Infezioni della Cute e dei Tessuti Molli

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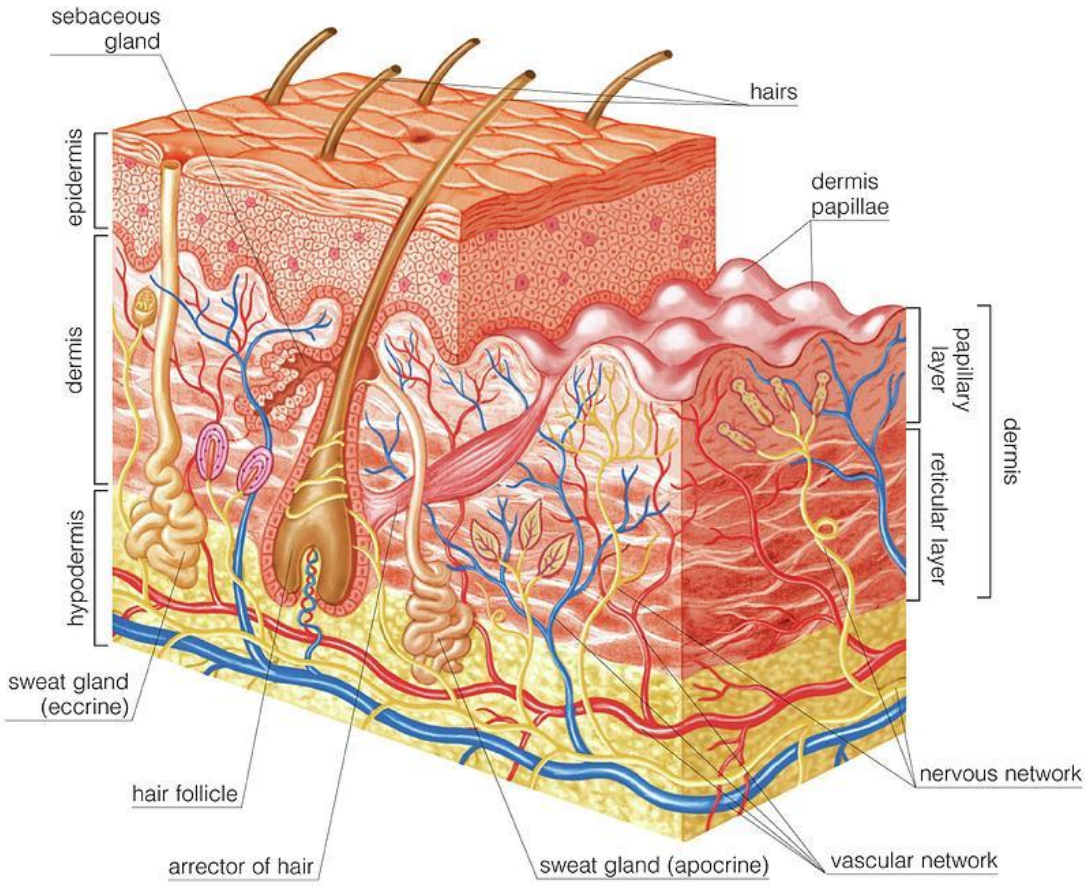
Cute: tessuto oppure organo?



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Human Skin Is the Largest Epithelial Surface for Interaction with Microbes

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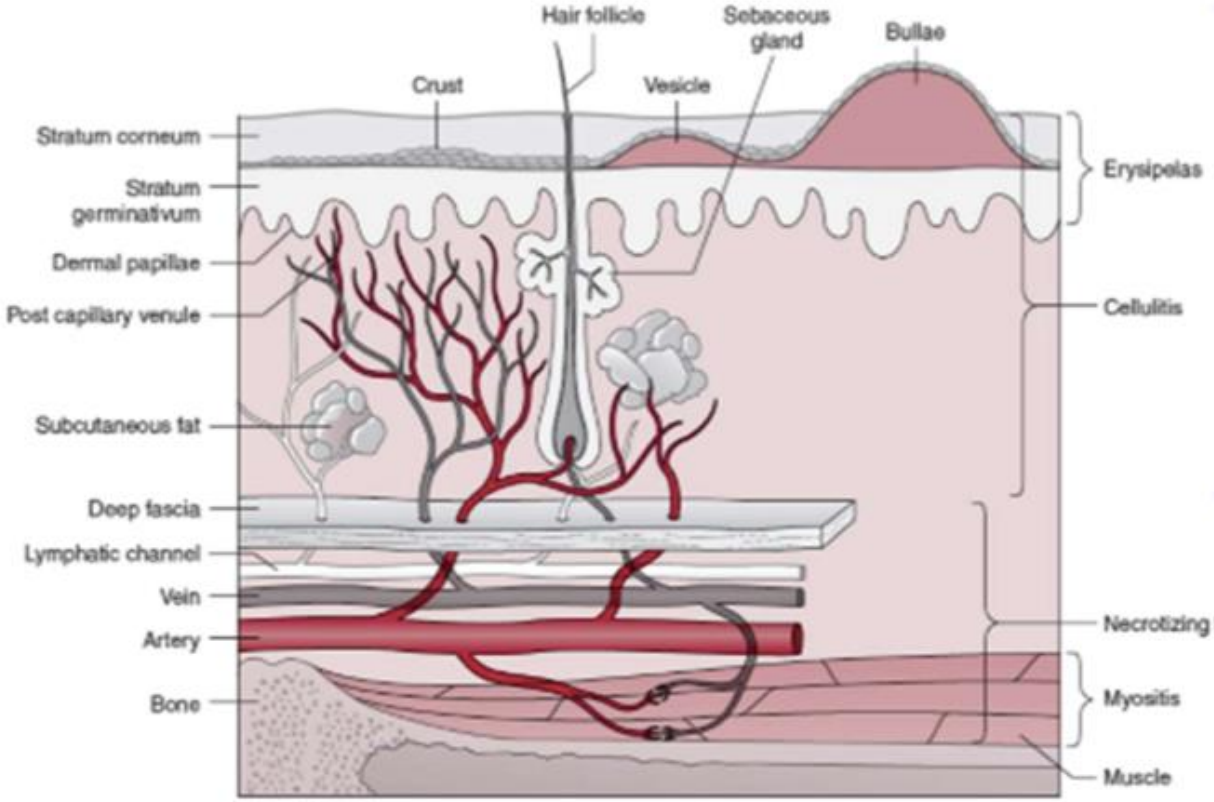
Classificazione Anatomica SSTi



