



VIII CONGRESSO
NAZIONALE
PIEDE DIABETICO
INTERASSOCIATIVO SID-AMD

*Focus sul piede nella
gestione del diabete*

ROMA, 18-20 GIUGNO 2026
HOTEL NH VILLA CARPEGNA

L'USO DEI DEVICES NELLA GESTIONE DELL'ULCERA

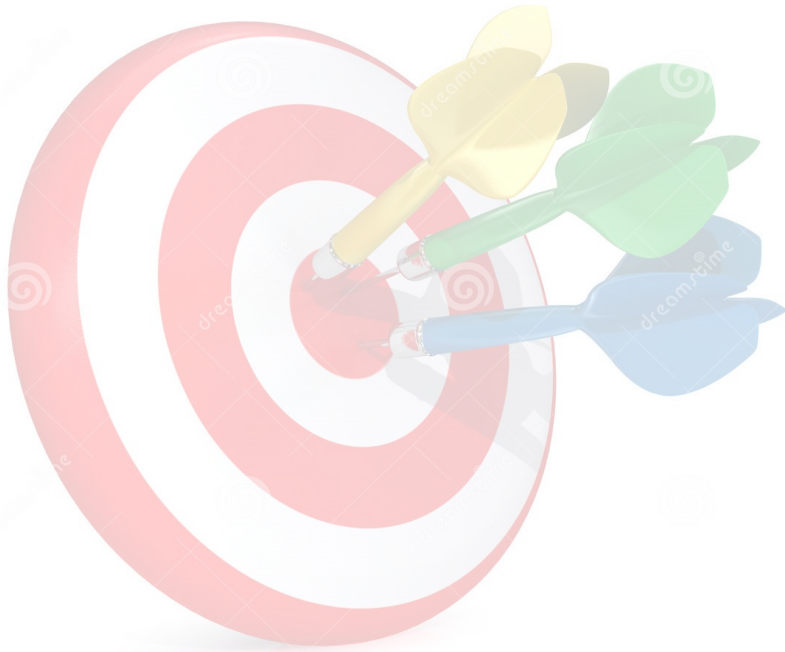
Elisabetta Iacopi
SD Piede Diabetico - AOUP

Disclosure

Dichiaro di NON aver ricevuto negli ultimi due anni compensi o finanziamenti da Aziende Farmaceutiche e/o Diagnostiche

Dichiaro altresì il mio impegno ad astenersi, nell'ambito dell'evento, dal nominare, in qualsivoglia modo o forma, aziende farmaceutiche e/o denominazione commerciale e di non fare pubblicità di qualsiasi tipo relativamente a specifici prodotti di interesse sanitario (farmaci, strumenti, dispositivi medico-chirurgici, ecc.).

Il dispositivo perfetto



- ✓ Prove di efficacia
- ✓ Sicurezza per il paziente
- ✓ Contenimento del costo
- ✓ Adattabilità al paziente
- ✓ Adattabilità alla lesione
- ✓ Sostenibilità ambientale



Il dispositivo perfetto



Terapeutico



Diagnostico

DISPOSITIVI
TERAPEUTICI



DISPOSITIVI
TERAPEUTICI



Il debridement

**EWMA Document:
Debridement**

An updated overview and clarification
of the principle role of debridement

A EWMA Document



AZIONE

OBIETTIVO

RIMOZIONE

Necrosi, Fibrina, Escare, Fonte di infezione o infiammazione, Tessuto non vitale, Essudato, Ipercheratosi, Materiale purulento, Ematomi, Corpi estranei, Detriti, Frammenti ossei, Biofilm

RIDUZIONE

Odore, Eccessiva secrezione, Rischio di infezione, Dolore

STIMOLAZIONE

Bordi della ferita, epitelizzazione

MIGLIORAMENTO

Qualità di vita



DEBRIDEMENT



DEBRIDEMENT

Recommendation 1: Do not use autolytic, biosurgical, hydrosurgical, chemical or laser debridement over standard of care. (GRADE Strength of recommendation: Strong; Certainty of evidence: Low)

