RISCHIO INFETTIVO NEL PAZIENTE AFFETTO DA ANEMIA APLASTICA NURSING CARE

Valentina De Cecco
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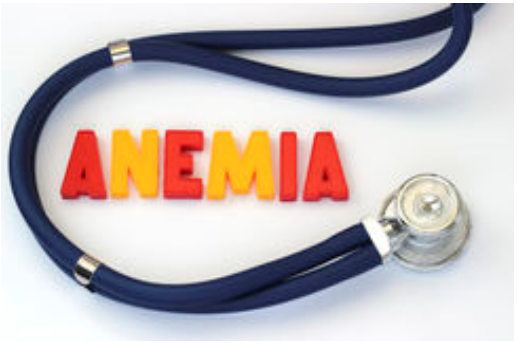

- TERAPIA IMMUNOSOPPRESSIVA

  ATG cavallo/ CICLOSPORINA /PDN / GCSF

- EMOCOMPONENTI: Globuli rossi filtrati

  PLT

  GRANULOCITI

Anemia aplastica

- Soggetto fortemente immunodepresso
- <500 neutrofili } <20.000 PLT
- <200 neutrofili

PREDISPOSIZIONE AD INFEZIONI

SANGUINAMENTI

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Guidelines for the diagnosis and management of adult aplastic anaemia

Sally B. Killick, Writing Group Chair[1] Nick Bown,[2] Jamie Cavenagh,[3] Inderjeet Dokal,[4] Theodora Foukaneli,[5] Anita Hill,[6] Peter Hillmen,[6] Robin Ireland,[7] Austin Kulasekararaj,[7] Ghulam Mufti,[7] John A. Snowden,[8] Sujith Samarasinghe,[9] Anna Wood, BCSH Task Force Member[10] and Judith C. W. Marsh[7] on behalf of the British Society for Standards in Haematology

[1]*The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust, Bournemouth,* [2]*Northern Genetics Service, Newcastle upon Tyne,* [3]*St Bartholomew's Hospital, Barts Health NHS Trust,* [4]*Barts and The London School of Medicine and Dentistry, Queen Mary University of London and Barts Health NHS Trust, London,* [5]*Addenbrooks Hospital, University of Cambridge, Cambridge,* [6]*Leeds Teaching Hospitals, Leeds,* [7]*Kings College Hospital NHS Foundation Trust, London,* [8]*Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield,* [9]*Great Ormond Street Hospital for Children NHS Foundation Trust, London, and* [10]*West Hertfordshire NHS Trust, Watford, UK*

Infection is the major cause of death in AA: prevention and treatment options

Infections remain the major cause of death in AA (Marsh & Kulasekararaj, 2013). In contrast to cancer patients undergoing chemotherapy, in SAA neutropenia is prolonged and persistent, resulting in a higher incidence of invasive fungal infection (IFI) and severe bacterial sepsis. Survival of non-responders to ATG in the last two decades has markedly improved and this has occurred in conjunction with decreased infection-related mortality and decreased frequency of IFIs (Valdez *et al*, 2011).

ALTA INCIDENZA DI INFEZIONI FUNGINE E SEVERE SEPSI BATTERICHE

Therapeutic Advances in Infectious Disease Review

Management of febrile neutropenia in the era of bacterial resistance

Sehnaz Alp and Murat Akova

Ther Adv Infect Dis
(2013) 1(1) 37–43
DOI: 10.1177/2049936113475610

Infection prevention and control measures in neutropenic patients

Appropriate hand-hygiene practices are considered the most effective way to prevent patients from exposure to pathogens in the healthcare setting [Boyce and Pittet, 2002; Freifeld *et al.* 2011; Tomblyn *et al.* 2009].