Non complicate
(>gram +)
S. aureus, Str pyogenes

Impetigine
Erisipela
Cellulite
Ascessi semplici
Foruncolosi

Complicate
(gram + e gram -)
Str pyogenes o flora intestinale mista

Cellulite
Ascesso profondo
Ulcera decubito
Fascite necrotizzante

SSTI
Complicate vs Non Complicate

Table 1. Definitions of complicated and uncomplicated skin and soft tissue infections and acute bacterial skin and soft structure infections

Uncomplicated SSTI	Complicated SSTI	ABSSSI
Superficial infections	Deep soft tissue infection	SSTIs with lesions with a minimum surface area of 75 cm^2
Cellulitis	Lesion requiring surgical procedure	Criteria
Erysipelas	Large abscesses	Erythema and/or induration extending $\geq$5 cm from the peripheral margin of the infection
Folliculitis	Infected postoperative wounds	Systemic signs of infection (such as fever)
Furunculosis	Infected burns	(and/or) proximal lymphadenopathy
Ecthyma	Infected chronic ulcers	Types of infections included
Impetigo	Necrotizing infections	Cellullitis, erysipelas
Infections that can be treated with surgical incision alone	Rapidly expanding infections	Major cutaneous abscesses
Small abscesses	Bacteremic infections and/or with septic shock	Wound infections
Absence of significant comorbidities	Significant underlying diseases or comorbidities compromising treatment outcomes	Excluded: impetigo and minor cutaneous abscess, animal or human bites, burns, necrotizing fasciitis and myonecrosis, diabetic foot infection, chronic wound infection, ecthyma gangrenosum, underlying osteomyelitis or septic arthritis, concurrent medical conditions that would obscure evaluation of outcome (i.e. neutropenia)

Table 1. Description of skin and soft tissue infections, associated Gram-negative pathogens, and patient risk factors

Type of infection	Description	Common Gram-negative microbial pathogens	Population at risk
Echthyma gangrenosum	Cutaneous infection that causes hemorrhagic pustules and evolves into a necrotic ulcer	*Pseudomonas* spp., *Stenotrophomonas maltophilia*, *Enterobacteriaceae*	Immunocompromised, malignancy, critically ill
Cellulitis	Acute infection of the skin and subcutaneous tissue that results in erythema, warmth, swelling and tenderness, with possible bullae or systemic symptoms (leukocytosis, fever)	*Pseudomonas aeroginosa*, *Enterobacteriaceae*	Previous antibiotic exposure, prolonged hospitalization
Cellulitis in special situations	Cellulitis, can present with ulceration, myonecrosis or rhabdomyolysis	*Aeromonas* spp.	Traumatic freshwater injury, cirrhosis, diabetes, immunocompromised
	Mild cellulitis, can progress rapidly with bullae, severe myonecrosis, or nectrotizing fasciitis in high-risk individuals	*Vibrio vulnificus*	Traumatic injury with saltwater, shellfish, or fish, cirrhosis, hereditary hemochromatosis, diabetes
	Cellulitis with possible cutaneous abscesses	*Enterobacteriaceae*, *Pseudomonas aeroginosa*, usually polymicrobial	Intravenous drug use
	Metastatic cellulitis – tender, erythematous, warm subcutaneous infiltrates that can be well demarcated	*S. maltophilia*	Immunocompromised, catheter and device placement
Necrotizing fasciitis	Rapidly progressive inflammation of the fascia, with secondary necrosis of the subcutaneous tissue characterized by erythema, fever and pain out of proportion to skin manifestations	Polymicrobial (*Enterobacteriaceae*, *Pseudomonas aeroginosa*)	More common in abdomen or groin (Fournier's gangrene), diabetes, obseity, or immunodeficiency
Diabetic foot infections	Differentiated from uninfected ulcer, usually warm, erythematous, swollen, increasing exudate or pus, inflammatory changes within ulcer bed, could include pain or systemic signs (fever, leukocytosis)	Polymicrobial (*Enterobacteriaceae*, *Pseudomonas* spp.)	Uncontrolled diabetes, peripheral vascular disease, chronic wounds, antibiotic exposure
Infected pressure ulcers	Differentiated from uninfected ulcer, could present with new or worsening pain, clinical signs of fever and inflammation	Polymicrobial (*Pseudomonas* spp., *Enterobacteriaceae* commonly *Proteus mirabilis*, *Acinetobacter* spp.)	Patients in long-term facilities or prolonged hospital stay
Surgical site infections	Infection of a surgical site with signs of erythema, inflammation, pain, purulent drainage, possible systemic symptoms (fever, leukocytosis)	*Enterobacteriaceae*, *Acinetobacter*, *Pseudomonas* spp.	Operations on the axilla, gastrointestinal tract, perineum, or female genital tract
Burn wound infection	May be difficult to distinguish burn wound infection from noninfectious burn erythema, can be confirmed with tissue biopsy	*Pseudomonas* spp., *S.maltophilia*, *Acenitobacter* spp., *Enterobacteriaceae*	Severe burn injury, prior antibiotic exposure, Gram-negative colonization
Injury in war	Increasing pain, erythema, or discharge from the wound, can be associated with systemtic symptoms (fever, hemodynamic instability)	*Pseudomonas* spp., *A. baumannii*, *Enterobacteriaceae*	Chronic war traumatic wounds, embedded foreign material