Recommendation 2: Do not routinely use enzymatic debridement as opposed to standard of care (i.e. sharp debridement) to improve wound healing outcomes in people with diabetes and a foot ulcer. (Strong; Low)

Recommendation 3: Do not use any form of ultrasonic debridement over standard of care (i.e. sharp debridement). (Strong; Low)

Recommendation 4: Do not use surgical debridement in those for whom sharp debridement can be performed outside a sterile environment. (Strong; Low)

Recommendation 5: We recommend the frequency of sharp debridement should be determined by the clinician based on clinical need. (Strong; Low)

[<https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-07-Wound-Healing-Guideline.pdf>]

NPWT

Negative pressure wound therapy for treating foot wounds in people with diabetes mellitus (Review)

Dumville JC, Hinchliffe RJ, Cullum N, Game F, Stubbs N, Sweeting M, Peinemann F



THE COCHRANE
COLLABORATION®

[Dumville et al – Cochrane Collaboration - 2013]



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Negative pressure wound therapy after partial diabetic foot amputation: a multicentre, randomised controlled trial

David G Armstrong, Lawrence A Lavery, for the Diabetic Foot Study Consortium

Summary

Lancet 2005; 366: 1704-10

Background Diabetic foot wounds, particularly those secondary to amputation, are very complex and difficult to treat. We compared standard moist wound care with negative pressure wound therapy (NPWT) to improve the proportion and rate of wound

La terapia a pressione negativa, mediante sistemi VAC, è sicura ed efficace nel trattamento di complesse lesioni di piede diabetico. Tale trattamento può aumentare il tasso di guarigione delle lesioni, ridurre i tempi di guarigione e potenzialmente ridurre le re-amputazioni rispetto alla terapia standard.

Texas A&M University Health
Science Center College of
Medicine, Temple, TX, USA
(LA Lavery DPM)

Correspondence to:
Prof David G Armstrong
Armstrongd@usa.net

patients (n=85) received standard moist wound care according to consensus guidelines. NPWT was delivered through the Vacuum Assisted Closure (VAC) Therapy System. Wounds were treated until healing or completion of the 112-day period of active treatment. Analysis was by intention to treat. This study has been registered with ClinicalTrials.gov, number NCT00224796.

Findings More patients healed in the NPWT group than in the control group (43 [56%] vs 33 [39%], $p=0.040$). The rate of wound healing, based on the time to complete closure, was faster in the NPWT group than in controls ($p=0.005$). The rate of granulation tissue formation, based on the time to 76–100% formation in the wound bed, was faster in the NPWT group than in controls ($p=0.002$). The frequency and severity of adverse events (of which the most common was wound infection) were similar in both treatment groups.

Interpretation NPWT delivered by the VAC Therapy System seems to be a safe and effective treatment for complex diabetic foot wounds, and could lead to a higher proportion of healed wounds, faster healing rates, and potentially fewer re-amputations than standard care.

[Armstrong D. et al – Lancet - 2005]



NPWT

Recommendation 28: Consider the use of NPWT as an adjunct therapy to standard of care for the healing of postsurgical diabetes-related foot wounds. (Conditional; Low)

Recommendation 28a: Do not use NPWT as an adjunct therapy to standard of care for the healing of non-surgically related diabetes foot ulcers. (Strong; Low)



- ✓ 16 studi per lesioni post-chirurgiche
- ✓ 3 studi per lesioni croniche
- ✓ Non nuovi studi rispetto LG precedenti

Evidenza di riduzione dei tempi di guarigione in lesioni chirurgiche ma non in lesioni croniche

[<https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-07-Wound-Healing-Guideline.pdf>]

Vacuum-assisted closure instill as a method of sterilizing massive venous stasis wounds prior to split thickness skin graft placement