PRINCIPALE VIA DI TRASMISSIONE

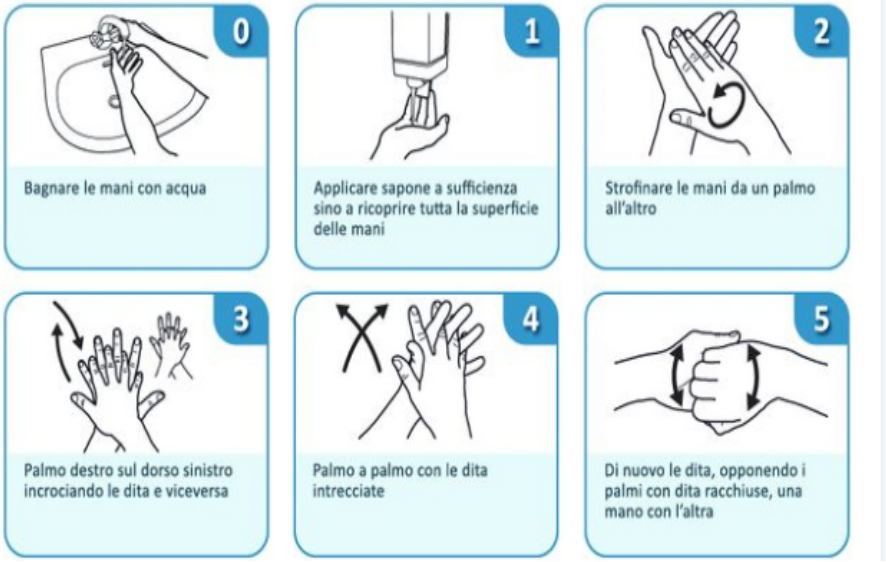
MANI

AEREA

Come lavarsi le mani?

Lavare le mani quando sono sporche, oppure utilizzare le salviettine monouso

Durata della procedura: 40-60 secondi



SAVE LIVES

Clean Your Hands

World Health Organization

Guide to Implementation

A Guide to the Implementation of the WHO Multimodal Hand Hygiene Improvement Strategy

MASSIMA EFFICACIA !

Efficacy of alcohol-based gels compared with simple hand wash and hygienic hand disinfection

G. Kampf[a,b,*], C. Ostermeyer[c]

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[b]*Institut für Hygiene und Umweltmedizin, Ernst-Moritz-Arndt Universität Greifswald, Walther-Rathenau-Str. 49a, 17489 Greifswald, Germany*
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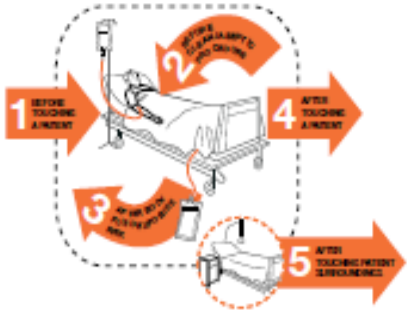
My 5 Moments
for Hand Hygiene



1 PRIMA DEL CONTATTO CON IL PAZIENTE	**QUANDO?** Effettua l'igiene delle mani prima di toccare un paziente mentre ti avvicini. **PERCHÈ?** Per proteggere il paziente nei confronti di germi patogeni presenti sulle tue mani.
2 PRIMA DI UNA MANOVRA ASETTICA	**QUANDO?** Effettua l'igiene delle mani immediatamente prima di qualsiasi manovra asettica. **PERCHÈ?** Per proteggere il paziente nei confronti di germi patogeni, inclusi quelli appartenenti al paziente stesso.
3 DOPO ESPOSIZIONE AD UN LIQUIDO BIOLOGICO	**QUANDO?** Effettua l'igiene delle mani immediatamente dopo esposizione ad un liquido biologico (e dopo aver rimosso i guanti). **PERCHÈ?** Per proteggere te stesso e l'ambiente sanitario nei confronti di germi patogeni.
4 DOPO IL CONTATTO CON IL PAZIENTE	**QUANDO?** Effettua l'igiene delle mani dopo aver toccato un paziente o nelle immediate vicinanze del paziente uscendo dalla stanza. **PERCHÈ?** Per proteggere te stesso e l'ambiente sanitario nei confronti di germi patogeni.
5 DOPO IL CONTATTO CON CIÒ CHE STA ATTORNO AL PAZIENTE	**QUANDO?** Effettua l'igiene delle mani uscendo dalla stanza dopo aver toccato qualsiasi oggetto o mobile nelle immediate vicinanze di un paziente - anche in assenza di un contatto diretto con il paziente. **PERCHÈ?** Per proteggere te stesso e l'ambiente sanitario nei confronti di germi patogeni.

