

Ruolo della terapia nutrizionale nel paziente critico

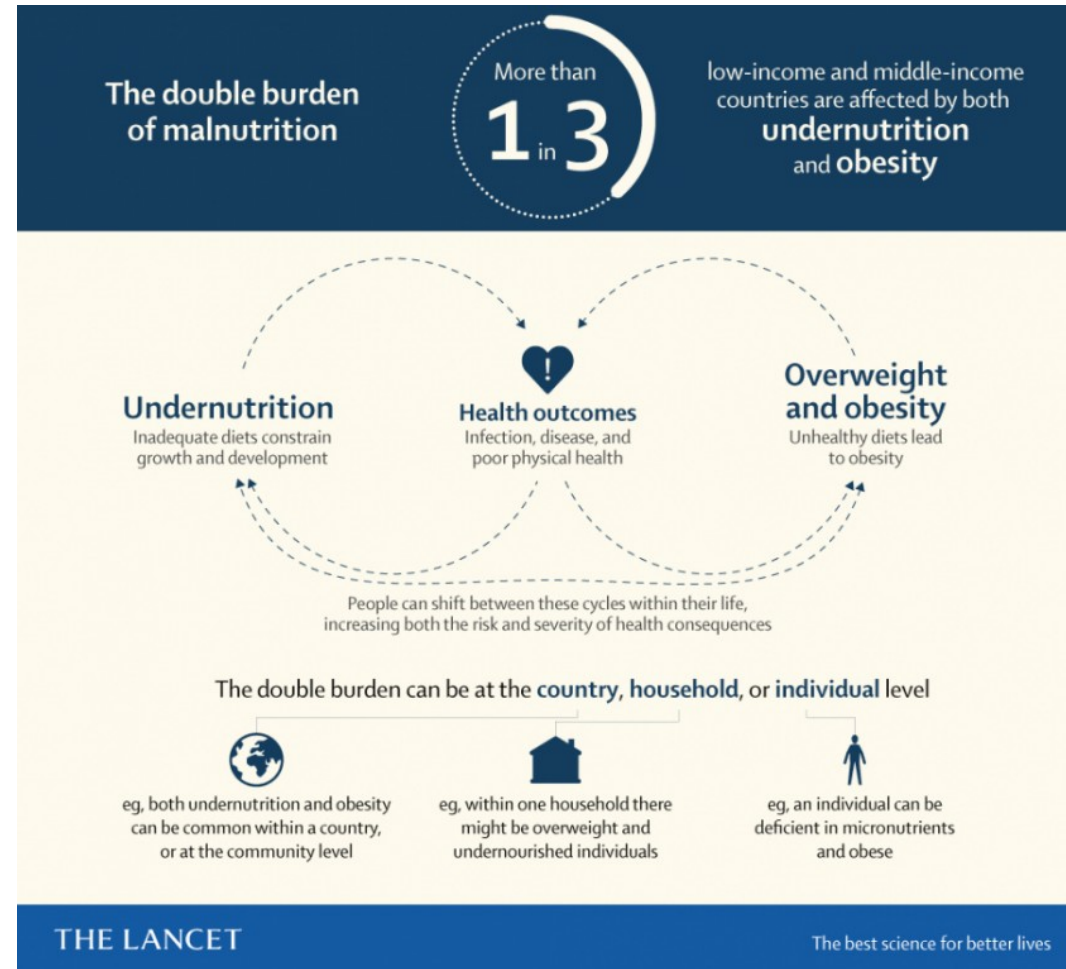
Luca De Carli

Riccione, 15 Maggio 2022



La malnutrizione

“uno stato di squilibrio, a livello cellulare, fra il rifornimento di nutrienti e di energia – troppo scarso o eccessivo – e il fabbisogno del corpo per assicurare il mantenimento, le funzioni, la crescita e la riproduzione”



Da doppio a triplo onere della malnutrizione

1

MALNUTRIZIONE PER ECCESSO⁽⁹⁾

>670 milioni di adulti

>120 milioni di giovani
tra i 5 e i 19 anni



sono **OBESI**

40

milioni di bambini
sono in **SOVRAPPESO**

2

MALNUTRIZIONE PER DIFETTO⁽⁹⁾

>800 milioni di persone



soffrono la **FAME**

149

milioni di bambini
sotto i 5 anni
soffrono di **RACHITISMO**

49

milioni di bambini
sono **DEPERITI**

3

MALNUTRIZIONE PER CARENZA DI MICRONUTRIENTI



(tra cui ferro, iodio, vit.A,
Vit.B12 e zinco)