Wissam Raad, John C Lantis II, Leslie Tyrie, Cynthia Gendics, G

Raad W, Lantis JC II, Tyrie L, Gendics C, Todd G. Vacuum-assisted closure instill as a method of sterilizing massive venous stasis wounds prior to split thickness skin graft placement. Int Wound J 2010; 7:81-85

ABSTRACT

REVIEW

Pooled Study-level Analysis of Randomized Controlled Trials Analyzing the Effect of Negative Pressure Wound Therapy With Irrigation vs Traditional Negative Pressure Wound Therapy on Diabetic Foot Outcomes

PEER REVIEWED



Karla De La Mata, DPM
Lawrence A. Lavery, DPM, MPH
Orhan K. Öz
Andrew Crisologo, DPM
Prakash Krishnan, MD, FACC
Michael Siah, MD
Arthur Tarricone
Amanda L. Killeen, DPM
Allen Gee

Keywords

Diabetic Foot Infection
Diabetic Foot Ulcer
Negative Pressure Wound Therapy
Negative Pressure Wound Therapy With Irrigation

NPWT INSTILL

REVIEW

Pooled Study-level Analysis of Randomized Controlled Trials Analyzing the Effect of Negative Pressure Wound Therapy With Irrigation vs Traditional Negative Pressure Wound Therapy on Diabetic Foot Outcomes

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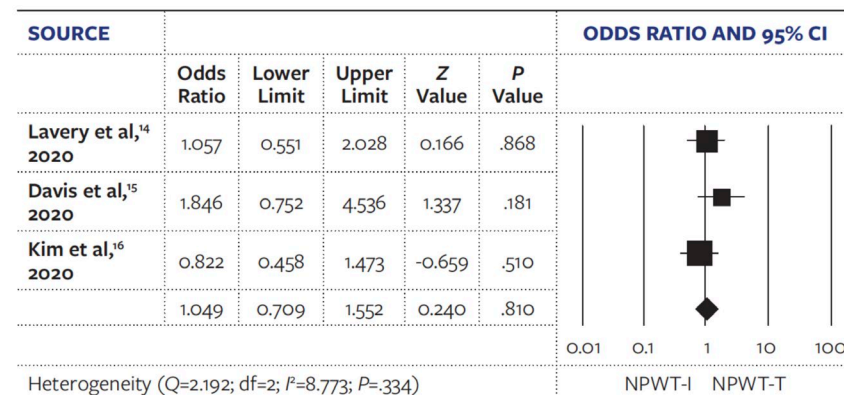


Figure 1. Binary wound closure.

Abbreviations: CI, confidence interval; df, degrees of freedom; NPWT-I, NPWT with irrigation; NPWT-T, traditional negative pressure wound therapy.

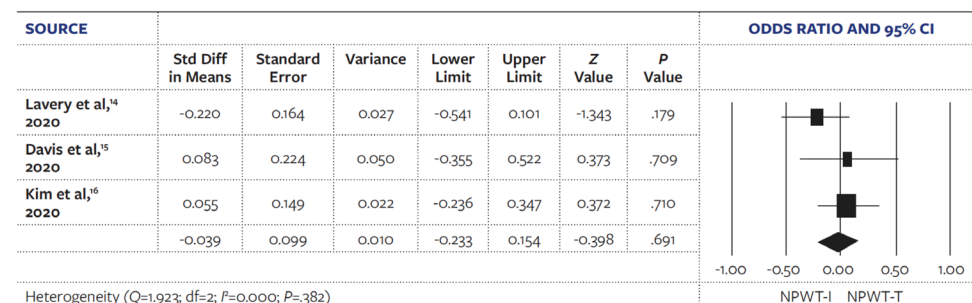


Figure 2. Std diff in means for time to wound closure.

Abbreviations: CI, confidence interval; df, degrees of freedom; NPWT-I, NPWT with irrigation; NPWT-T, traditional negative pressure wound therapy; Std diff, standardized difference.