bjh guideline

Guidelines for the diagnosis and management of adult aplastic anaemia

Sally B. Killick, Writing Group Chair[1] Nick Bown,[2] Jamie Cavenagh,[3] Inderjeet Dokal,[4] Theodora Foukaneli,[5] Anita Hill,[6] Peter Hillmen,[6] Robin Ireland,[7] Austin Kulasekararaj,[7] Ghulam Mufti,[7] John A. Snowden,[8] Sujith Samarasinghe,[9] Anna Wood, BCSH Task Force Member[10] and Judith C. W. Marsh[7] on behalf of the British Society for Standards in Haematology

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Prevention of infections. Aplastic anaemia patients who are severely neutropenic should ideally be nursed in isolation when in hospital. In the UK it is common practice to give prophylactic antibiotics and antifungals, regular mouth care including an antiseptic mouthwash (such as chlorhexidine or saline) and food of low bacterial content (Hochsmann *et al*, 2013). Prophylactic antibiotics, either two non-absorbables (e.g. colistin and neomycin) or quinolones (e.g. ciprofloxacin), may be initiated but the preference should be according to local policy. A mould (aspergillus) active azole, preferably itraconazole or posaconazole, should be used as prophylaxis. In the UK, prophylaxis against *Pneumocystis jirovecii* is not routinely given. Anti-viral prophylaxis in untreated patients with AA is not routinely given. Antiviral prophylaxis with aciclovir or valaciclovir should be used during and after ATG therapy. During ATG therapy, sub-clinical reactivation of CMV and Epstein–Barr virus (EBV) is common but self-limiting, and therefore does not need antiviral treatment; EBV-related post-transplant lymphoproliferative disease has only very rarely been reported after ATG, most often after rabbit ATG. It is not UK practice to give *Pneumocystis jirovecii* prophylaxis with ATG.

PROFILASSI

ISOLAMENTO IN CAMERA SINGOLA

- TERAPIA ANTIBIOTICA
- ANTIFUNGINA
- ANTIVIRALE
- ORAL CARE CLOREXIDINA O
- SOLUZ.SALINA
- ALIMENTI A BASSA CARICA
- MICROBICA

Treatment of infections. Protocols and guidelines for the management of febrile neutropenia, including the assessment and management of fungal infections, are well developed and clinicians should follow local hospital and National Institute for Health and Care Excellence guidance (Phillips *et al*, 2012). Empirical anti-fungal therapy, as per local guidelines,

should be initiated early for patients with clinically suspected IFIs, as these patients have persistent neutropenia. Granulocyte transfusions may be potentially life saving in severe sepsis, such as invasive fungal disease, particularly for patients due to proceed to HSCT (Quillen *et al*, 2009).

Aplastic anaemia patients who are severely neutropenic should be given prophylactic antibiotics and antifungal therapy according to local policies. Grade 2B

Aplastic anaemia patients receiving IST should also receive prophylactic anti-viral agents, although routine prophylaxis against *Pneumocystis jirovecii* is not necessary. Grade 2C

bjh guideline

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For microbiological diagnosis, at least two sets of blood cultures must be obtained. In the absence of a central venous catheter (CVC), two blood culture sets must be obtained from separate venipunctures. If a CVC is present, one of these blood-culture sets must be taken from each lumen of the CVC, and the other one from a peripheral vein site, simultaneously [Adamkiewicz *et al.* 1999; DesJardin *et al.* 1999; Freifeld *et al.* 2011; Kontoyiannis *et al.* 2009; Weinstein, 1996]. A differential time to positivity of 120 min between cultures drawn simultaneously through a CVC and peripheral vein site is suggestive of central line-associated bloodstream infection (CLABSI) [Blot *et al.* 1999; Freifeld *et al.* 2011; Raad *et al.* 2004; Seifert *et al.* 2003]. In case of any other suspicious foci of infection, appropriate clinical specimens must be examined for microbiological diagnosis. In patients with respiratory signs or symptoms, the evaluation of chest radiography is recommended [Freifeld *et al.* 2011; Kontoyiannis *et al.* 2009].