Patogenesi di SSTI

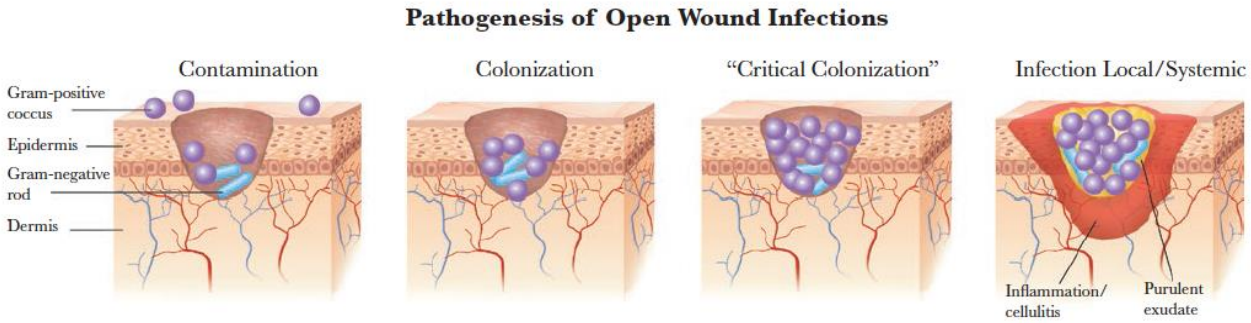


Figure 1. The typical evolution of a superficial wound infection. The growth of microorganisms in a wound and the host response determine how far along in this spectrum the process goes.

- I Fase: perdita della barriera cutanea con iniziale **contaminazione** batterica definita come presenza transitoria di microrganismi che non si replicano attivamente
- II Fase: **colonizzazione** con microrganismi che si replicano ma che non inducono danni ai tessuti e risposta immunitaria dell'ospite
- III fase: presenza di **colonizzazione critic**a con replicazione batterica >105 UFC con attivazione della risposta immunitaria
- IV fase: segni clinici di **infiammazione e infezione**

Lipsky BA, Silverman MH, Joseph WS. A Proposed New Classification of Skin and Soft Tissue Infections Modeled on the Subset of Diabetic Foot Infection. Open Forum Infect Dis. 2016 Dec 7;4(1):ofw255. doi: 10.1093/ofid/ofw255. PMID: 28480249; PMCID: PMC5413991.

Direzione Generale per la Tutela della Salute
ed il Coordinamento del Sistema Sanitario Regionale

Linee di indirizzo per l'attuazione dei programmi di Antimicrobial Stewardship e per l'implementazione locale dei protocolli di terapia antibiotica

rivolte alle ASL, alle AO, alle AOU e agli IRCCS del Sistema Sanitario Regionale della Campania

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Adempimenti ai sensi del
PIANO NAZIONALE CONTRASTO ANTIMICROBICORESISTENZA
(PNCAR 2022-2025)

ERISIPELA - Forme ambulatoriali, con netta definizione diagnostica	Amoxicillina 1 g **o** Amoxicillina/clavulanato 875+125 mg TID **o** Cefazolina 2 g TID **o** Cefditoren 200 mg BID **o** Cefuroxime 250 mg BID **o** Ceftriaxone 2 g die	Durata: 7 giorni
- Allergia ai betalattamici	Moxifloxacina 400 mg die **O** Levofloxacina 750 mg die **O** Clindamicina 300 mg TID **O** Doxicilina 100 mg BID **O** Trimetoprim/Sulfametossazolo* 160/800 mg TID	
- Forme severe necessitanti ospedalizzazione	Ceftriaxone 2 g die **O** Ampicillina-sulbactam 2+1 g QID **O** Cefazolina 2 g TID	Durata: 7-10 giorni
- dubbi con cellulite (etiologia stafilococcica); fattori di rischio MRSA; neutropenia	**Terapia endovenosa**: Vancomicina 15 mg/kg BID dopo dose di carico 25 mg/kg **O** Teicoplanina 10-12 mg/Kg/die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tedizolid 200 mg die **O** Ceftarolina 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 6 mg/kg die in bolo **O** Dalbavancina 1 g 1° giorno - 500 mg 8° giorno **O** 1.500 mg in singola dose **O** Oritavancina 1.200 mg in singola dose	Durata della terapia per i pazienti neutropenici, forme severe, sospetto MRSA: 14 giorni
CELLULITE - forme ambulatoriali, non gravi	Amoxicillina 1 g **O** Amoxicillina/clavulanato 875+125 mg TID **O** Cefazolina 2 g TID **O** Cefditoren 200 mg BID **O** Cefuroxime 250mg BID **O** Ceftriaxone 2 g die	Durata: 7 giorni
- Forme severe, paziente ospedalizzato, immunodepresso, con fattori di rischio per MRSA	**Terapia endovenosa:** Vancomicina 15 mg/kg BID dopo dose di carico 25mg/kg o Teicoplanina 10-12 mg/Kg/die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tedizolid 200 mg die **O** Ceftarolina 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 6 mg/kg die in bolo **O** Dalbavancina 1g 1° giorno - 500 mg 8° giorno **O** 1.500 mg in singola dose **O** Oritavancina 1.200mg in singola dose + Piperacillina-tazobactam 4+0.5 g TID **O** Cefepime 2 g BID (TID in infusione prolungata se sospetto MDR) **O** Ceftazidime 2 g TID **O**	Durata: 10-14 giorni Valutare rischio di evoluzione necrotizzante (LRINEC score >6; segni clinici di necrosi) per richiedere consulto chirurgico urgente per debridement immediato
- In pazienti ad alto rischio di infezioni gram negativi MDR	Meropenem 1 g TID	In presenza di ascesso cutaneo richiedere drenaggio