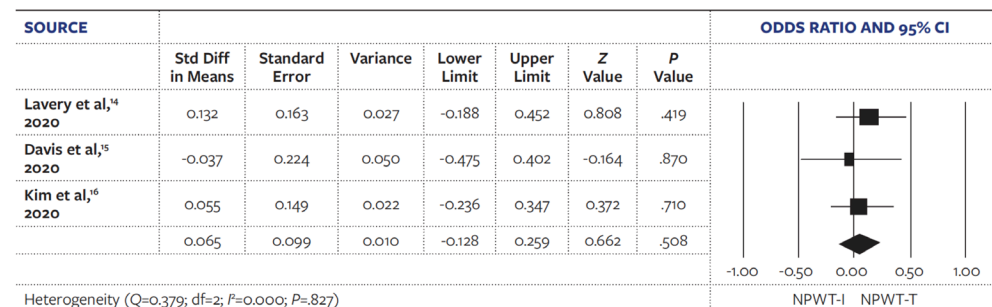


Figure 3. Std diff in means for length of hospital stay.

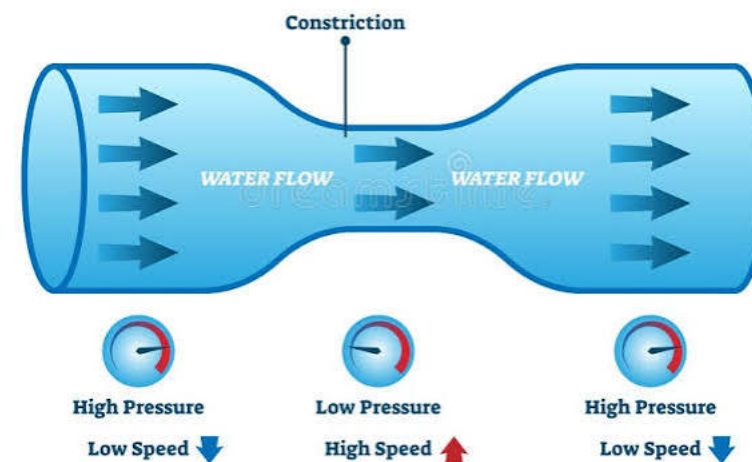
Abbreviations: CI, confidence interval; df, degrees of freedom; NPWT-I, NPWT with irrigation; NPWT-T, traditional negative pressure wound therapy; Std diff, standardized difference.



Idrochirurgia



VENTURI EFFECT



Idrochirurgia



- ✓ Rimozione selettiva
- ✓ Preserva tessuto vitale
- ✓ Veloce
- ✓ Scarso sanguinamento
- ✓ Ridotto traumatismo
- ✓ Ottimale preparazione per innesti



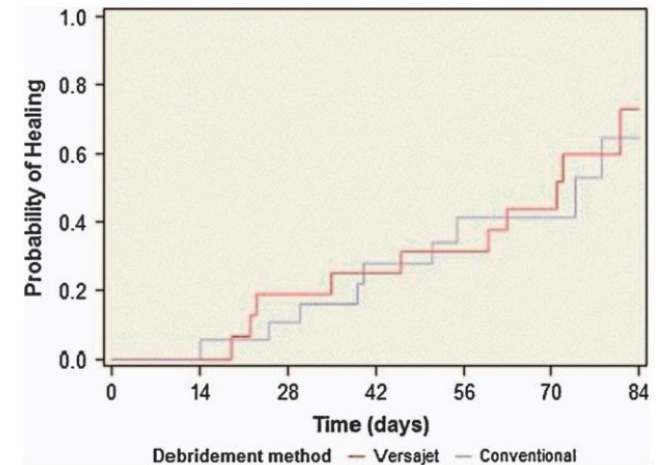
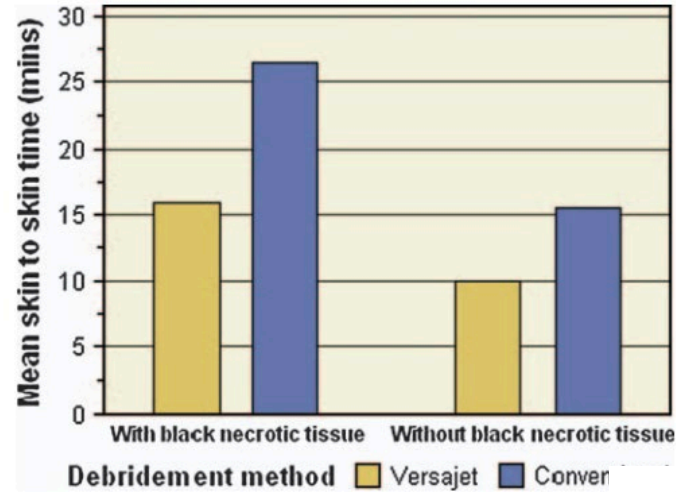
- ✓ Costo elevato
- ✓ Necessità di esperienza
- ✓ Efficienza ridotta su escare aderenti



