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CORSO TPM CAMPANIA
per coordinatori alla donazione e al prelievo di organi e tessuti

13-15 settembre 2022
NAPOLI (Pozzuoli) – AMERICAN HOTEL

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Infection remains a significant complication after solid organ transplantation (SOT). The incidence of various pathogens varies widely depending on the presence of specific factors, according to which patients can be classified into different risk categories that may merit tailored prophylaxis strategies.

Many factors may contribute to Infections after SOT:

- Donor's factors
- Recipient's Factors
- Surgical Factors
- Enviromental Factors

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IL PROFILO DI RISCHIO DEL DONATORE

- **IDONEO:** assenza di elementi noti che comportino un rischio di trasmissione di patologia oppure presenza di elementi noti che non impediscono l'utilizzo degli organi eventualmente prevedendo una selezione dei riceventi e il rispetto di alcune raccomandazioni
- **NON IDONEO:** presenza di fattori che comportano un rischio di trasmissione di patologia tra donatore e ricevente la cui gravità supera il beneficio atteso dal trapianto o il rischio di mortalità conseguente alla permanenza in lista d'attesa

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DONATORE NON IDONEO

Solo alcune PATOLOGIE NEOPLASTICHE costituiscono sicuramente (evidenze scientifiche) criteri assoluti di esclusione dalla donazione:

- Neoplasie maligne metastatizzate
- Carcinoma in atto (eccetto prostata, vescica, rene e tiroide)
- Microcitoma polmonare
- Melanoma con follow-up inferiore ai 5 anni
- Leucemia, Linfomi e Mieloma in atto

IN TUTTI GLI ALTRI CASI DI PATOLOGIA NEOPLASTICA, INFETTIVA, EMATOLOGICA, IMMUNOLOGICA E GENETICA E' NECESSARIO CONTATTARE LA SPECIFICA *SECOND OPINION NAZIONALE* E AVVISARE IL CNTO

DONATORE IDONEO

RISCHIO STANDARD: assenza di fattori di rischio per trasmissione di malattia dal donatore al ricevente

RISCHIO NON STANDARD TRASCURABILE: presenza di fattori di rischio per trasmissione di patologia, ma la cui natura però non è tale da restringere il campo dei possibili riceventi. Anche se tali patologie venissero trasmesse, sarebbero facilmente trattabili. Consenso informato.

Anti-core pos.
Lue
Meningite in terapia da almeno 24h
Batteriemie con antibiogr.
M-GUS con CM> 1,5
Ca in situ (escluso ca mammario alto grado)

ALCUNI ESEMPI

Tumori SNC esclusi i 4° grado WHO
Ca rene <4 cm a basso grado
Ca uroteliale a basso grado
Ca tiroide < 1 cm
Baselioma
Ca prostata ≤ 6 gleason

DONATORE IDONEO

RISCHIO NON STANDARD ACCETTABILE: presenza di fattori di rischio per trasmissione di patologie tali da restringere il campo dei possibili riceventi. L'utilizzo di questi organi è giustificato dalla particolare condizione clinica del ricevente e comunque il rischio di trasmissione della patologia è sensibilmente inferiore rispetto al rischio di mortalità connesso al permanere in lista d'attesa. Informativa da far firmare al momento dell'iscrizione in lista + Consenso informato al momento del trapianto.

HCV +
HBsAg +
Comportamenti a elevato rischio
Infezioni da MDR localizzate
Malattia di Chagas

ALCUNI ESEMPI

Tumori SNC di 4° WHO in assenza di fatt. risc.
Linfomi in remissione da oltre 10 anni
Ca in atto a basso grado e basso stadio
Storia di Ca a basso grado e basso stadio

DONATORE IDONEO

RISCHIO NON STANDARD ACCETTABILE SOLO PER PAZIENTI IN GRAVI CONDIZIONI CLINICHE: presenza di fattori di rischio per trasmissione di patologia particolarmente grave (per lo più neoplastica) che a giudizio degli esperti nazionali possono essere considerati a rischio accettabile per pazienti in condizioni cliniche tali che il rischio di morire in lista d'attesa supera ampiamente quello conseguente all'eventuale trasmissione della grave patologia.

Informativa da far firmare al momento dell'iscrizione in lista + Consenso informato al momento del trapianto.

Es.: presenza o storia clinica di patologia neoplastica infiltrante

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CASI PARTICOLARI: ENCEFALITI

Donatori con diagnosi di encefalite senza causa nota, ricerca su Sangue e Liquor di:

- HSV - DNA
- VZV - DNA
- HHV6 - DNA
- CMV - DNA
- EBV - DNA
- Enterovirus - RNA
- West Nile – RNA (stagionale)

Second Opinion

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Quale sistema in Campania?

Algoritmo valutativo in Campania

1) Conoscenza del Territorio
2) Analisi del donatore nel contesto territoriale

Perché?

Donatore Utopistico

No infezioni
In ambiente senza infezioni e possibilità di infettarsi

Donatore Reale

Sospetto per infezioni
In ambiente con alto rischio di infezioni da germi MDR

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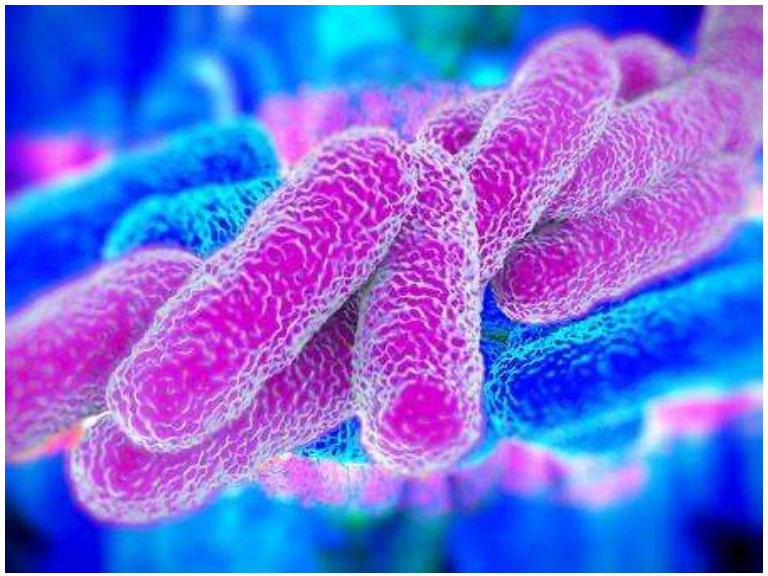
RAPPORTO 2019
SULL'ANTIBIOTICO RESISTENZA
E SULL'USO DI ANTIBIOTICI

RILEVATI NELLE STRUTTURE PUBBLICHE
DEL SISTEMA SANITARIO DELLA CAMPANIA



Il Territorio

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a 1. Distribuzione degli isolati e dei pazienti per Laboratorio/ Azienda e copertura per giornate di degenza nel 2019