INFEZIONI DI SITO CHIRURGICO - Assenza di segni e sintomi sistemici, eritema < 5 cm	Solo incisione e drenaggio	
- Febbre, sintomi sistemici di infezione, eritema > 5 cm	<u>Chirurgia pulita (collo, tronco, estremità):</u> Cefazolina 2 g TID	Durata 5-7 giorni
- In presenza di fattori di rischio per MRSA (colonizzazione nota, recenti terapie antibiotiche, recenti ospedalizzazioni)	**Terapia orale**: Doxiciclina* 100 mg BID **O** Trimetoprim/Sulfametossazolo 160/800 mg BID **O** Linezolid 600 mg BID **O** Tedizolid 200 mg die **Terapia endovenosa**: Vancomicina 15 mg/kg BID dopo dose di carico 25mg/kg **O** Teicoplanina 10-12 mg/Kg/die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tedizolid 200 mg die **O** Ceftarolina 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 6 mg/kg/die in bolo **O** Dalbavancina 1g 1° giorno - 500 mg 8° giorno **O** 1.500 mg in singola dose **O** Oritavancina 1.200mg in singola dose <u>Chirurgia pulito-contaminata o sporca (ascella, tratto digerente, tratto genitale femminile, perineo):</u> Cefepime 2 g BID (TID in infusione prolungata se sospetto MDR) **O** Ceftazidime 2 g TID + metronidazolo 500 mg TID **O** Vancomicina 15 mg/kg BID dopo dose di carico 25mg/kg **O** Teicoplanina 10-12 mg/Kg/die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 4-6 mg/kg die in bolo **+**	Durata (se drenaggio completo): - 7 giorni per infezioni superficiali; - 10-14 giorni per infezioni profonde; - 14-21 per infezioni di organi/spazi. Durata per infezioni con drenaggi incompleti: in base a risposta clinica.
- In paziente ad alto rischio di infezione da gram negativi MDR	Piperacillina-tazobactam 4+0.5 g TID **O** Meropenem 1 g TID	

FASCITE NECROTIZZANTE - Etiologia sconosciuta, terapia empirica	Vancomicina 15 mg/kg BID dopo dose di carico 25mg/kg **O** Teicoplanina 10-12 mg/Kg/die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 4-6 mg/kg die in bolo +	Immediato debridement chirurgico, da ripetere fino a completa bonifica area di necrosi. Durata della terapia personalizzata in base ad efficacia della necrosectomia e della risposta individuale.
- In paziente ad alto rischio di infezione da gram negativi MDR	Piperacillina-tazobactam 4+0.5 g TID **O** Meropenem 1 g TID	
Casi particolari: - **Fascite di tipo 1 o sinergica (gangrena di Fournier e gangrena di Meleney)** Etiologia polimicrobica (Gram negativi+anaerobi)	Piperacillina-tazobactam 4+0.5 g TID **O** Meropenem 1 g TID (in paziente ad alto rischio di infezione da gram negativi MDR) **O** Cefepime 2 g TID **O** Ceftazidime 2 g TID + metronidazolo 500 mg TID +/-	
- In presenza di fattori di rischio per MRSA	**Terapia Orale**: Doxiciclina* 100 mg BID **O** Trimetoprim/Sulfametossazolo* 160/800 mg BID **O** linezolid 600 mg BID **O** tedizolid 200 mg die	
	Terapia Endovenosa: Vancomicina 15 mg/kg BID dopo dose di carico 25mg/kg **O** Teicoplanina 10-12 mg/Kg die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tedizolid 200 mg die **O** Ceftarolina 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 6 mg/kg/die in bolo **O** Dalbavancina 1g 1° giorno - 500 mg 8° giorno **O** 1.500 mg in singola dose **O** Oritavancina 1.200mg in singola dose	
- **Fascite di tipo 2 (monomicrobica)** o Streptococcica (di solito *pyogenes*)	Ceftriaxone 2 g die **O** Vancomicina 15 mg kg BID dopo dose di carico 25mg/kg (se allergici) + Clindamicina 900 mg QID **O** Linezolid 600 mg BID	
o Stafilococcica (CA-MRSA)	**Terapia Orale**: Doxiciclina* 100 mg BID **O** Trimetoprim/Sulfametossazolo 160/800 mg BID **O** linezolid 600 mg BID **O** tedizolid 200 mg die **Terapia Endovenosa**: Vancomicina 15 mg/kg BID dopo dose di carico 25mg/kg **O** Teicoplanina 10-12 mg/Kg die dopo dose carico 10 mg/kg TID **O** Linezolid 600 mg BID **O** Tedizolid 200 mg die **O** Ceftarolina 600 mg BID **O** Tigeciclina 50 mg BID dopo dose di carico **O** Daptomicina 6 mg/kg/die in bolo **O** Dalbavancina 1g 1° giorno - 500 mg 8° giorno **O** 1.500 mg in singola dose **O** Oritavancina 1.200mg in singola dose + Clindamicina 900 mg QID; Linezolid 600 mg BID	
- **Fascite di tipo 3** (*Vibrio vulnificus o Aeromonas hydrophila*) Immunodepressi, cirrosi scompensata, dopo bagno in acque salate	Ceftriaxone 2 g die + Doxiciclina 100 mg BID primo giorno poi 100 mg UID Levofloxacina 750 mg die **O** Ciprofloxacina 750 mg BID	
- Mionecrosi clostridica (gangrena gassosa) (*Clostridium spp.)*	Come fascite streptococcica	

