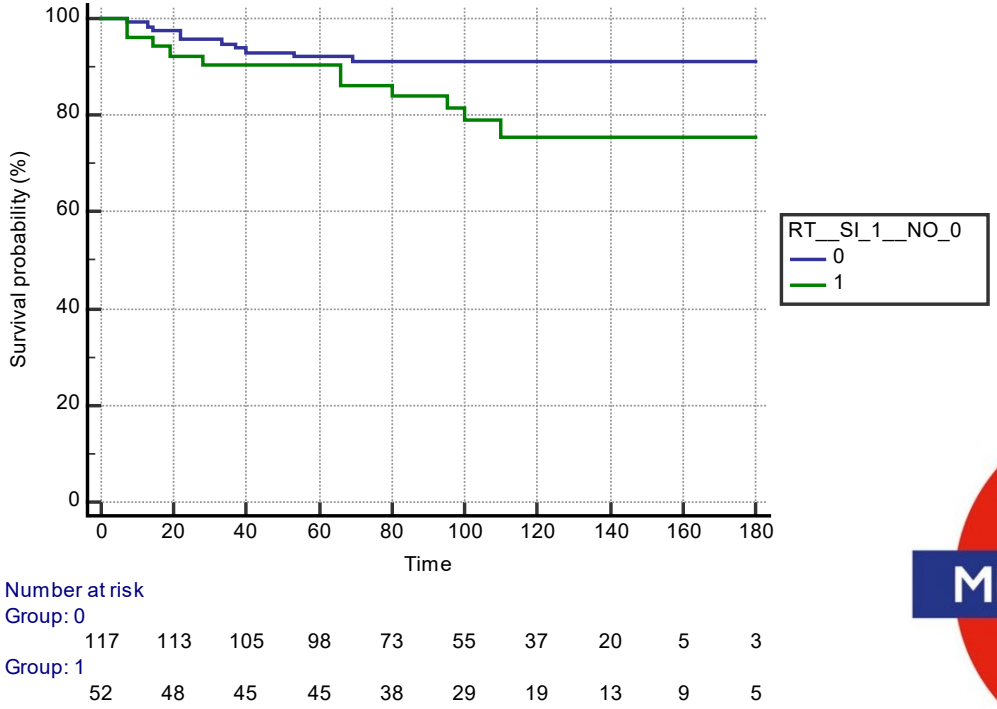


5 years 81,7%

10 years 77%

GR1: 91,5% 5 years, 85,8% 10 years;
GR2: 90,5% 5 years, 85,3% 10 years;
GR3: 76,1% 5 years, 71,9% 10 years.

Results – Event free survival GR1



CR: NO RT

5 years EFS 92,1% (SE 2,5)

10 years EFS 91,1% (SE 2,7)

PR: RT (25,2 Gy)

5 years EFS 90,4% (SE 4,1)

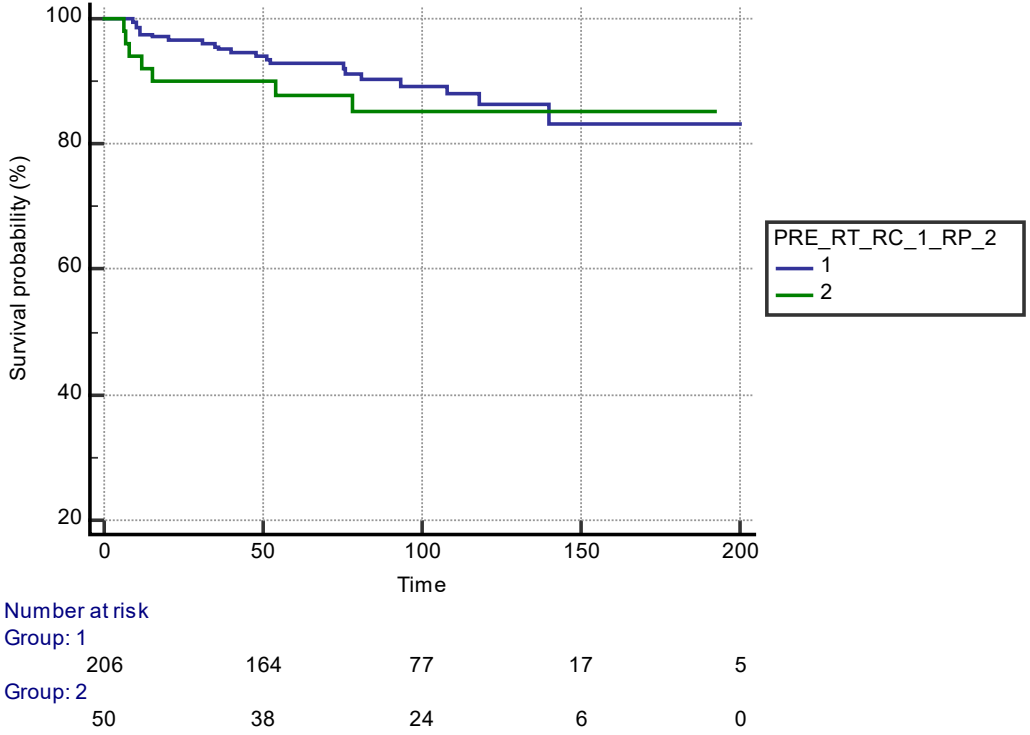
10 years EFS 75,6% (SE 6,6)