Le patologie obesità-correlate
incidono sui budget sanitari
in tutto il mondo per:


2000 miliardi di ⁽⁹⁾
dollari l'anno

https://www.salute.gov.it/imgs/C_17_pagineAree_4968_11_file.pdf

Prevalenza della malnutrizione ospedaliera

Autore	Prevalenza
Edington	20%
Mc Whirter	40%
Bistran	40-50%
Bruun Li	44%
Naber	45%
Coats	46%
IBANUTRI	48,1%
ITALIA	
PIMAI	31%

Prevalence of hospital-acquired malnutrition and modifiable determinants of nutritional deterioration during inpatient admissions: A systematic review of the evidence

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Abstract

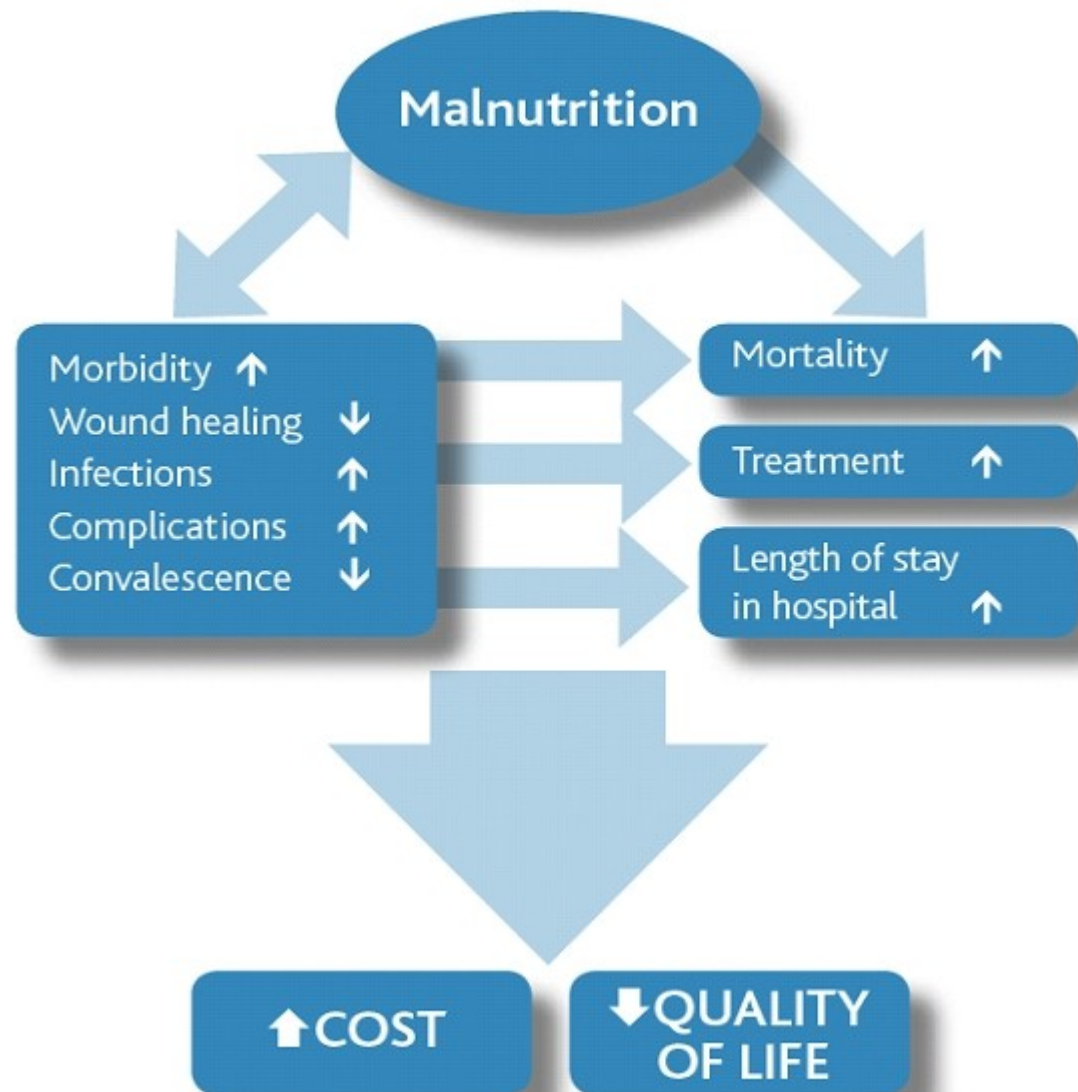
Background: Malnutrition affects between 20% and 50% of hospital inpatients on admission, with further declines expected during hospitalisation. This review summarises the existing literature on hospital-acquired malnutrition that examines the magnitude of nutritional deterioration amongst adult inpatients and identifies preventable barriers to optimising nutrition support during episodes of care.