*** l'uso dei farmaci asteriscati è da valutarsi sulla base di protocolli locali nell'ambito dei programmi di Antimicrobial Stewardship e, comunque, preferibilmente su indicazione degli infettivologi o, nelle realtà in cui essi non siano presenti, di altri clinici esperti di terapia antimicrobica e nelle modalità previste dalla Legge 94/98 e Legge 244/2007 (art. 2, comma 348).**

Clinical Infectious Diseases

SUPPLEMENT ARTICLE

Current Treatment Options for Acute Skin and Skin-structure Infections

Yoav Golan

Department of Internal Medicine, Division of Infectious Diseases, Tufts Medical Center, Boston, Massachusetts

Clinical Infectious Diseases® 2019;68(S3):S206–12

Table 3. 2014 Infectious Diseases Society of America Recommendations for Antibiotic Treatment of Acute Bacterial Skin and Structure Infection Caused by Methicillin-resistant *Staphylococcus aureus* [6]

Antibiotic	Route	Recommended Dosing in Adults
Vancomycin	IV	15 mg/kg every 12 hours
Linezolid	IV/oral	IV: 600 mg every 12 hours Oral: 600 mg twice a day
Clindamycin	IV/oral	IV: 600 mg every 8 hours Oral: 300–450 mg 4 times a day
Daptomycin	IV	4 mg/kg daily
Ceftaroline	IV	600 mg every 12 hours
Doxycycline, minocycline	Oral	100 mg twice a day
Trimethoprim-sulfamethoxazole	Oral	1–2 double strength tablets twice a day

Quali novità?

Molecola	brand	Formulazione	Dosaggio	applicazioni	note
Tedizolid	Sivextro	Compresse 200 mg (iniettabile)	1 cp/24h per 6 giorni	SSTi	Mielosoppressione Disfunzione mitocondriale Neuropatia periferica Acidosi lattica Clod d. Sindrome serotoninergica se SSTI
Delafloxacina	Quofenix	Ev 300 mg Cpr 450 mg	Ogni 12 h	SSTI e CAP	Switch ev → os

& la long acting..

Hot Topics in SSTi

- Biofilm
- Piede diabetico
- Terapie Long Acting

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ESCMID GUIDELINES | VOLUME 21, SUPPLEMENT 1, S1-S25, MAY 01, 2015

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ESCMID* guideline for the diagnosis and treatment of biofilm infections 2014

N. Høiby • T. Bjarnsholt • C. Moser • ... A.J. Ullmann • C. Williams

for the ESCMID Study Group for Biofilms (ESGB) and Consulting External Expert Werner Zimmerli •

Show all authors • Show footnotes

Open Archive • Published: January 14, 2015 • DOI: https://doi.org/10.1016/j.cmi.2014.10.024

"Biofilms typically cause chronic infections, which means that the infections persist despite apparently adequate antibiotic therapy and the host's innate and adaptive defence mechanisms".