Azienda - Presidio	Isolati N	Isolati %	Pazienti N	Pazienti %	Copertura* gg degenza	%Copertura gg degenza*
A.O. CARDARELLI NA	9.928	18,60%	4.887	16,08%	340.179	12,88%
A.O. SANTOBONO-PAUSILIPON NA	2.152	4,03%	1.246	4,10%	78.238	2,96%
A.O. DEI COLLI NA	7.169	13,43%	3.555	11,70%	182.245	6,90%
A.O. RUGGI SA	5.950	11,15%	3.510	11,55%	233.847	8,85%
A.O. MOSCATI AV	2.719	5,09%	1.538	5,06%	154.238	5,84%
A.O. RUMMO BN	1.286	2,41%	755	2,48%	96.374	3,65%
A.O. S.ANNA S.SEBASTIANO CE	2.314	4,33%	1.512	4,98%	123.536	4,68%
A.O.U. L. VANVITELLI	1.917	3,59%	1.058	3,48%	65.305	2,47%
A.O.U. FEDERICO II	6.269	11,74%	3.801	12,51%	162.126	6,14%
I.R.C.C.S. "FONDAZIONE PASCALE"	1.100	2,06%	620	2,04%	39.783	1,51%
ASL AV - P.O. S.ANGELO DEI LOMBARDI	566	1,06%	410	1,35%	45.815	1,73%
ASL CE - P.O. MOSCATI AVERSA	718	1,34%	406	1,34%	48.017	1,82%
ASL NA1 - OSPEDALE DEL MARE	2.042	3,82%	971	3,20%	77.487	2,93%
ASL NA1 - PP.OO. NAPOLI EST	1.664	3,12%	996	3,28%	82.254	3,11%
ASL NA1 - PP.OO. NAPOLI OVEST	1.236	2,32%	835	2,75%	67.426	2,55%
ASL NA2 - P.O. POZZUOLI	827	1,55%	689	2,27%	66.030	2,50%
ASL NA2 - P.O. FRATTAMAGGIORE	467	0,87%	392	1,29%	35.358	1,34%
ASL NA2 - P.O. GIUGLIANO	706	1,32%	500	1,65%	36.515	1,38%
ASL NA2 - P.O. ISCHIA	136	0,25%	112	0,37%	13.505	0,51%
ASL NA3 OO.RR. AREA STABIESE	1.208	2,26%	787	2,59%	52.066	1,97%
ASL NA3 OO.RR. AREA NOLANA	729	1,37%	478	1,57%	30.996	1,17%
ASL SA - P.O. UMBERTO I NOCERA	2.283	4,28%	1.333	4,39%	105.867	4,01%
Totale	**53.386**	**100%**	**30.391**	**100%**	**2.137.207**	**81%**

* Sul totale giornate di degenza (Ordinari+DH) 2019 Ospedali pubblici Campania = 2.642.014

Tabella 4. Distribuzione degli isolati clinici 2019 per specialità di ricovero

Specialità di ricovero	N isolati	% isolati	N pazienti	% pazienti
Terapia intensiva	10.955	20,5%	3.890	12,8%
Scienze mediche	10.776	20,2%	6.868	22,6%
Scienze Chirurgiche	7.846	14,7%	4.346	14,3%
Territorio	5.562	10,4%	2.498	8,2%
Emergenza	3.327	6,2%	2.157	7,1%
Oncologia/Ematologia	2.675	5,0%	1.623	5,3%
Malattie infettive	2.564	4,8%	1.596	5,2%
Pediatria	1.898	3,6%	1.662	5,5%
Day hospital	1.371	2,6%	1.273	4,2%
Ginecologia/Ostetricia	1.233	2,3%	577	1,9%
Geriatria	1.054	2,0%	717	2,4%
Altri Reparti	4.125	7,7%	3.183	10,5%
Totali	**53.386**	**100%**	**30.391**	**100%**

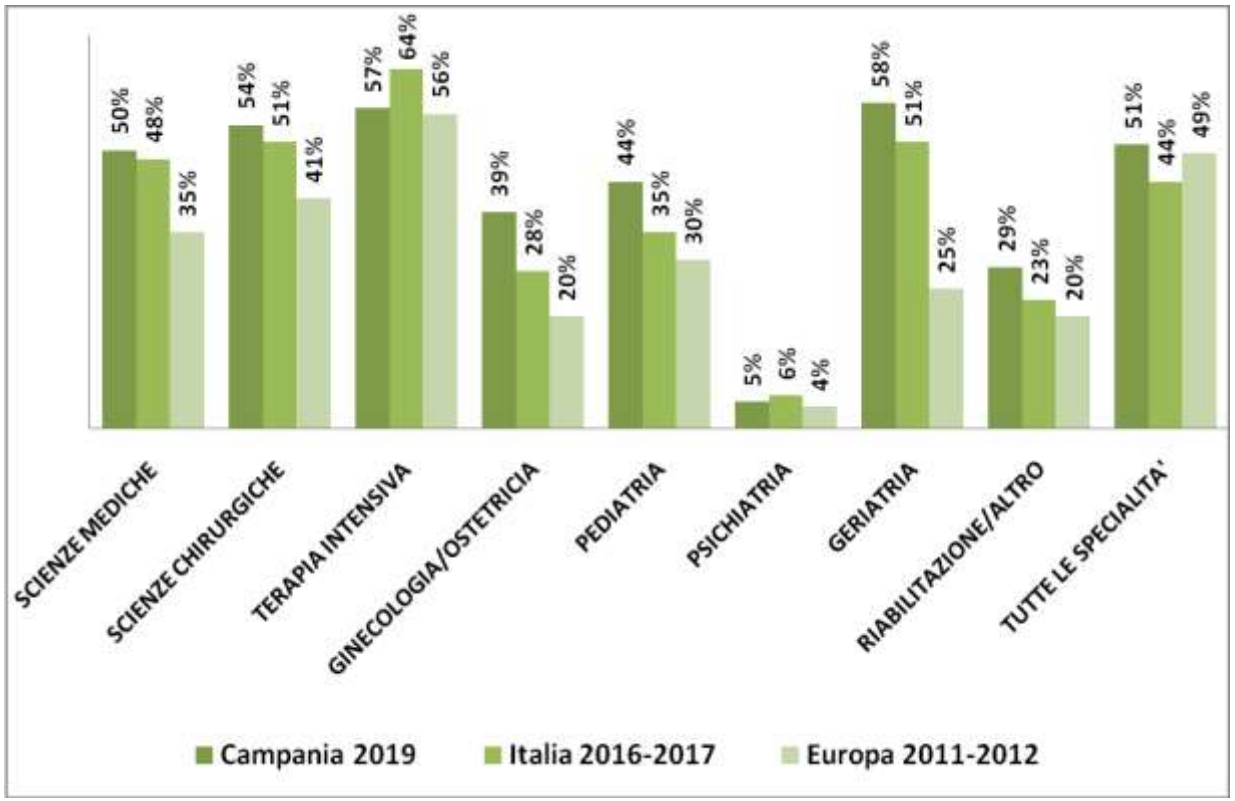
Tabella 2. Microrganismi isolati nel 2019 dai Laboratori Si.Re.Ar.