Idrochirurgia

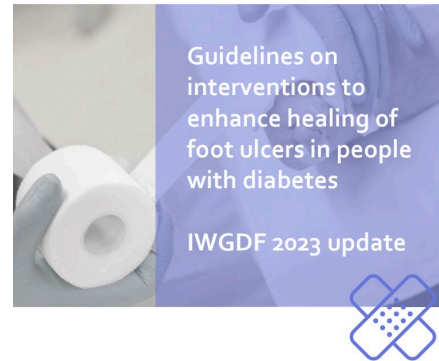
A prospective randomised controlled clinical trial comparing hydrosurgery debridement with conventional surgical debridement in lower extremity ulcers

Wayne J Caputo, Donald J Beggs, Jessica L DeFede, Lisa Simm, Hussein Dharma



Caputo WJ, *Int Wound J.* 2008

Recommendation 15: Do not use any interventions reported in the field of physical therapies for wound healing in the management of diabetes-related foot ulcers. (Strong; Low)



Part of the 2023 IWGDF Guidelines on the prevention and management of diabetes-related foot disease



- ✓ Calore
- ✓ Ultrasuoni
- ✓ Compressione
- ✓ Stimolazione elettrica
- ✓ Campi elettromagnetici
- ✓ Luce/Laser
- ✓ ESWT
- ✓ Precondizionamento ischemico
- ✓ Risonanza magnetica terapeutica
- ✓ Manipolazioni connettivali

[<https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-07-Wound-Healing-Guideline.pdf>]

The Clinical Utility of Autofluorescence Imaging for Bacterial Detection in Wounds: A Systematic Review

Sadie Badrie¹  | Zena Moore^{2,3,4,5,6,7,8}  | Declan Patton^{2,8,9} | Tom O'Connor^{2,7,8}  | Rosemarie Derwin^{3,10} 

ORIGINAL ARTICLE

A Scoping Review of Fluorescence Imaging: A Promising New Technology for Bacterial Detection in Burn Wounds

Steven L.A. Jeffery, BSc, MBChB, EBOPRAS, FRCS (Plast), FHEA^{1,*}  and Erik Hanson-Viana, MD² 

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<https://doi.org/10.1177/15347346211047098>



Regular Issue Article

A Clinical Study to Evaluate Autofluorescence Imaging of Diabetic Foot Ulcers Using a Novel Artificial Intelligence Enabled Noninvasive Device

Vijay Viswanathan, MD, PhD, FICP, FRCP(London), FRCP(Glasgow) ¹, Senthil Govindan, MBBS, MS(General Surgery), MCH(Plastic Surgery)¹, Bamila Selvaraj, MPT(Neurology), MIAP, Dip. in Podiatry¹, Secunda Rupert, MD², and Raghul Kumar, M Sc³