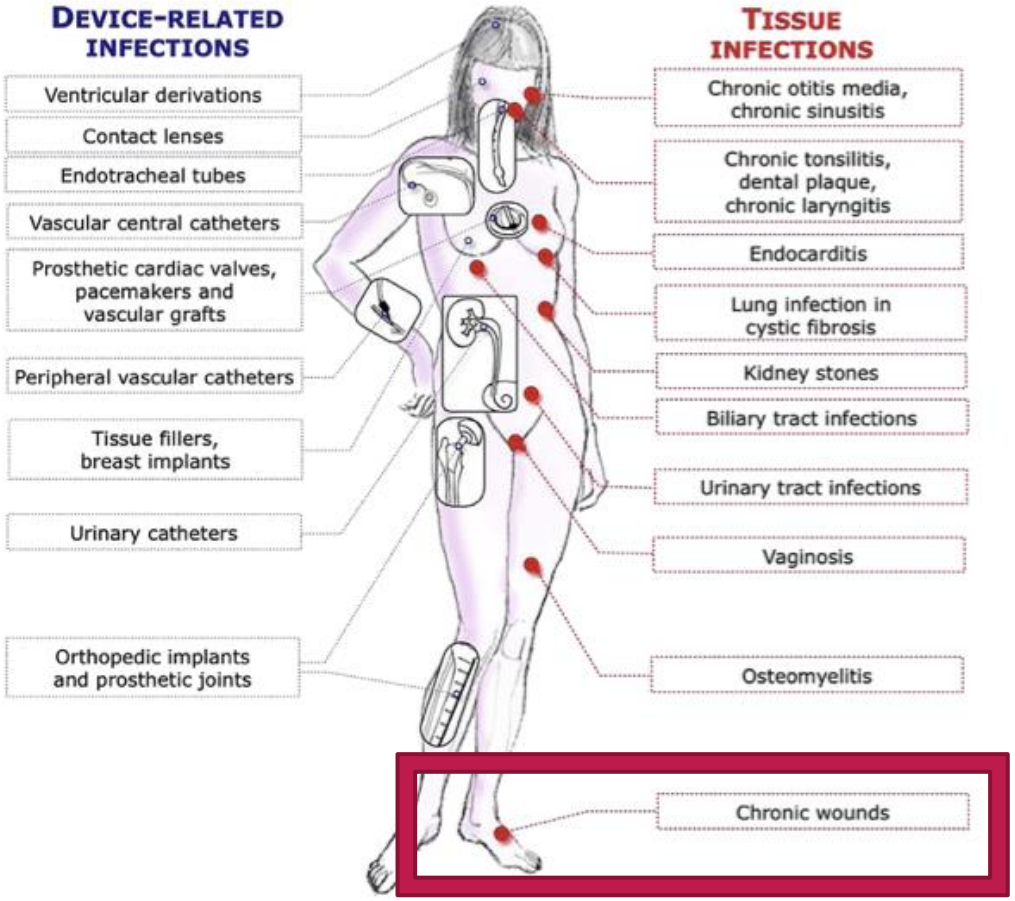
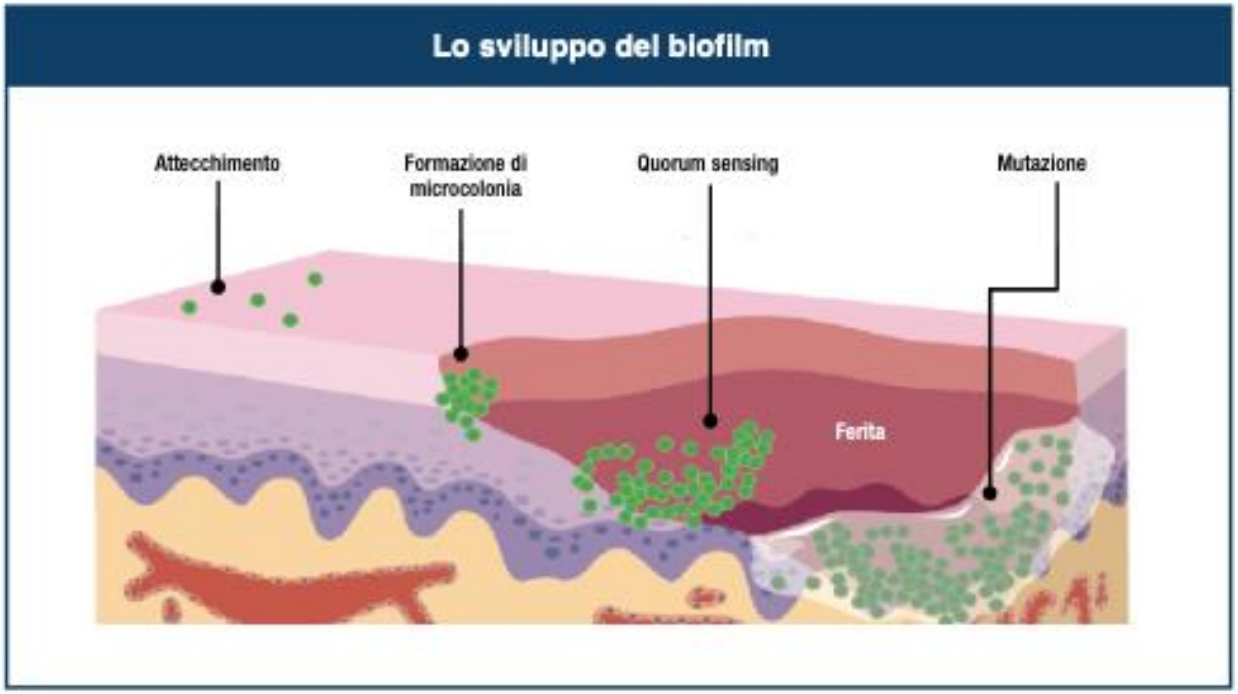


FIG. 1. Typical biofilm infections (3) (reproduced with permission).



Biofilm: colonie batteriche (soprattutto Gram +) altamente organizzate e impenetrabili da numerose classi antibiotiche.
Si presenta come un focolaio protetto di infezione che favorisce la ***cronicizzazione della ferita*** con un persistente ***stimolo pro - infiammatorio*** e contestuale ***distruzione tissutale***.