Microrganismo	N isolati	% isolati	N pazienti	% pazienti
Escherichia coli	11.896	22,28%	6.288	20,69%
Staphylococcus aureus	6.243	11,69%	3.775	12,42%
Klebsiella pneumoniae	5.006	9,38%	2.355	7,75%
Pseudomonas aeruginosa	4.330	8,11%	2.285	7,52%
Enterococcus faecalis	2.937	5,50%	1.444	4,75%
Staphylococcus epidermidis	2.831	5,30%	1.899	6,25%
Acinetobacter baumannii complex	2.663	4,99%	1.775	5,84%
Proteus mirabilis	1.807	3,38%	1.000	3,29%
Enterobacter cloacae	1.436	2,69%	814	2,68%
Enterococcus faecium	1.342	2,51%	742	2,44%
Staphylococcus haemolyticus	1.174	2,20%	681	2,24%
Candida albicans	746	1,40%	450	1,48%
Streptococcus agalactiae	721	1,35%	474	1,56%
Stenotrophomonas maltophilia	668	1,25%	413	1,36%
Klebsiella oxytoca	654	1,23%	404	1,33%
Streptococcus pneumoniae	260	0,49%	167	0,55%
Altri organismi	8.672	16,24%	5.422	17,84%
Totali	**53.386**	**100%**	**30.391**	**100%**

Tabella 3. Distribuzione degli isolati clinici 2019 per materiale/ sede di isolamento

Sede/Materiale di isolamento	N isolati	% isolati	N pazienti	% pazienti
Urina	14.646	27,43%	8.698	28,62%
Sangue	7.752	14,52%	5.021	16,52%
Ferita chirurgica	4.939	9,25%	2.507	8,25%
Bronchiale	4.567	8,55%	2.264	7,45%
Escreato	3.128	5,86%	1.820	5,99%
Aspirato tracheale	2.180	4,08%	1.219	4,01%
Vagina	1.694	3,17%	1.197	3,94%
Faringe	1.557	2,92%	1.027	3,38%
Ferita	1.391	2,61%	811	2,67%
Pelle	1.068	2,00%	632	2,08%
Catetere vascolare centrale	1.045	1,96%	611	2,01%
Liquido cerebro spinale	231	0,43%	173	0,57%
Altri materiali	9.188	17,21%	4.410	14,51%
Totali	**53.386**	**100%**	**30.391**	**100%**

Figura 25. Prevalenze di pazienti in trattamento antibiotico stratificate per area di ricovero (Campania 2019 vs Italia 2016-2017 vs Europa 2011-2012)



Perché è importante il contesto territoriale?

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Donor-Derived Infections in Solid Organ Transplant Recipients

P. A. Grossi,[a,*] J. A. Fishman[b] and the AST Infectious Disease Community of Practice

Table 2: Standard screening tests for organ donors

Human immunodeficiency virus (HIV) antibody
Hepatitis B (HBV) serologies including HBV surface antigen, core antibody, surface antibody and Hepatitis delta antigen and or antibody in HBsAg positive donors
Hepatitis C antibody
Treponemal and non treponemal testing (TPHA or TPPA or FTA-Abs + Rapid plasma reagin [RPR])
Human T cell lymphotrophic virus (HTLV-I/II) antibody
Toxoplasma antibody
Cytomegalovirus antibody
Epstein-Barr virus (EBV) antibody panel (EBV viral capsid antigen, ± early antigen and nuclear antigen antibody levels)
Herpes simplex virus antibody
Varicella-zoster virus antibody
Blood and urine cultures

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Special Article

Donor-Derived Infections in Solid Organ Transplantation

M.G. Ison[a,*], P. Grossi[b,c] and the AST Infectious Diseases Community of Practice

Table 2: Summary of potential donor-derived infectious disease transmissions reported to the United States organ procurement and transplantation network 2005–2011 (2)

Infection type	Number of donor reports	Number of recipients with confirmed transmission	Number of DDI-attributable recipient deaths
Viruses[1]	166	48	16
Bacteria[2]	118	34	9
Fungi[3]	75	31	10
Mycobacteria[4]	53	10	3
Parasites[5]	35	22	7

Bacteremic donors

It has been estimated that 5% of organ donors have bacteremia at the time of organ procurement (2,44,45). Transmission has been described, typically involving bacteria that were not susceptible to typically utilized perioperative antibiotics. When transmissions occur, there is frequently significant graft loss, morbidity and mortality (2,44–46). Although bacteremia and bacterial infections in the donor pose a potential risk for the transmission of infection to the recipient, discarding organs from such donors could further compromise the already limited donor pool and aggravate the organ donor shortage. The risk of donor-transmitted infection varies with the type of bacteria causing the infection. Among Gram-positive bacteria, there is a low risk of transmission with relatively avirulent bacteria, like coagulase-negative staphylococci. Gram-negative bacilli in the donor appear to pose a greater risk for transmission and is associated with poorer outcomes than that caused by Gram-positive bacteria (47–54).

Donor-derived infection—the challenge for transplant safety

Jay A. Fishman and Paolo A. Grossi

Abstract | Organ transplantation, including of the heart, lung, kidney, liver, pancreas, and small bowel, is considered the therapy of choice for end-stage organ failure. Each year, over 70,000 organs are implanted worldwide. One donor may provide multiple organs, as well as corneas and other tissues, for multiple recipients. The degree of risk for transmission of infection carried with grafts, notably of viruses, is largely unknown and, for a specific organ, difficult to assess. The approach to microbiological screening of organ donors varies with national and regional regulations and with the availability and performance of microbiological assays used for potential donors. Transmission of both expected or common, and unexpected infections has been observed in organ transplants, generally recognized after development of clusters of infections among recipients of organs from a common donor. Other than for unusual or catastrophic events, few data exist that define the incidence and manifestations of donor-derived infections or the ideal assays to use in screening to prevent such transmissions. Absolute prevention of the transmission of donor-derived infections in organ transplantation is not possible. However, improvements in screening technologies will enhance the safety of transplantation in the future.