Data about RT are missing (12 pts out of 181)

5 SMN (RT-induced?)

1 PD

Results – Event free survival GR2



CR: RT (14,4 Gy)

5 years EFS 92,8% (SE 1,9)

10 years EFS 86,4% (SE 3,1)

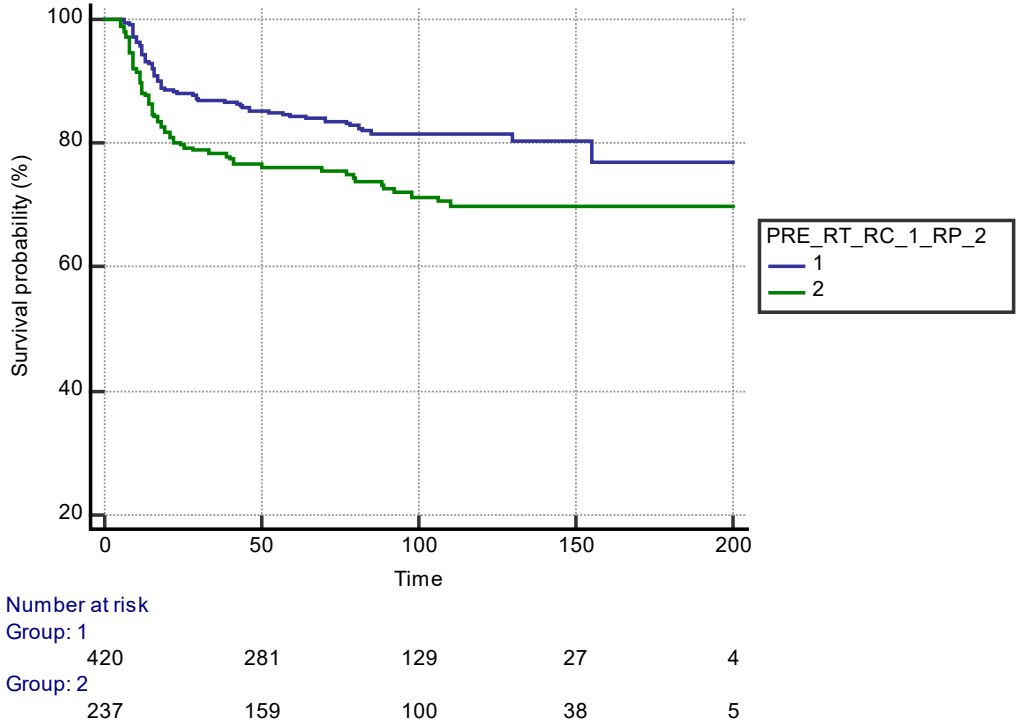
PR: RT (25,2 Gy)

5 years EFS 87,6% (SE 4,8)

10 years EFS 85,1% (SE 2,6)

Data about RT are missing (17 pts out of 273)

Results – Event free survival GR3



CR: RT (14,4 Gy)

5 years EFS 84,3% (SE 1,8)

10 years EFS 81,5% (SE 2,1)

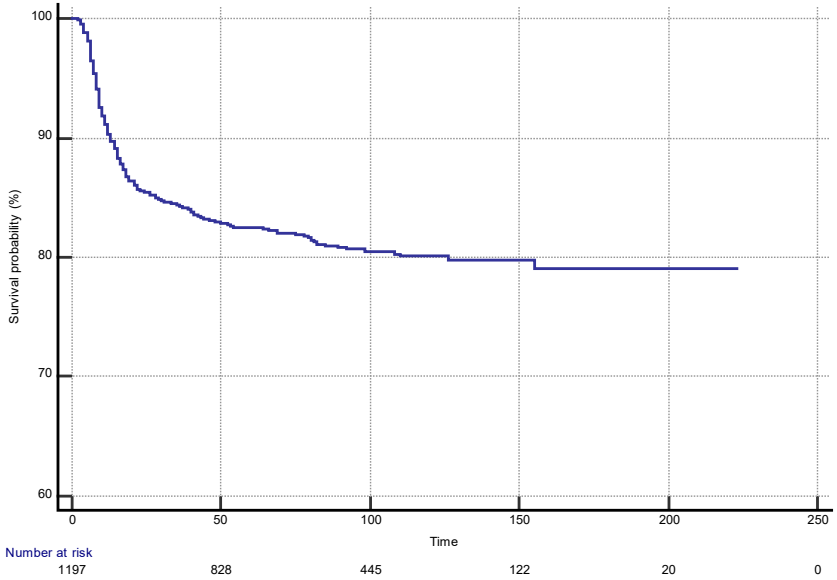
PR: RT (25,2 Gy)