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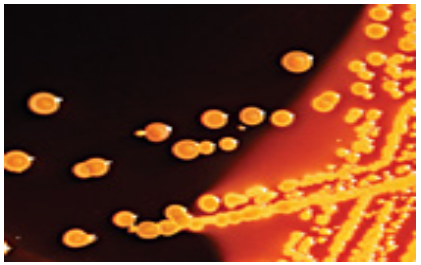
2 SET EMOCOLTURE DA DIFFERENTE VENIPUNTURA

1 SET EMOCOLTURE PER LUME DEL CVC E 1 SET DA VENA PERIFERICA



Executive Summary: Clinical Practice Guideline for the Use of Antimicrobial Agents in Neutropenic Patients with Cancer: 2010 Update by the Infectious Diseases Society of America

Alison G. Freifeld,[1] Eric J. Bow,[9] Kent A. Sepkowitz,[2] Michael J. Boeckh,[4] James I. Ito,[5] Craig A. Mullen,[3] Issam I. Raad,[6] Kenneth V. Rolston,[6] Jo-Anne H. Young,[7] and John R. Wingard[8]

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2 SET DI EMOCOLTURE DA VENIPUNTURA DIFFERENTE

2 SET DI EMOCOLTURE DA CVC PER LUME E VENIPUNTURA 1 SET

COLTURE DI ALTRI SITI SE CLINICAMENTE INTERESSATI

CONTROLLO RADIOLOGICO SE VI SONO SEGNI SINTOMI RESPIRATORI

SE SEPSI CVC CORRELATA (*s.aureus,p.aeruginosa, Fungina,micobattere)* rimuovere cvc /PORT

SE SEPSI DA COAGULASI NEG. PRESERVARE IL CVC CON LOCK ANTIBIOTICA

6. At least 2 sets of blood cultures are recommended, with a set collected simultaneously from each lumen of an existing central venous catheter (CVC), if present, and from a peripheral vein site; 2 blood culture sets from separate venipunctures should be sent if no central catheter is present (A-III). Blood culture volumes should be limited to <1% of total blood volume (usually ~70 mL/kg) in patients weighing <40 kg (C-III).
7. Culture specimens from other sites of suspected infection should be obtained as clinically indicated (A-III).
8. A chest radiograph is indicated for patients with respiratory signs or symptoms (A-III).

XI. How are Catheter-Related Infections Diagnosed and Managed in Neutropenic Patients?

Recommendation

43. Differential time to positivity (DTP) >120 min of qualitative blood cultures performed on specimens simultaneously drawn from the CVC and a vein suggests a central line–associated blood stream infection (CLABSI) (A-II).

44. For CLABSI caused by *S. aureus*, *P. aeruginosa*, fungi, or mycobacteria, catheter removal is recommended in addition to systemic antimicrobial therapy for at least 14 days (A-II). Catheter removal is also recommended for tunnel infection or port pocket site infection, septic thrombosis, endocarditis, sepsis with hemodynamic instability, or bloodstream infection that persists despite ⩾72 h of therapy with appropriate antibiotics (A-II).
45. For documented CLABSI caused by coagulase-negative staphylococci, the catheter may be retained using systemic therapy with or without antibiotic lock therapy (B-III).