Fishman, J. A. & Grossi, P. A. *Nat. Rev. Nephrol.* 10, 663–672 (2014); published online 2 September 2014; doi:10.1038/nrneph.2014.159

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A. Mularoni[1,*], A. Bertani[2], G. Vizzini[1], F. Gona[3], M. Campanella[1], M. Spada[1], S. Gruttadauria[1], P. Vitulo[2], P. Conaldi[3], A. Luca[4], B. Gridelli[1] and P. Grossi[5]

Outcome of Transplantation Using Organs From Donors Infected or Colonized With Carbapenem-Resistant Gram-Negative Bacteria

Table 3: Characteristics of donors and recipients

Donor			Recipient						
N	Type of MDR infection/colonization	Site of infection/ colonization	N/Organ	RISK	TRANSMISSION – Outcome of transmission	COMMUNICATION	ANTIBIOTIC PROPHYLAXIS TARGETED ON DONOR STRAIN	PROBLEM	SURVIVED
1	CRKP INFECTION	Blood	1 A Left Liver	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
			1 B Right Liver	HIGH	YES- Infection (SSI)	Effective	Inappropriate	Risk underestimated	YES
			1 C Lungs	HIGH	YES- Airway Colonization	Effective	Inappropriate	Risk underestimated	YES
			1 D Pancreas Islets	LOW[1]	NO	Effective	None	None	YES
2	CRKP INFECTION	Blood, Urine, BAL	2 A Kidney	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
			2 B Liver	HIGH	YES- Infection (SSI)	Ineffective	Prompt – Appropriate – Incomplete	Information Lost	YES
3	CRAB INFECTION	Blood, BAL	3 A Kidney	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
			3 B Kidney	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
4	CRAB INFECTION	Blood	4 A Liver	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
5	CRAB COLONIZATION	Urine, BAL	5 A Kidney	HIGH	NO	Ineffective	Inappropriate	Miscommunication	YES
6	CRKP INFECTION	Urine	6 A Kidneys	HIGH	YES- Infection (SSI, BSI, UTI)	Ineffective	Delayed	Miscommunication	NO
			6 B Liver	LOW	NO	Ineffective	None	Miscommunication	YES
7	CRAB COLONIZATION	BAL	7 A Lungs	HIGH	NO	Effective	Delayed	Risk underestimated	YES
8	CRAB COLONIZATION	BAL	8 ALungs	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
			8 B Heart	LOW	NO	Effective	None	None	YES
			8 CLiver	LOW	NO	Effective	None	None	YES
9	CRAB INFECTION	Blood	9 A Liver	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
10	CRKP and CRAB INFECTION	Blood	10 A Kidney	HIGH	NO	Effective	Prompt – Appropriate – Complete	None	YES
11	CRAB and CRKP COLONIZATION	BAL	11 A Liver	LOW	NO	Effective	None	None	YES
			11 B Kidneys	LOW	NO	Effective	None	None	YES
12	CRAB COLONIZATION	BAL	12 A Liver	LOW	NO	Effective	None	None	YES
13	CRAB COLONIZATION	BAL	13 A Liver	LOW	NO	Effective	None	None	YES
			13 B Heart	LOW	NO	Effective	None	None	YES
14	CRKP COLONIZATION	BAL	14 A Liver	LOW	Not Proven[2]	Effective	Prompt – Appropriate – Complete	None	NO
15	CRAB COLONIZATION	BAL	15 A Liver	LOW	NO	Effective	None	None	YES
16	CRAB COLONIZATION	BAL	16 A Liver	LOW	NO	Effective	None	None	YES
17	CRAB COLONIZATION	BAL	17 A Liver	LOW	NO	Effective	None	None	NO
			17 B Heart	LOW	NO	Effective	None	None	NO
18	CRAB COLONIZATION	BAL	18 A Liver	LOW	NO	Effective	None	None	YES
			18 B Kidney	LOW	NO	Effective	None	None	YES

Pre-emptive antibiotic treatment targeted on donor strain: Prompt: Started in the first 6 days; Appropriate: Combination therapy as recommended by van Duin et al (21); Complete: Continued for at least 7 days. Risk: We considered at high risk of donor-derived infection transmission recipients who received organs from donors with BSI or with an infection at the same transplanted organ (e.g. MDR bacteria recovered from urine in case of kidney transplants or MDR recovered from BAL in case of lung transplants). We considered at low risk of donor-derived infection transmission recipients who received an organ from donors with infection/colonization at a nontransplanted organ and without bacteremia.

[1]Recipient 1D was considered at low risk because even though the pancreas preservation fluid was positive for CRKP, final islet preparation cultures were microbiologically sterile after antibiotic decontamination. Transmission – Outcome of transmission: If the transmission occurred, the outcome (infection/colonization) and the type of infection, if applicable, are reported. SSI, surgical site infection; UTI, urinary tract infection; BSI, blood stream infection. Survived: survival at 6-month follow-up.

[2]Recipient 14A: Developed BSI caused by CRKP, the same pathogen isolated from the donor's BAS. Antibiotic biotype of the donor and recipient isolates were similar, but the donor strain was not available so we could not perform PFGE, and transmission could neither be proven nor excluded.

BAL, broncho alveolar lavage; CRAB, carbapenem-resistant *Acinetobacter*; CRKP, carbapenem-resistant *Klebsiella pneumoniae*; MDR, multidrug resistant; PFGE, pulsed field gel electrophoresis.

The safe use of organs from donors with multidrug-resistant bacteria requires intra- and inter-institutional communication to allow appropriate management and prompt treatment of recipients in order to avoid transmission of infection

Curr Infect Dis Rep (2016) 18:18
DOI 10.1007/s11908-016-0526-9

Multidrug-Resistant Bacterial Donor-Derived Infections in Solid Organ Transplantation

Jessica D. Lewis[1] & Costi D. Sifri[1]

Table 1 Summary of clusters of multidrug-resistant Gram-negative donor-derived infection

Location	Year	Bacteria	Category of transmission risk	Source of donor culture	Number of transplant centers involved	Number infected/ number at risk	Death/ allograft loss + death
Italy [1]	2009	CRPA	Expected	Endotracheal aspirate	1	2/2	2/2
USA [8]	2009	ESBL *E. coli*	Unexpected	Urine, perfusate	2	2/2	0/2
USA [9, 10]	2012	MDR PA	Unexpected	Peritoneal fluid, blood, sputum	2	4/4	2/2
Brazil [11]	2012	CRAB	Unexpected	BAL	1	1/1	1/1
Israel [12]	2012	CRKP	Unexpected	Sputum, BAL	1	1/5	1/1
USA [13]	2012	KPC-producing CRKP	Expected	CSF, perfusate	3	1/4	0/0
Italy [14]	2014	OXA-48-producing CRKP	Unexpected	Perfusate	2	2/2	0/1
Italy [15••]	2015	CRKP	Unexpected	Blood	Not reported	2/4	0/0
Italy [15••]	2015	CRKP	Unexpected	Blood, urine, BAL	Not reported	1/2	0/0
Italy [15••]	2015	CRKP	Unexpected	Urine	Not reported	1/2	1/1
Italy [15••]	2015	CRAB	Unexpected	Blood, BAL	Not reported	0/2	0/0
Italy [15••]	2015	CRAB	Unexpected	Blood	Not reported	0/1	0/0
Italy [15••]	2015	CRAB	Unexpected	Blood	Not reported	0/1	0/0
Italy [15••]	2015	CRKP and CRAB	Unexpected	Blood	Not reported	0/1	0/0