Biofilm e.. SSTi

- Ritarda/compromette il normale processo di guarigione
- microrganismi MDR
- impermeabile a terapie antibiotiche

Contents lists available at ScienceDirect

Biofilm

journal homepage: www.sciencedirect.com/journal/biofilm

To update or not to update the ESCMID guidelines for the diagnosis and treatment of biofilm infections – That is the question! The opinion of the ESGB board

Niels Høiby [a,b,c,*], Claus Moser [a,b,c], Antonio Oliver [a,d], Craig Williams [a,e], Gordon Ramage [a,e], Elisa Borghi [a,f], Joana Azeredo [a,g], Maria Dolores Macia [a,d], for the ESGB board [a]

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The interim opinion at the present time (2022) is therefore, that the guidelines **do not need revision now**, but there is a **need for survey** articles discussing **new methods of diagnosis** and **treatment of biofilm infections** in order - hopefully – to give inspiration to conduct clinical trials which may lead to progress in diagnosis and treatment of patients with biofilm infections.

Piede Diabetico

Contents lists available at ScienceDirect

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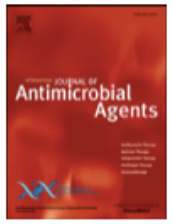

Hot Topic

Hot topics in diabetic foot infection

Kordo Saeed[a,b,*], Silvano Esposito[c], Ayesha Akram[d], Tiziana Ascione[e], Abhijit M. Bal[f,g], Matteo Bassetti[h], Alessia Carnelutti[i], Monica Chan[j], Joshua Davis[k], Matthew Dryden[l,m], Mohd Fadil Muhammad Farhan[n], Shelanah Fernando[o,p], Thomas Gottlieb[o,p], Ian Gould[q], Merve Yildiz[r], David Chien LYE[s,t,u,v], Pasquale Pagliano[e], Stephen Poole[a], Paul S. Pottinger[w], Anna Maria Spera[c], Serhat Unal[x], Ata Nevzat Yalcin[r], on behalf of the International Society of Antimicrobial Chemotherapy

ARTICLE INFO

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Epidemiologia PD

Among ***facultative aerobic bacteria***, the most commonly isolated, especially in western countries, are

- methicillin-sensitive *Staphylococcus aureus* (MSSA), methicillin-resistant *S. aureus* (MRSA),
- coagulase-negative staphylococci (*Streptococcus* spp., *Enterococcus* spp.,
- Enterobacteriaceae,
- *Corynebacterium* spp.
- *Pseudomonas aeruginosa* (*P. aeruginosa*), while

Gram-negative bacteria are more often prevalent in Africa and Asia.

Anaerobic bacteria include

- Gram-positive cocci,
- *Prevotella* spp.,
- *Porphyromonas* spp.
- several species of the *Bacteroides fragilis* group.

S. aureus is the most frequent pathogen.

Mild DFIs tend to be caused by **Gram-positive** cocci (e.g. *S. aureus*)

Moderate DFIs by **Gram-positive** pathogens and **Gram-negative** bacteria such as ***P. aeruginosa* and *Acinetobacter baumannii***.

However, more data are required to establish the importance of *A. baumannii* in DFI.

In severe DFIs, the infection can be ***polymicrobial in nature***, involving Gram-positive and Gram-negative bacteria along with *Candida* spp.

Diagnosi
Tampone o Biopsia?

- Il t**ampone** NON riesce a dirimere tra colonizzazione ed infezione!
- Pulizia ulcera → debridement di tessuto necrotico → **Biopsia**

Head of the Snake Paradigm

- The current thinking has likened the microbial flora of a diabetic infection to a snake in which the **gram positive cocci** represent the **head of the snake** and all the rest of the organisms comprise the body.
- Once one removes the head of the snake, the rest will die.

Almost as surely,

- killing the *Staphylococcus* and *Streptococcus*, the remaining organisms too will be inconsequential.

Joseph WS, Lipsky BA. Medical therapy of diabetic foot infections. J Vasc Surg. 2010 Sep;52(3 Suppl):67S-71S. doi: 10.1016/j.jvs.2010.06.010. PMID: 20804935.

Open Forum Infectious Diseases

MAJOR ARTICLE

The Impact of Multidrug-Resistant Organisms on Outcomes in Patients With Diabetic Foot Infections

Oryan Henig,[1,2,a] Jason M. Pogue,[3,4] Emily Martin,[5] Umar Hayat,[6] Mahmoud Ja´ara,[6] Paul E. Kilgore,[7] Raymond Cha,[7] Sorab Dhar,[8] and Keith S. Kaye[1]

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DFI-MDRO was associated with a 2-fold increased risk of **recurrent** DFI compared with patients with DFI-non-MDRO.

Table 1. Description of the Cohort and Outcomes of Patients With DFI-MDRO Compared With Patients With DFI-Non-MDRO