Methods: A systematic review was conducted to answer the question: Among adult hospital inpatients, the presence of which modifiable factors contribute to hospital-acquired malnutrition? A database search was conducted between the 24 April and 30 June 2020 using CINAHL, MEDLINE, Scopus and PubMed databases according to a protocol registered with PROSPERO (CD42020182728). In addition, issues of the 10 top clinical nutrition journals published during the period of from 1 April 2015 to 30 March 2020 were hand-searched.

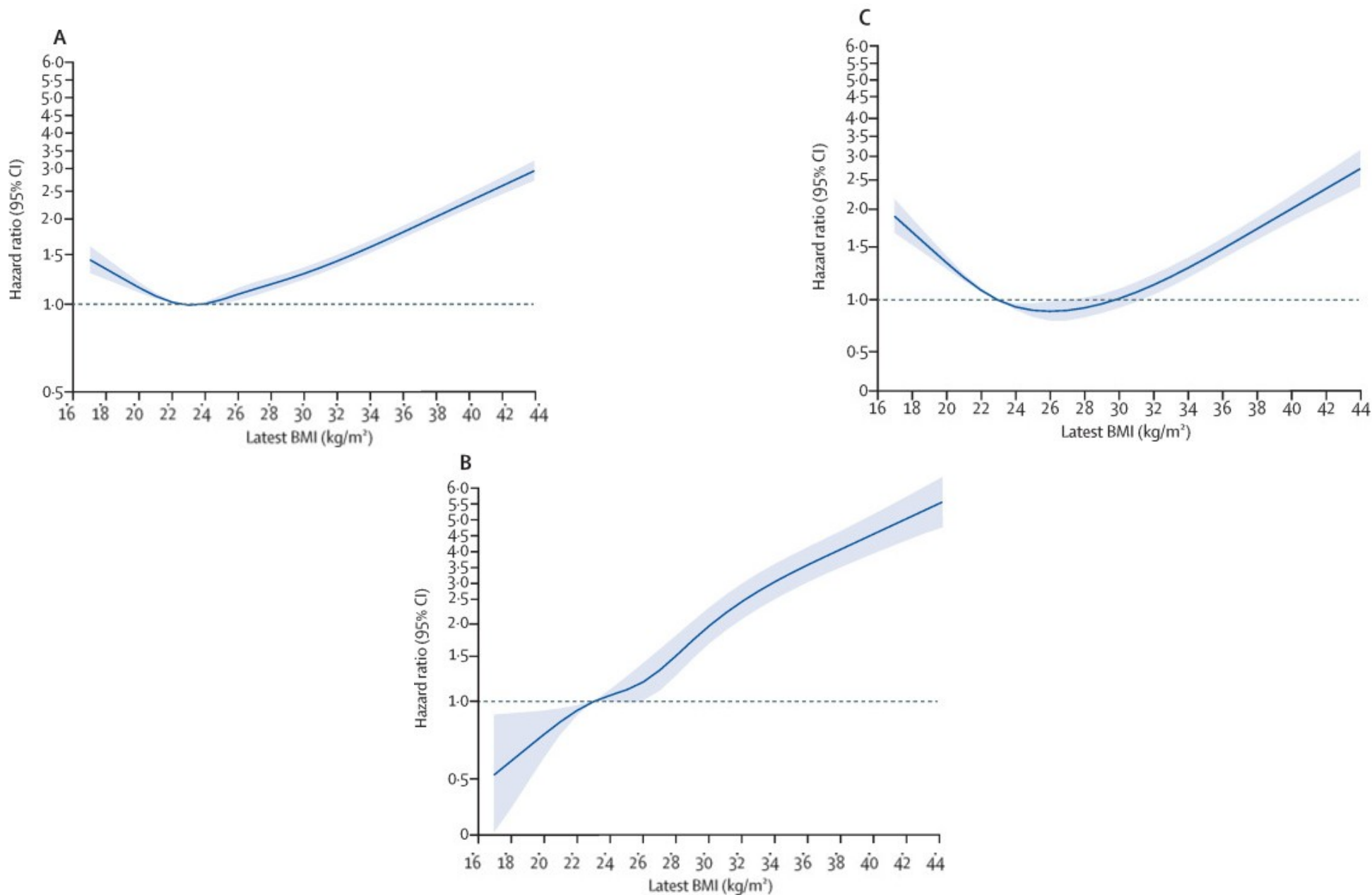
Results: Fifteen articles were eligible for inclusion from a total of 5944 retrieved abstracts. A narrative synthesis of evidence was completed because of the high level of heterogeneity in methodologies. Nutritional deterioration is common among previously well-nourished and nutritionally compromised patients, with studies reporting that 10%–65% of patients experienced nutritional decline. Frequently reported barriers were meal-time interruptions, meal dissatisfaction, procedure-related fasting, effects of illness or treatment, chewing difficulties, poor appetite and malnutrition as a low clinical priority.