CRPA carbapenem-resistant *Pseudomonas aeruginosa*, *ESBL* extended-spectrum beta-lactamase, *MDR* multidrug-resistant; *PA* Pseudomonas aeruginosa, *CRAB* carbapenem-resistant *Acinetobacter baumannii*, *CRKP* carbapenem-resistant *Klebsiella pneumoniae*, *KPC Klebsiella pneumoniae* carbapenemase, *BAL* bronchoalveolar lavage fluid, *CSF* cerebrospinal fluid

Table 2 Summary of clusters of multidrug-resistant Gram-positive donor-derived infection

Location	Year	Bacteria	Category of transmission risk	Source of donor culture	Number of transplant centers involved	Number infected/ number at risk	Death/allograft loss + death
Spain [16]	1997	MRSA	Unexpected	Blood	1	1/1	1/1
Canada [17]	1999	MRSA	Unexpected	Endotracheal aspirate	2	3/4	0/0
USA [18•]	2014	MRSA	Expected	Blood	1	1/1	0/0
USA [19•]	2014	MRSA	Expected	Blood	Not reported	2/4	0/0

MRSA methicillin-resistant *Staphylococcus aureus*

CONCLUSION

It is important for transplant clinicians to appreciate the lessons that can be learned from these cases of MDR bacterial DDIs; however this review also raises many unanswered questions. **Further study is needed to identify donor factors that are associated with transmission of MDR bacteria to recipients** so that transplant clinicians can risk-stratify donors with regard to their likelihood of transmitting MDR bacterial infection and develop a more informed management plan.

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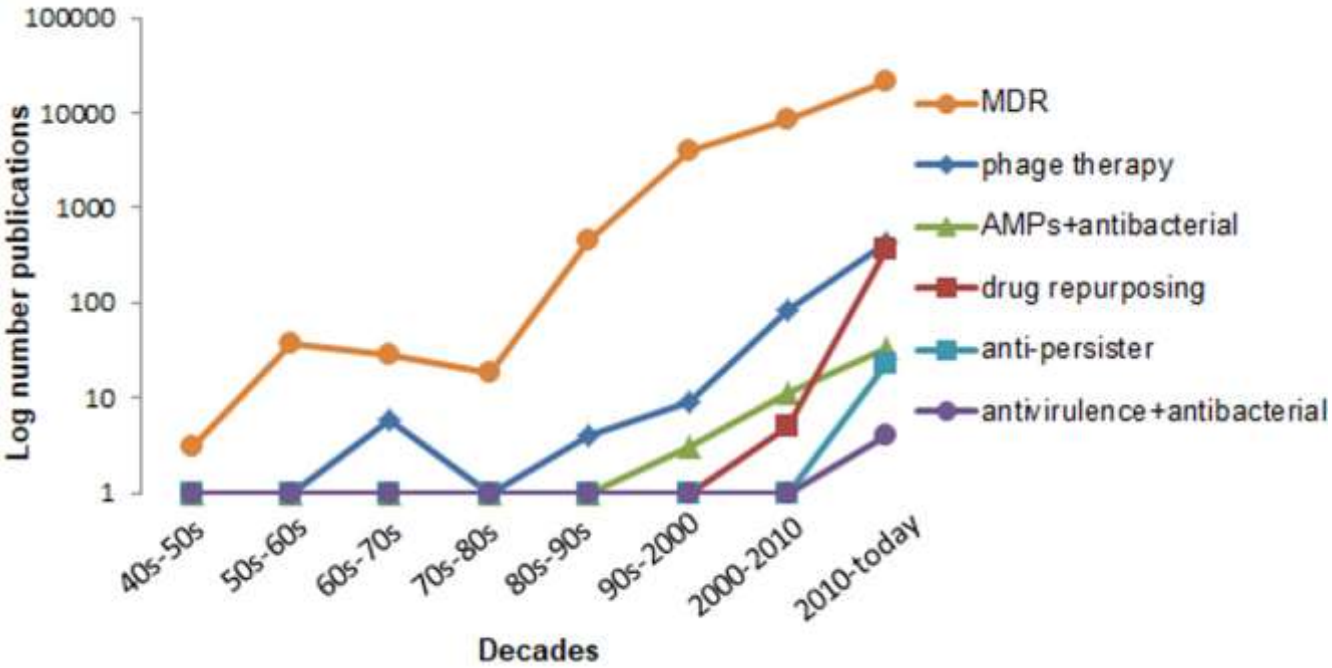
antibiotics

MDPI

Review

Strategies to Combat Multidrug-Resistant and Persistent Infectious Diseases

Olga Pacios [1,2], Lucia Blasco [1,2], Inès Bleriot [1,2], Laura Fernandez-Garcia [1,2], Mónica González Bardanca [1,2], Antón Ambroa [1,2], María López [1,3], German Bou [1,2,4] and Maria Tomás [2,4,*]



To treat or not to treat, that’s the question

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Antibiotic utilization in deceased organ donors

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Affiliations + expand

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TABLES

Table 1. Antibiotic utilization in deceased organ donors

Donor antibiotic utilization	N (%)[a]
Received any antibiotic during terminal hospitalization or peri-organ procurement	427 (97%)
Received any antibiotic during terminal hospitalization outside of the organ procurement period	400 (91%)

In conclusion, our study identified widespread use of broad-spectrum antibiotics and many instances of potentially redundant antibiotic prescription among deceased organ donors. Since brief antibiotic exposures may increase the risk for donor MDRO colonization and subsequent MDRO DDIs in the recipient, the organ donor population is an important future target of antibiotic stewardship interventions

Risk Factors for Early Multidrug-Resistant Infections in Solid Organ Transplant Recipients: How Impactful Are Donor-Derived Infections?