	DFI-MDRO (n = 364)	DFI-Non-MDRO (n = 284)	Crude OR (95% CI)[a]	Adjusted OR (95% CI)
Demography and comorbid conditions				
Age, mean ± SD, y	59.2 ± 13.8	57.4 ± 13.6	*P* = .09	
Gender (female), No. (%)	135 (37.1)	96 (33.8)	*P* = .41	
Bedridden status, No. (%)	74 (21.1)	36 (13.2)	1.32 (0.81–2.16)	
Recent hospitalization, No. (%)	141 (38.7)	56 (19.7)	1.53 (0.99–2.38)	
LTCF residence, No. (%)	40 (11.0)	18 (6.3)	1.48 (0.74–2.95)	
Charlson comorbidity index, median (IQR)	5 (3 to 7)	4 (3 to 6)	*P* < .001	
CKD, No. (%)	118 (32.4)	65 (22.9)	1.48 (1.00–2.18)	
Retinopathy, No. (%)	68 (18.7)	49 (17.3)	1.10 (0.73–1.656)	
Neuropathy, No. (%)	308 (84.6)	227 (79.9)	1.38 (0.92–2.07)	
PVD, No. (%)	270 (74.2)	172 (60.6)	1.45 (1.00–2.09)	
ABI (n = 231), median (IQR)	0.99 (0.69 to 1.20)	0.99 (0.67 to 1.17)	*P* = .36	
HbA1C (n = 531), mean ± SD	8.8 ± 2.5	9.4 ± 2.8	*P* = .01	
Management				
Inpatient duration of treatment, median (IQR)	9 (6 to 15)	8 (5 to 13)	*P* = .06	
Total duration of treatment, median (IQR)	20 (13 to 42)	16 (11 to 34)	*P* = .002	
Outcomes (within 1 y)				
Recurrent DFI, No. (%)	90 (24.7)	35 (12.3)	2.34 (1.53–3.58)	2.1 (1.38–3.21)
LEA, No. (%)	59 (16.2)	29 (10.2)	1.70 (1.06–2.73)	1.25 (0.74–2.13)
Less extensive amputation, No. (%)	170 (46.7)	145 (51.1)	0.84 (0.62–1.15)	0.79 (0.96–1.35)
Length of stay, median (IQR), d	9 (6 to 13)	7 (5 to 11)	*P* < .001	
R (%)	234 (64.3)	157 (55.3)	1.46 (1.06–2.0)	1.13 (0.80–1.61)
Mortality, No. (%)	23 (7.6)	13 (5.6)	1.38 (0.68–2.78)	0.95 (0.43–2.09)

Abbreviations: ABI, ankle-brachial index; CI, confidence interval; CKD, chronic kidney disease; HbA1C, hemoglobin A1C; LEA, lower extremity amputation; LTCF, long-term care facility; MDRO, multidrug-resistant organism; OR, odds ratio; PVD, peripheral vascular disorder.

[a]For continuous variables, *P* values are presented instead of odds ratios (ie, age, Charlson score, ABI, HbA1C, length of stay, duration of treatment).

IDSA

Infectious Diseases Society of America

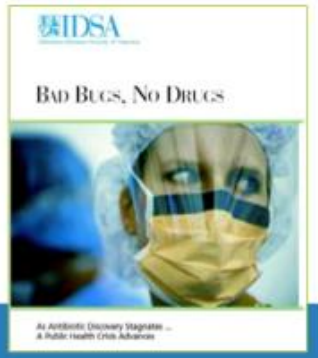
Anti-Infective Drugs Advisory Committee
U.S. Food and Drug Administration

The Need for New Antibiotics

Amanda Jezek
Vice President of Public Policy & Government Relations

March 31, 2014

10 x '20



The 10 x '20 Initiative

- Global commitment to develop **10 new systemic antibacterial drugs by 2020** (CID; April 2010)

- Bring together essential leaders: global political, scientific, industrial, economic, intellectual property, policy, medical and philanthropic leaders to determine the right combination of incentives necessary to establish a sustainable R&D enterprise

IDSA's Goal: New Antibiotics to Save Lives

Prior generations gave us the gift of antibiotics.

Today, we have a moral obligation to ensure this global treasure is available for our children and future generations.

IDSA

10x'20

World Health Organization

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Home / News / WHO publishes list of bacteria for which new antibiotics are urgently needed

WHO publishes list of bacteria for which new antibiotics are urgently needed

27 February 2017 | News release | GENEVA |Reading time: 3 min (785 words)

WHO priority pathogens list for R&D of new antibiotics

Priority 1: CRITICAL

- *Acinetobacter baumannii*, carbapenem-resistant
- *Pseudomonas aeruginosa*, carbapenem-resistant
- *Enterobacteriaceae*, carbapenem-resistant, ESBL-producing

Priority 2: HIGH

- *Enterococcus faecium*, vancomycin-resistant
- *Staphylococcus aureus*, methicillin-resistant, vancomycin-intermediate and resistant
- *Helicobacter pylori*, clarithromycin-resistant
- *Campylobacter* spp., fluoroquinolone-resistant
- *Salmonellae*, fluoroquinolone-resistant
- *Neisseria gonorrhoeae*, cephalosporin-resistant, fluoroquinolone-resistant

Priority 3: MEDIUM

- *Streptococcus pneumoniae*, penicillin-non-susceptible
- *Haemophilus influenzae*, ampicillin-resistant
- *Shigella* spp., fluoroquinolone-resistant

Long Acting?

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REVIEWS

The role of long-acting antibiotics in the clinical practice: a narrative review

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Posologia long acting

Molecola	Posologia	Correzione funzione renale
Dalbavancina (Xydalba)	1500 mg ev oppure 1000mg → 500 mg	si
Oritavancina (Tenkasi)	1200 mg in singola dose da infondere ev in 3 h	no

On label	Off label (consolidamento)
Acute bacterial skin and skin structure infection (ABSSSI)	Infective endocarditis and cardiac implantable electronic device (CIED) infections
	Bone and joint infection (including prosthetic joint infection)
	Other indications (blood-stream infection, endovascular graft infection, pneumonia, meningitis, etc.)

Grazie per la Vostra Attenzione!