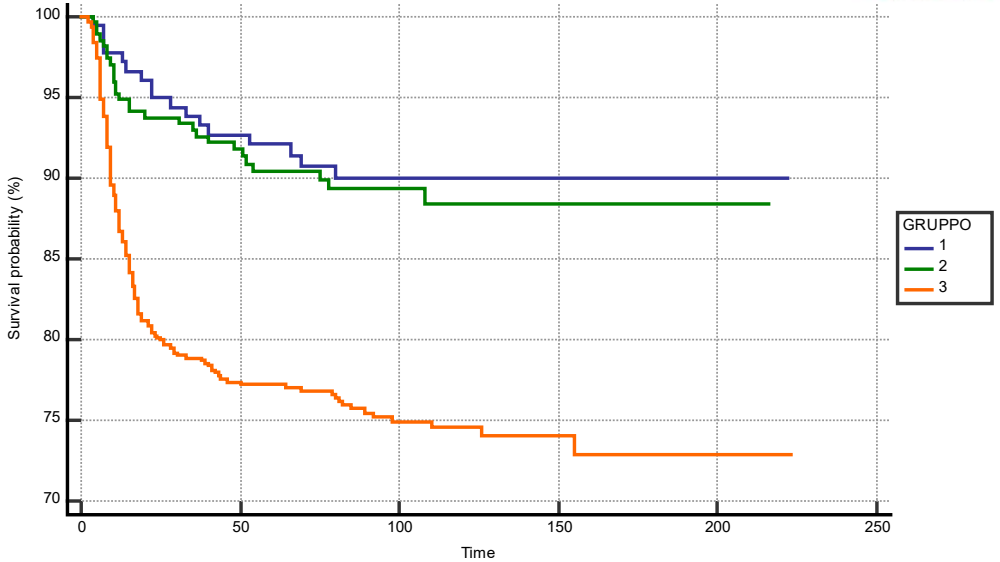
5 years EFS 76,1% (SE 2,8)

10 years EFS 69,8% (SE 3,2)

Data about RT are missing (88 pts out of 745)

Results – Freedom from progression





Number at risk

Group: 1					
180	152	91	27	5	0
Group: 2					
273	211	107	26	6	0
Group: 3					
744	465	247	69	9	0

5 years 82,5%

10 years 80,1%

GR1: 92,1% 5 years, 90,0% 10 years;
GR2: 90,5% 5 years, 88,4% 10 years;
GR3: 77,2% 5 years, 74,5% 10 years.

Results - SMN

Overall cumulative incidence at 10 years from diagnosis: 2,1%

Histology	n° (30)
Thyroid	18
NHL	4
Sarcoma	2
Other	5
Unknown	1

Conclusions

- Cumulative 10-year OS is higher than that of AIEOP-MH-96 protocol (**94,8% vs 92,9%**) with a lower therapeutic burden.
- 10-year overall cumulative incidence of SMN is lower than that of AIEOP-MH-96 protocol (**2,1% vs 3,3%**).
- GR1: if RC after CT, **RT can be safely omitted**.
- GR2: if RC, or if PR, after CT 14,4 Gy LF-RT or 25,2 Gy LF-RT respectively can be **safely delivered**.
- GR3: unsatisfactory results even with additional CT and RT (25,2 Gy)

Thanks to

M. Mascarin[1], A. Vitullo[1], P. Muggeo[2], M. Pillon[3], A. Garaventa[4], S. Buffardi[5], P. Farruggia[6], P. Bertolini[7], T. Casini[8], S. Cesaro[9], I. D'Alba[10], R. Pericoli[11], V. Folsi[12], R.M. Mura[13], G. Russo[14], A. Sau[15], M. Bianchi[16], A. Sala[17], L. Vinti[18], R. Burnelli[19], and to C. Elia for the analysis

On behalf of the AIEOP

[1]IRCCS Centro di Riferimento Oncologico, (CRO), Aviano; [2]AOUC Policlinico, Bari; [3]AOU di Padova, Padova; [4]IRCCS Istituto G. Gaslini, Genova; [5]AORN Santobono-Pausilipon, Napoli; [6]ARNAS Ospedali, Palermo; [7]AOU di Parma, Parma; [8]IRCCS AOU Meyer, Firenze; [9]AOUI Ospedale Donna Bambino, Verona; [10]AOUOR PO G. Salesi, Ancona; [11]Ospedale Infermi, Rimini; [12]Ospedale dei Bambini ASST Spedali Civili, Brescia; [13]OP Microcitemico, Cagliari; [14]AOU Policlinico V. Emanuele, Catania; [15]PO Santo Spirito, Pescara; [16]Ospedale Regina Margherita – S. Anna, Torino; [17]Fondazione MBBM, IRCCS Ospedale S. Gerardo, Monza; [18]IRCCS OP Bambino Gesù, Roma; [19]AOU S. Anna, Ferrara