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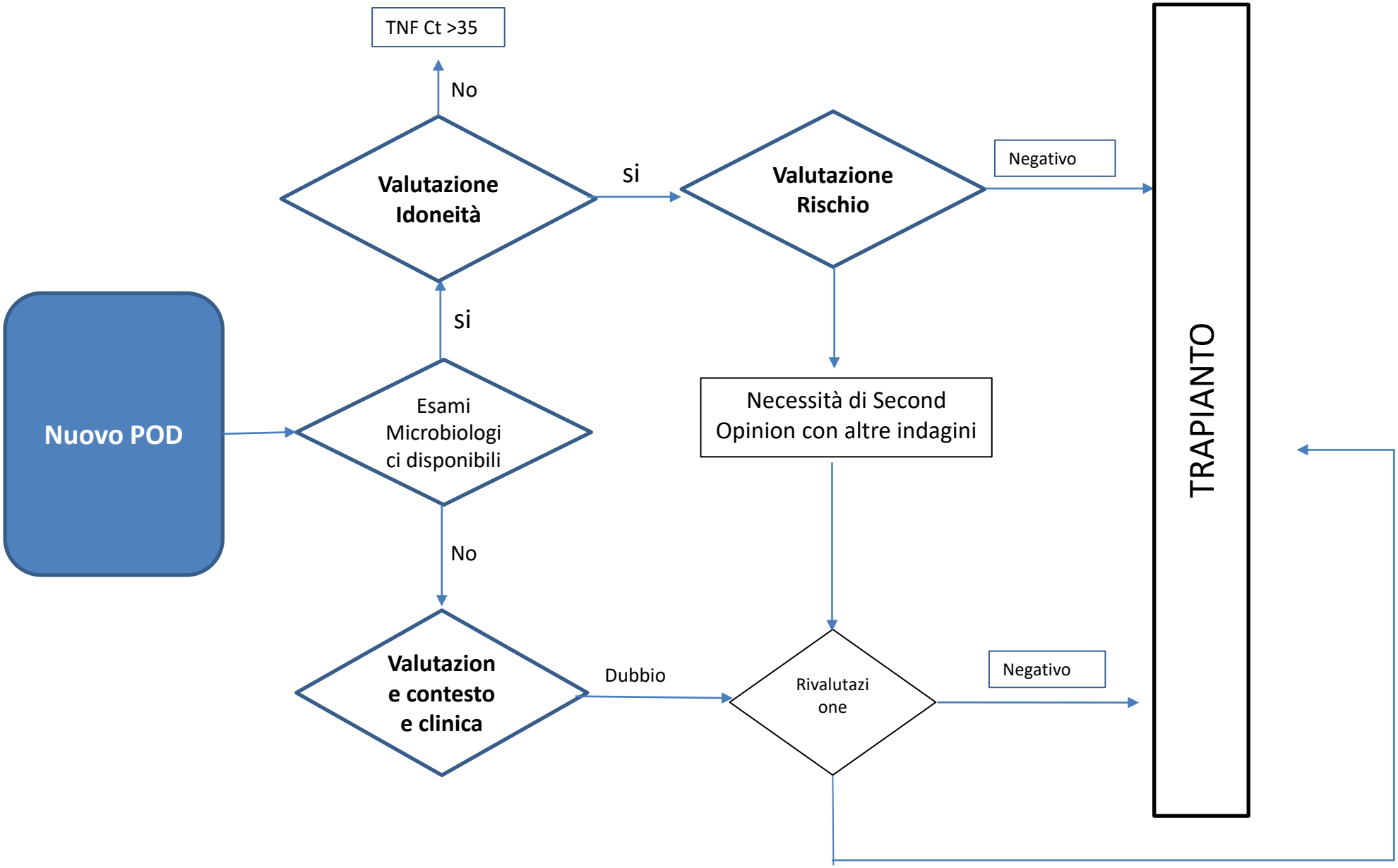
Meeting: 2020 American Transplant Congress

Risk Factor	Odds Ratio	CI-Lower	CI-Upper	P value
Heart Transplant	4.06	1.18	13.96	0.026
ESBL-producing bacteria colonization	3.48	2.08	5.80	<0.001
MBL-producing bacteria colonization	3.45	1.47	8.06	0.003
MDR *Acinetobacter* colonization	9.17	3.29	25.57	<0.001
ICU stay ≥7 days	1.78	1.06	3.00	0.029
>48 hours on mechanical ventilation	3.76	2.20	6.41	<0.001
Received Carbapenem	6.10	3.66	10.15	<0.001
Received Colistin	5.72	2.84	11.52	<0.001
Received Fosfomycin	3.29	1.02	10.64	0.358
Received Tigecycline	11.70	5.97	22.94	<0.001
Surgical Reoperation	2.92	1.61	5.31	<0.001
CMV Viremia	0.58	0.36	0.94	0.027

Conclusions: Being at high risk for DDI is not a major risk factor for early post-transplant MDRGNB infection within an active surveillance system, indicating that infected organs may be used in SOT with an active surveillance system and early preemptive targeted therapy in the high risk recipients. Many other factors, mainly related to hospital stay, increase the risk for MDRGNB infections. Recipients who developed MDRGNB infections were more likely to have been previously colonized by the same infecting pathogen, demonstrating the importance of infection control measures for infection prevention.

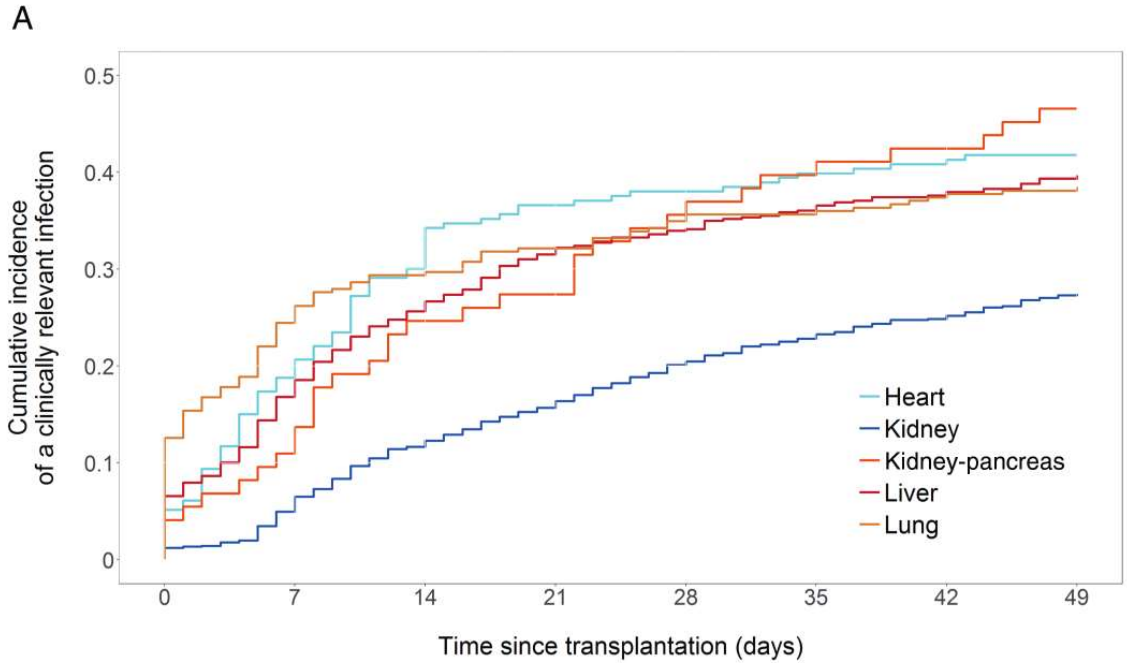

TNF Ct >35
No
Valutazione Idoneità
Sì
Valutazione Rischio
Negativo
TRAPIANTO
Nuovo POD
Sì
Esami Microbiologici disponibili
Necessità di Second Opinion con altre indagini
No
Valutazione e contesto e clinica
Dubbio
Rivalutazione
Negativo