Conclusions: The findings of this review support the need for routine nutritional risk screening throughout each hospital admission with hospital-acquired malnutrition affecting up to 65% of inpatients. Clear establishment of the roles and responsibilities of each member within multidisciplinary healthcare teams in the provision of nutrition care and cost-benefit analyses are recommended to demonstrate the effectiveness of changes to models of care.

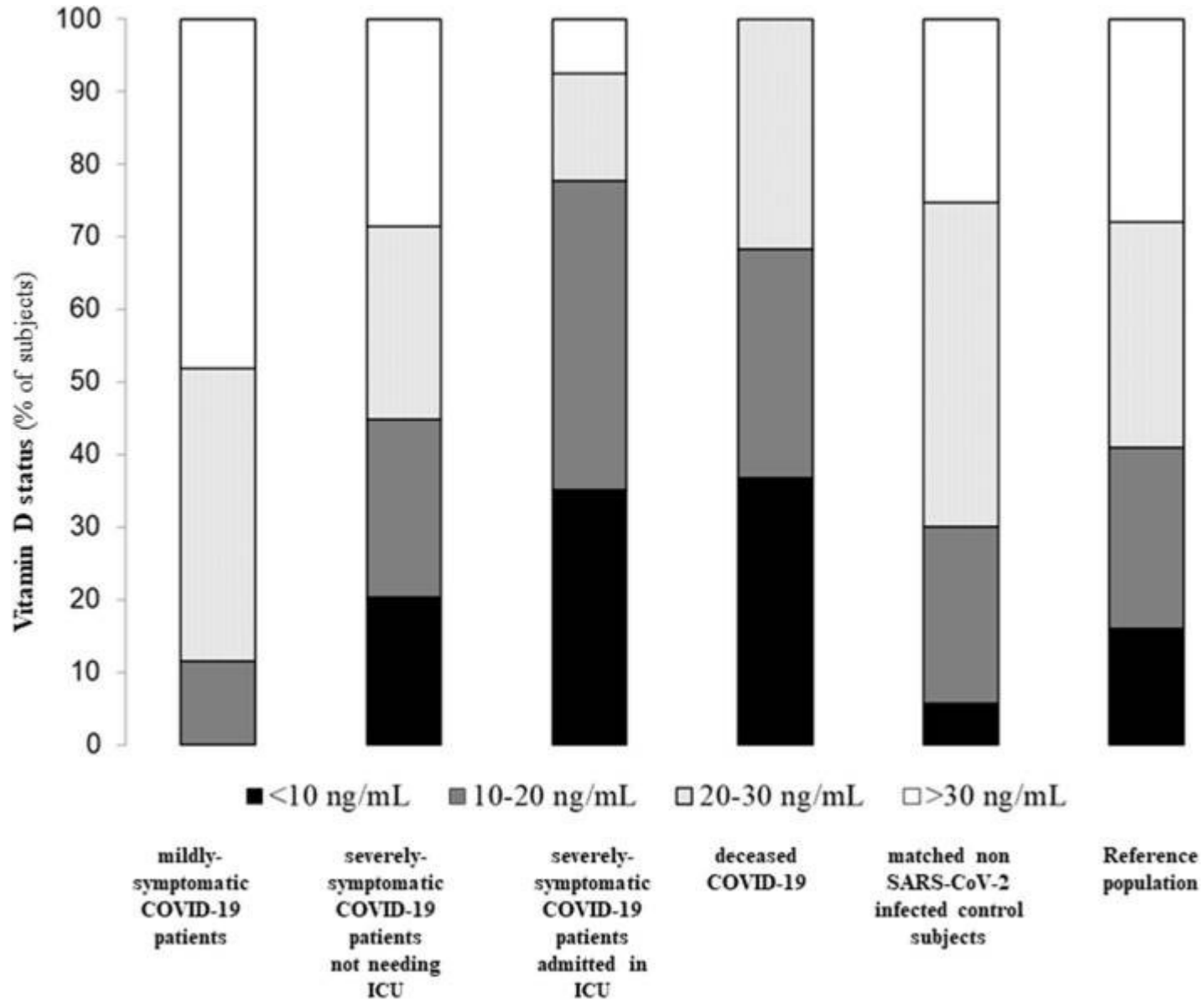
*Nutritional deterioration is common among previously well-nourished and nutritionally compromised patients, with studies reporting that **10%–65% of patients experienced nutritional decline**. Frequently reported barriers were **meal-time interruptions, meal dissatisfaction, procedure-related fasting, effects of illness or treatment, chewing difficulties, poor appetite and malnutrition as a low clinical priority**.*