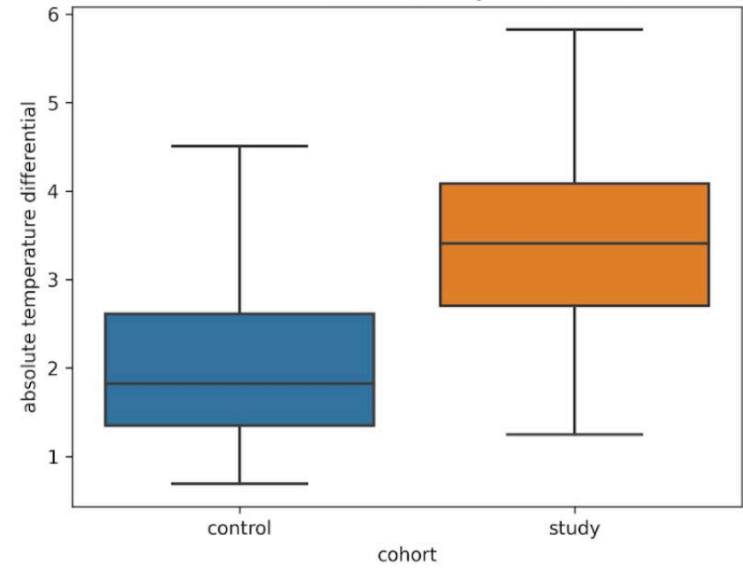
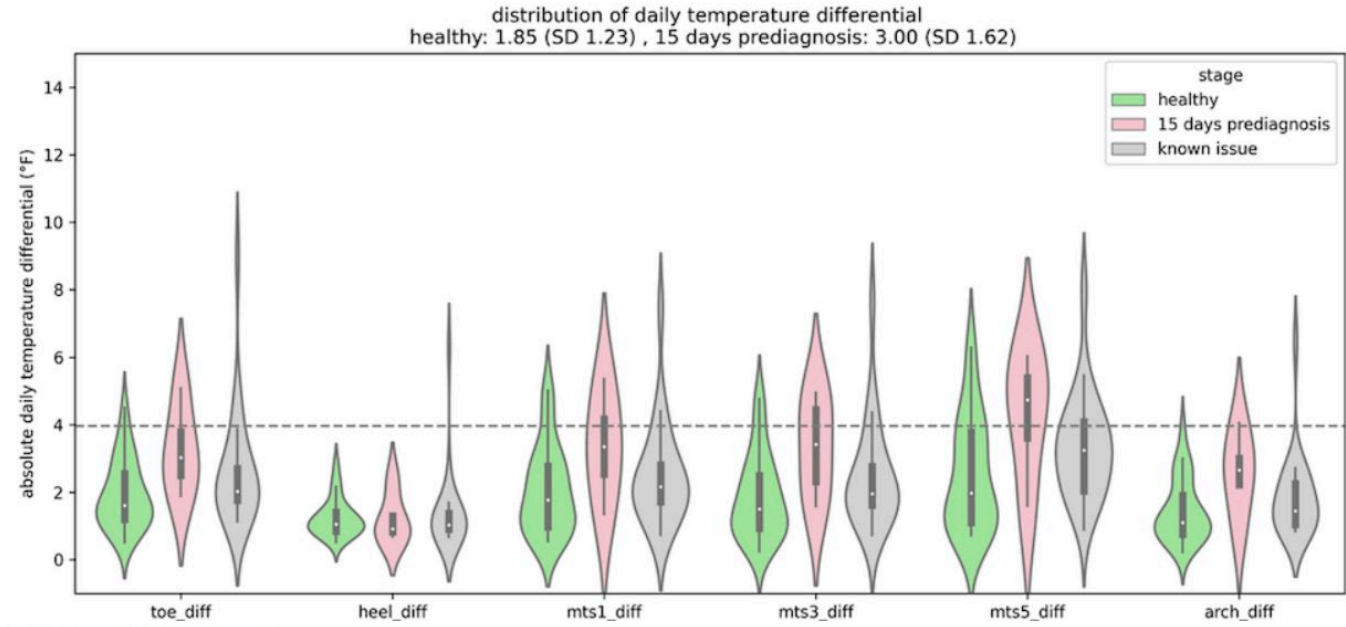
Monitoraggio temperature

JMIR FORMATIVE RESEARCH Reyzelman et al

Original Paper

An Evaluation of Real-world Smart Sock-Based Temperature Monitoring Data as a Physiological Indicator of Early Diabetic Foot Injury: Case-Control Study

Alexander M Reyzelman¹, DPM; Chia-Ding Shih¹, DPM, MPH; Gregory Tovmassian¹, DPM; Mohan Nathan², BA, MBA; Ran Ma², BSc; Henk Jan Scholten², BA, LLM; Kara Malhotra², MSc; David G Armstrong³, DPM, PhD



E DOMANI?