Clinical Infectious Diseases

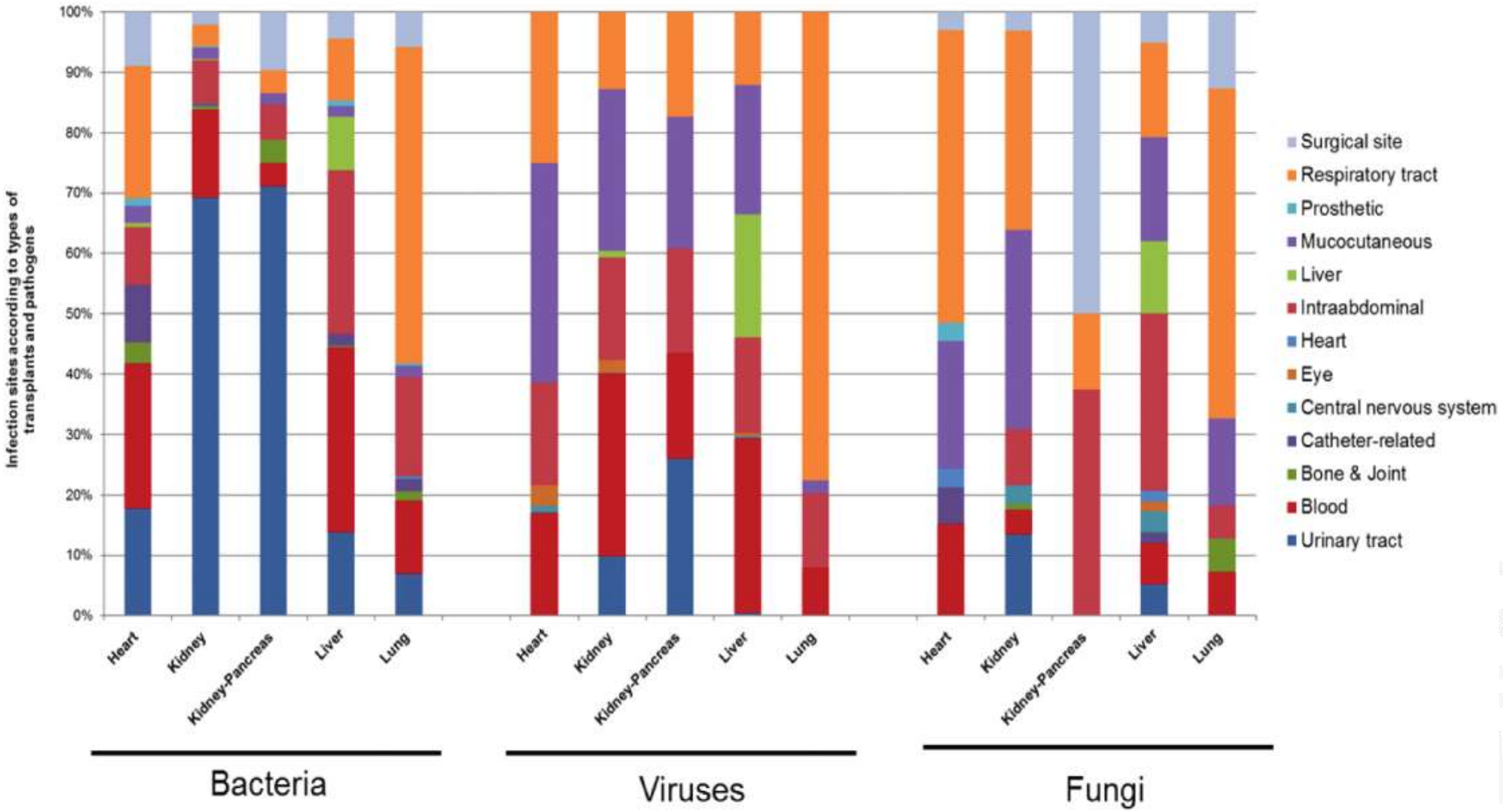
MAJOR ARTICLE

Burden and Timeline of Infectious Diseases in the First Year After Solid Organ Transplantation in the Swiss Transplant Cohort Study

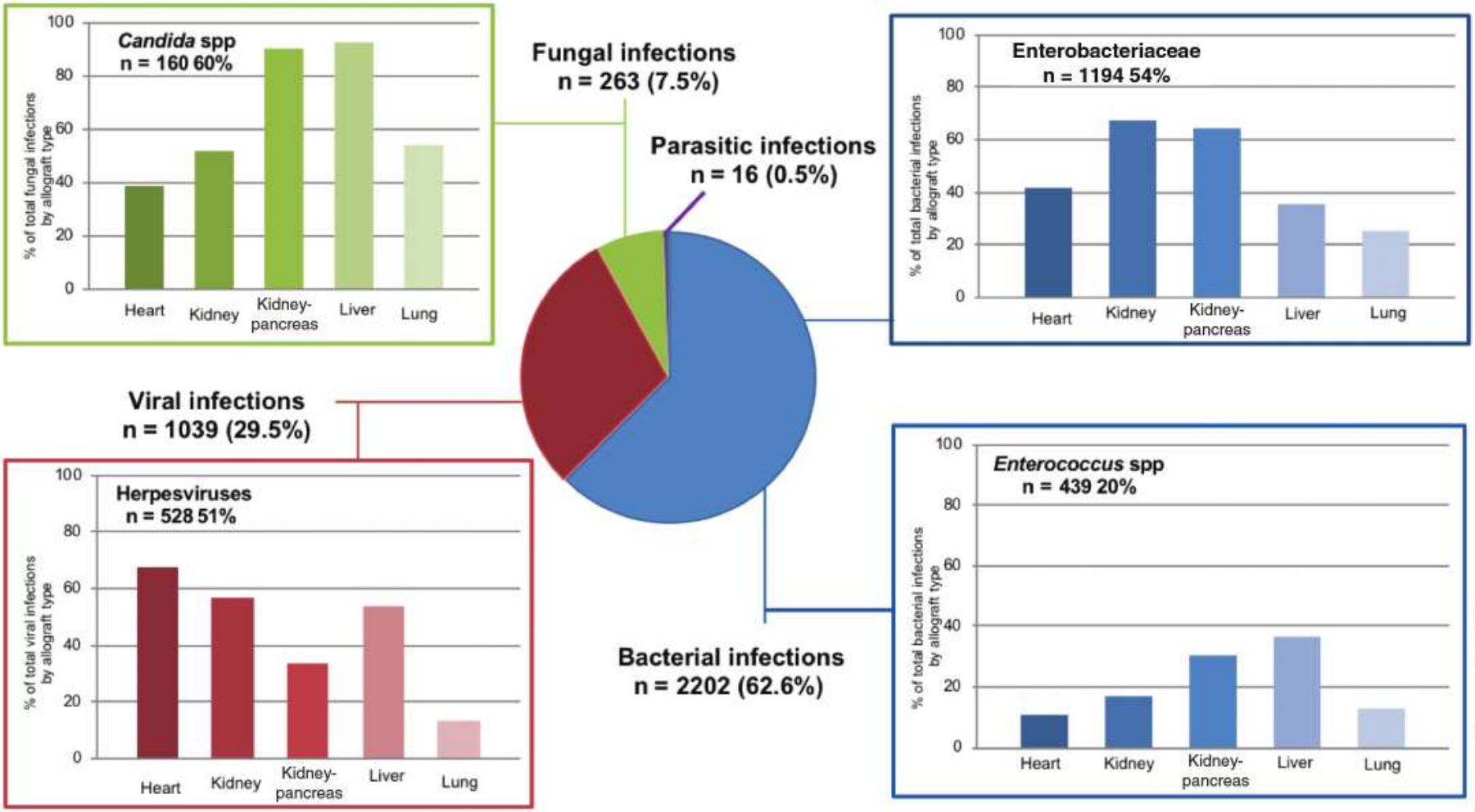
Christian van Delden,[1] Susanne Stampf,[2] Hans H. Hirsch,[3,4] Oriol Manuel,[5] Pascal Meylan,[6] Alexia Cusini,[7] Cédric Hirzel,[7] Nina Khanna,[4] Maja Weisser,[4] Christian Garzoni,[7,8] Katja Boggian,[9] Christoph Berger,[10] David Nadal,[10] Michael Koller,[2] Ramon Saccilotto,[2] and Nicolas J. Mueller[11]; for the Swiss Transplant Cohort Study[a]