Associazioni tra BMI e ricoveri ospedalieri da COVID-19(A), BMI e ricoveri in terapia intensiva da COVID-19 (B), BMI e morte da COVID-19 (C) (n=6 910 695)

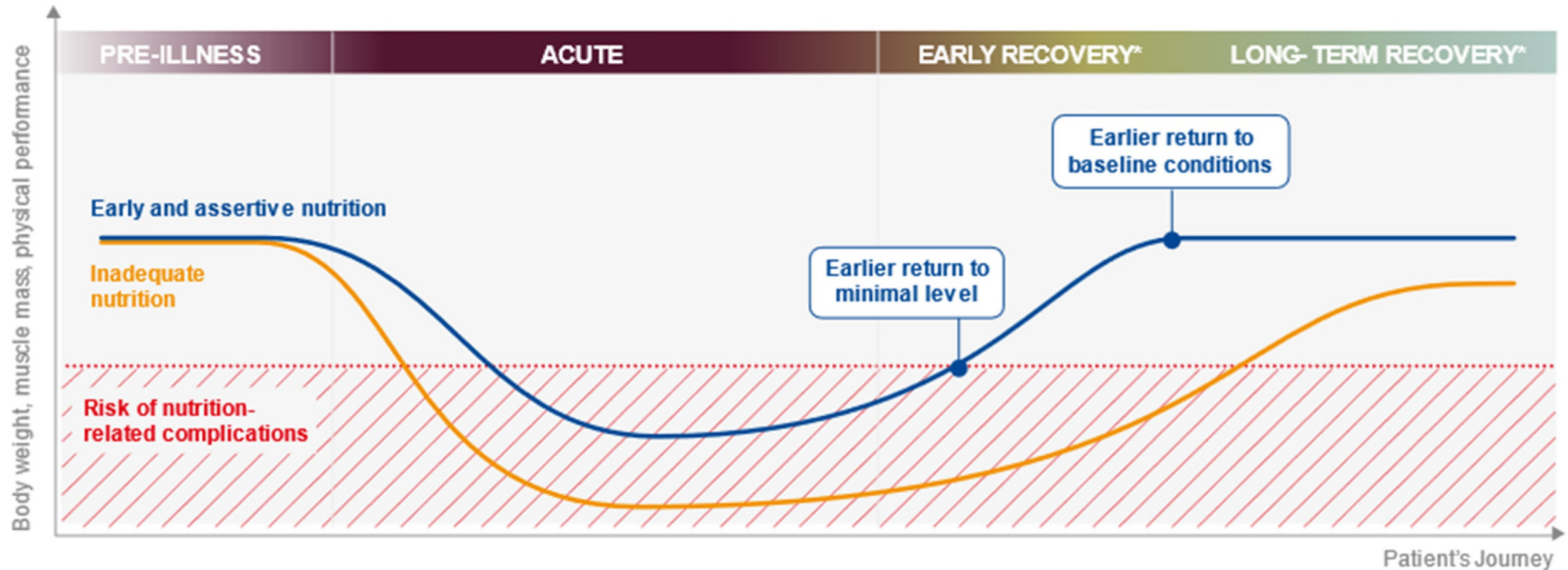


Gao M, Piernas C, Astbury NM, Hippisley-Cox J, O'Rahilly S, Aveyard P, Jebb SA. Associations between body-mass index and COVID-19 severity in 6.9 million people in England: a prospective, community-based, cohort study. *Lancet Diabetes Endocrinol.*



Campi, Irene et al. "Vitamin D and COVID-19 severity and related mortality: a prospective study in Italy." *BMC infectious diseases* vol. 21,1 566. 14 Jun. 2021, doi:10.1186/s12879-021-06281-7

L'intervento nutrizionale precoce



Cereda E, Clavé P, Collins PF, Holdoway A, Wischmeyer PE. Recovery Focused Nutritional Therapy across the Continuum of Care: Learning from COVID-19. *Nutrients*. 2021 Sep 21;13(9):3293. doi: 10.3390/nu13093293. PMID: 34579171; PMCID: PMC8472175.