Disciplina che sviluppa sistemi hardware e software capaci di simulare abilità umane come il ragionamento, l'apprendimento, la pianificazione e la creatività

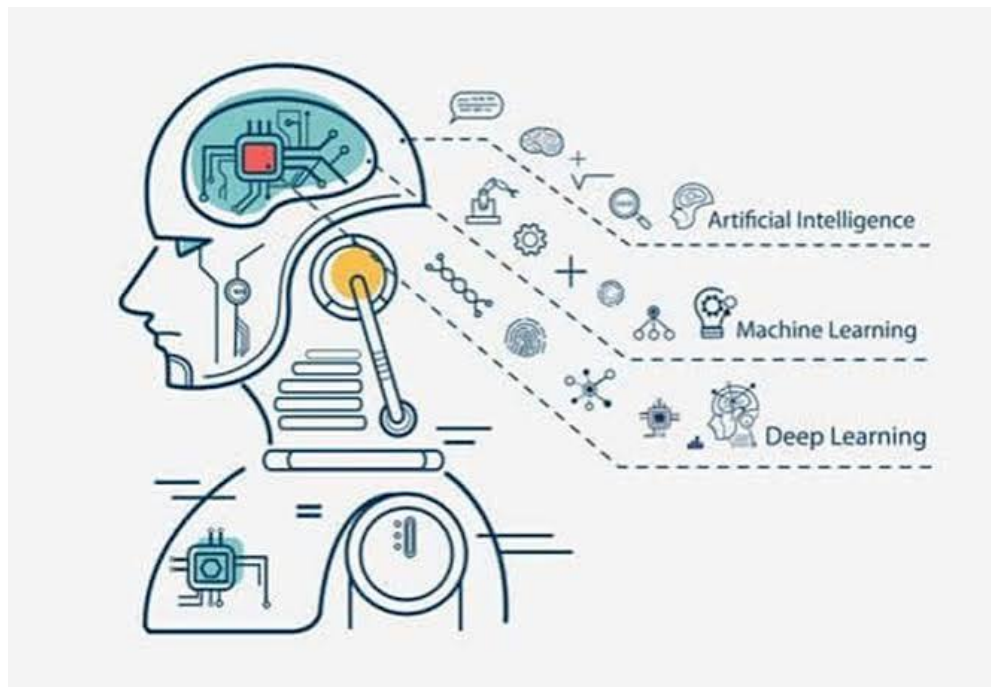


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Machine learning

- ✓ Branca dell'AI con obiettivo di insegnare ai computer ad apprendere automaticamente dall'esperienza (attraverso grandi quantità di dati).
- ✓ Utilizza algoritmi matematici che analizzano i dati per riconoscere schemi, fare previsioni o prendere decisioni autonome
- ✓ Cerca di migliorare le proprie performance nel tempo.
- ✓ A differenza del deep learning necessita di guida esterna.

Conclusioni

- ✓ Chi si ferma è perduto
- ✓ Pz sempre più complessi
- ✓ Soluzioni sempre più innovative



GRAZIE

DELL'ATTENZIONE



SAVE THE DATE

The 21st Meeting of the Diabetic Foot Study Group

24 - 26 September 2026 · Florence · Italy

www.dfsg.org



17th Pisa International Diabetic Foot Course 2026

Management of the Diabetic Foot

Theory & Practice 30 September - 3 October 2026 · Pisa · Italy



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