Panel A

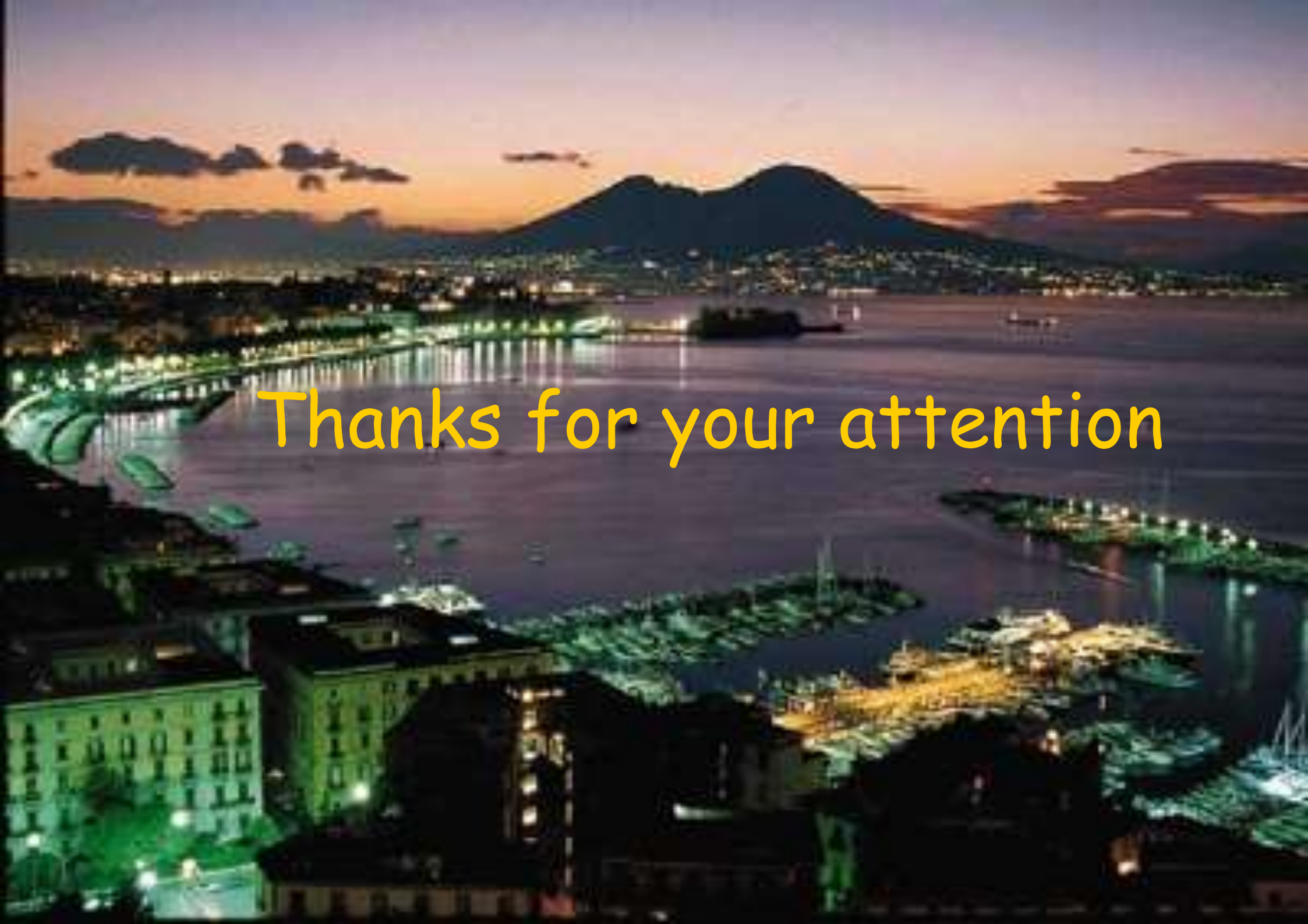

Infection sites according to types of transplants and pathogens
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Heart
Kidney
Kidney-Pancreas
Liver
Lung
Bacteria
Viruses
Fungi
Surgical site
Respiratory tract
Prosthetic
Mucocutaneous
Liver
Intraabdominal
Heart
Eye
Central nervous system
Catheter-related
Bone & Joint
Blood
Urinary tract

B


Candida spp
n = 160 60%
% of total fungal infections by allograft type
100
80
60
40
20
0
Heart
Kidney
Kidney-pancreas
Liver
Lung
Fungal infections
n = 263 (7.5%)
Parasitic infections
n = 16 (0.5%)
Enterobacteriaceae
n = 1194 54%
% of total bacterial infections by allograft type
Viral infections
n = 1039 (29.5%)
Herpesviruses
n = 528 51%
% of total viral infections by allograft type
Bacterial infections
n = 2202 (62.6%)
Enterococcus spp
n = 439 20%
% of total bacterial infections by allograft type

Le nostre attività quindi….

- **Valutare attentamente DONATORE e…..RICEVENTE**
- **Seguire rigorosamente i pazienti per stabilire tempestivamente un programma di trattamento**
- **Implementare le linee guida sulla terapia antibiotica in terapia intensiva**
- **Migliorare la difesa antimicrobica nelle UTI**
- **Valutazione e cross match del donatore sui fattori di rischio del ricevente**
- **Migliorare il lavoro di squadra e l'implementazione di una rete di malattie infettive con controllo delle infezioni**


Thanks for your attention