Table 2. Bloodstream Isolates in Patients with Severe Aplastic Anemia

Microbiological organism	Total (*n*=174)	Group 1 (*n*=43)	Group 2 (*n*=51)	Group 3 (*n*=80)
Coagulase-negative Staphylococcus species	56	23	13	20
Unspecified coagulase-negative *Staphylococcus* species	11	5	2	4
Staphylococcus epidermis	31	14	8	9
Staphylococcus haemolyticus	6	3	0	3
Other gram-positive cocci[a]	8	1	3	4
Staphylococcus aureus	7	1	4	2
Enterococcus faecalis	9	2	3	4
Enterococcus faecium	4	0	1	3
Enterococcus species	2	0	1	1
Gram-positive bacilli	16	1	3	12
Unspecified gram-positive bacilli species	4	1	0	3
Corynebacterium species	6	0	1	5
Clostridium ramosum	1	0	0	1
Clostridium speticum	2	0	0	2
Other gram-positive bacilli[b]	3	0	2	1
Enterobacteriaceae	32	10	6	16
Escherichia coli	9	3	1	5
Enterobacter cloacae	5	0	2	3
Enterobacter aerogenes	2	2	0	0
Proteus mirabilis	1	0	0	1
Klebsiella pneumonia	11	4	2	5
Klebsiella oxytoca	3	1	0	2
Fermenter species	1	0	1	0
Stenotrophomonas (Xanthomonas) maltophilia	10	3	1	6
Pseudomonas aeruginosa and non–lactose fermenters	21	7	3	11
Pseudomonas aeruginosa	13	3	2	8
Other *Pseudomonas* species	4	3	0	1
Sphingomonas paucimobilis	1	1	0	0
Capnocytophaga sputigena	1	0	0	1
Acinetobacter species	2	0	1	1
Candida species and other yeasts	8	3	2	3
Candida albicans	3	1		
Candida tropicalis	1	1		
Candida krusei	1	1		
Candida glabrata	2	0		
Malassezia furfur	1	0		
Filamentous fungi- *Alternaria* species	1	0		
Anaerobic bacteria	12	3		
Bacteroides species	3	2		
Leptotrichia species	1	0		
Bifidobacterium species	1	1		
Propionibacterium acnes	8	0	3	5
Atypical mycobacteria[c]	3	0	0	3

[a] *Staphylococcus captitis ureolyticus, Staphylococcus hominis, Micrococcus, Leuconostoc mesenteroides, Stomatococcus mucilaginosus,* and *Gemella morbillorum.*
[b] *Lactobacillus* species, *Brevibacter casei,* and *Rothia mucilaminosus.*
[c] *Mycobacterium chelonae, Mycobacterium porcinum,* and *Mycobacterium mycogenicum.*

56 casi Staphilo.coagul.neg
31 casi Staphilo.epiderm.
9 casi Enterococco Faec.
16 casi Bacilli Gram pos.
32 casi Enterobatteriacee
9 casi Escherichia coli
11 KCP
21 casi Pseudomonas aerug.
Non lactose ferm.
13 casi Pseudomonas aerug.
8 casi Candida
12 casi Batteri anaerobi
8 casi Propionbacteruim

Decreased Infection-Related Mortality and Improved Survival in Severe Aplastic Anemia in the Past Two Decades

Jessica M. Valdez,[1,2,6] Phillip Scheinberg,[3,6] Olga Nunez,[3] Colin O. Wu,[4] Neal S. Young,[3] and Thomas J. Walsh[2,5]

[1]Howard Hughes Medical Institute, National Institutes of Health Research Scholars Program, [2]Pediatric Oncology Branch, National Cancer Institute, and [3]Hematology Branch [4]Office of Biostatistics Research, National Heart, Lung and Blood Institute, Bethesda, Maryland; and [5]Transplantation-Oncology Infectious Diseases Program, Weill Cornell Medical College of Cornell University, and New York Presbyterian Hospital, New York, New York

Marzo 2011

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journal homepage: www.ajicjournal.org

Major article

Investigation of a cluster of *Clostridium difficile* infections in a pediatric oncology setting

Raymund Dantes MD, MPH [a,b,*], Erin E. Epson MD [b,c], Samuel R. Dominguez MD, PhD [d,e], Susan Dolan RN, MS, CIC [d], Frank Wang MD [a], Amanda Hurst PharmD [d], Sarah K. Parker MD [d,e], Helen Johnston MPH [c], Kelly West [d], Lydia Anderson [a], James K. Rasheed PhD [a], Heather Moulton-Meissner PhD [a], Judith Noble-Wang PhD [a], Brandi Limbago PhD [a], Elaine Dowell [d], Joanne M. Hilden MD [d,e], Alice Guh MD, MPH [a], Lori A. Pollack MD, MPH [a], Carolyn V. Gould MD, MSCR [a]

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ISOLAMENTO PROTETTIVO
CLOSTRIDIUM DIFFICILE
MRSA/MDRO

PRTOCOLLI AZIENDALI

Management of MDROs in Healthcare settings,2006

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

HICPAC
HEALTHCARE INFECTION CONTROL PRACTICES ADVISORY COMMITTEE

Table 1
Infection prevention policies implemented immediately before CDPHE-CDC investigation

Category	Intervention
Environmental cleaning	• Universal sodium hypochlorite (1:10 solution) disinfection in all CCDB areas instead of just contact isolation rooms. • Increased frequency of environmental cleaning to 2-3 times daily and between each patient in outpatient clinic. • Cleaning of family lounge after each family use.
Personal protective equipment	• Universal glove use. • Continue contact precautions for all patients with current or prior CDI.
Isolation policies	• Closure of playrooms. • Restriction of family lounge to a single family at a time. • Cessation of group and communal gathering activities for CCBD patients and families. • Family education regarding hand hygiene and other infection control policies. • Dedicated patient equipment in each room (eg, medication barcode scanners, scales, stethoscopes). • Electronic alert for providers in medical records for all patients with CDI. • Storage of multidose containers (eg, nasal spray) in individual plastic bags in shared refrigerator for individual patients in isolation.

CCBD, Center for Cancer and Blood Disorders; *CDC*, Centers for Disease Control and Prevention; *CDI*, *Clostridium difficile* infection; *CDPHE*, Colorado Department of Public Health and Environment.

Department of Public Health and Environment and Centers for Disease Control and Prevention (CDC) was requested.

The primary objectives of this investigation were to determine the nature and extent of CDI in CCBD patients, evaluate risk factors for CDI in CCBD patients, determine potential modes of transmission, and implement interventions to stop transmission.

METHODS

IDSA GUIDELINES

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XII. What Environmental Precautions Should be Taken When Managing Febrile Neutropenic Patients?

Recommendations

48. Hand hygiene is the most effective means of preventing transmission of infection in the hospital (**A-II**).

49. Standard barrier precautions should be followed for all patients, and infection-specific isolation should be used for patients with certain signs or symptoms (**A-III**).

50. HSCT recipients should be placed in private (ie, single-patient) rooms (**B-III**). Allogeneic HSCT recipients should be placed in rooms with >12 air exchanges/h and high-efficiency particulate air (HEPA) filtration (**A-III**).

51. Plants and dried or fresh flowers should not be allowed in the rooms of hospitalized neutropenic patients (**B-III**).

REVIEW

Infection control measures to decrease the burden of antimicrobial resistance in the critical care setting

Caroline Landelle[a], Kalisvar Marimuthu[a,b], and Stephan Harbarth[a]

Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns

Cochrane Nursing Care Field – Cochrane Review Summary

Gloves, gowns and masks for reducing the transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) in the hospital setting (Review)

Rhoda Redulla [a,b]

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[b] *Drexel University, Philadelphia, PA, USA*

http://dx.doi.org/10.1016/j.ijnurstu.2015.12.010
0020-7489/

POCHE EVIDENZE VALIDE IN QUANTO NON VI SONO STUDI RANDOMIZZATI PER L'UTILIZZO DEI DPE

Associazione Italiana Ematologia Oncologia Pediatrica

Gruppo di Lavoro "Insufficienze Midollari"
Coordinatore: Dr. Piero Farruggia

RACCOMANDAZIONI DIAGNOSTICO-TERAPEUTICHE SULLE APLASIE MIDOLLARI ACQUISITE IN ETA' PEDIATRICA

Autori: A. Barone,* A. Lucarelli,* D. Onofrillo,* F. Verzegnassi,* S. Bonanomi, S. Cesaro, C. Cugno, F. Fioredda, A.P. Iori, S. Ladogana, A. Locasciulli, D. Longoni, M. Lanciotti, A. Macaluso, R. Mandaglio, N. Marra, B. Martire, M. Maruzzi, G. Menna, L. Notarangelo, G. Palazzi, M. Pillon, U. Ramenghi, G. Russo, J. Svahn, F. Timeus, F. Tucci, M. Zecca, P. Farruggia,** C. Dufour,** P. Saracco.**

2013

GRAZIE PER L’ATTENZIONE