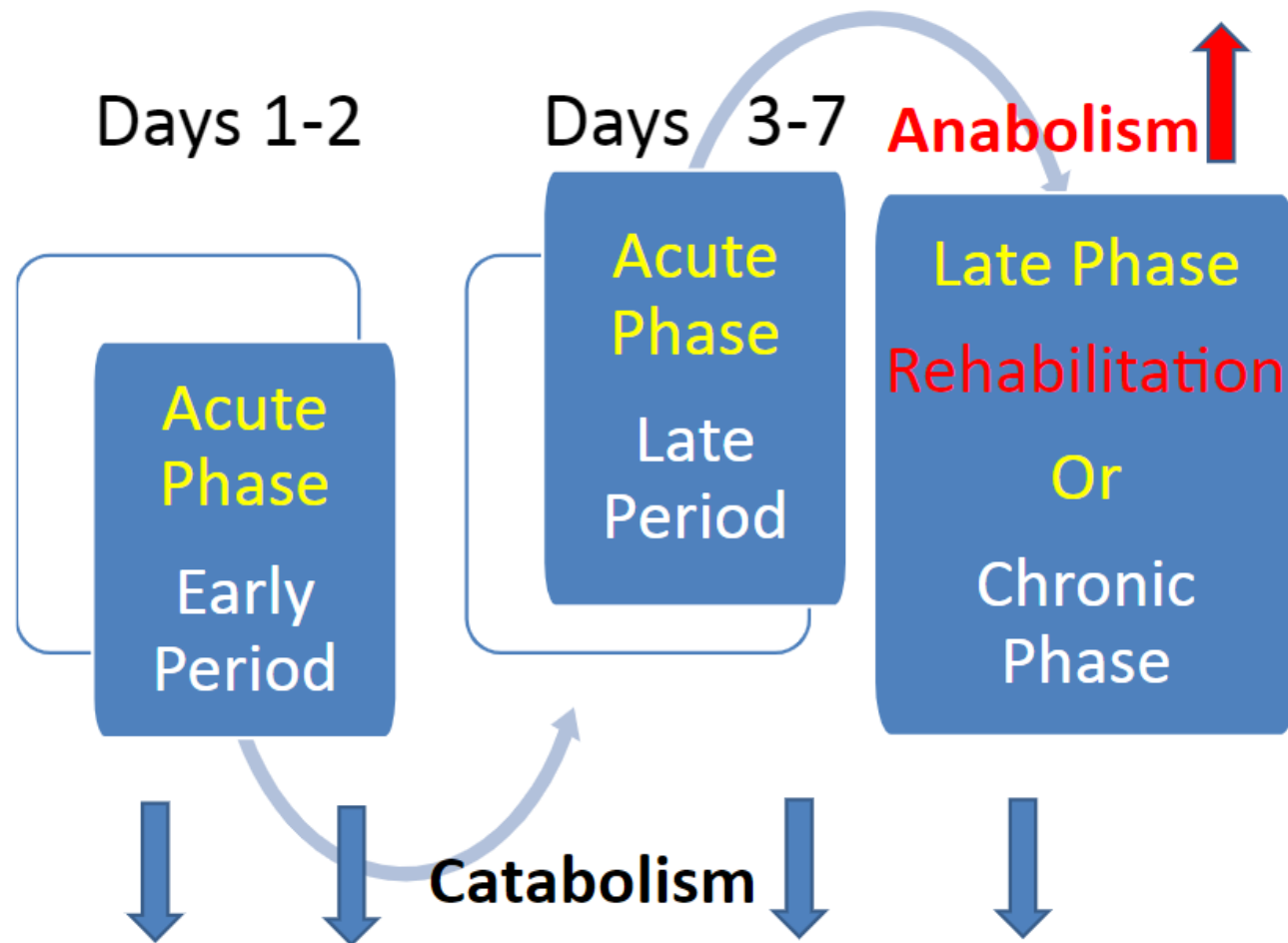
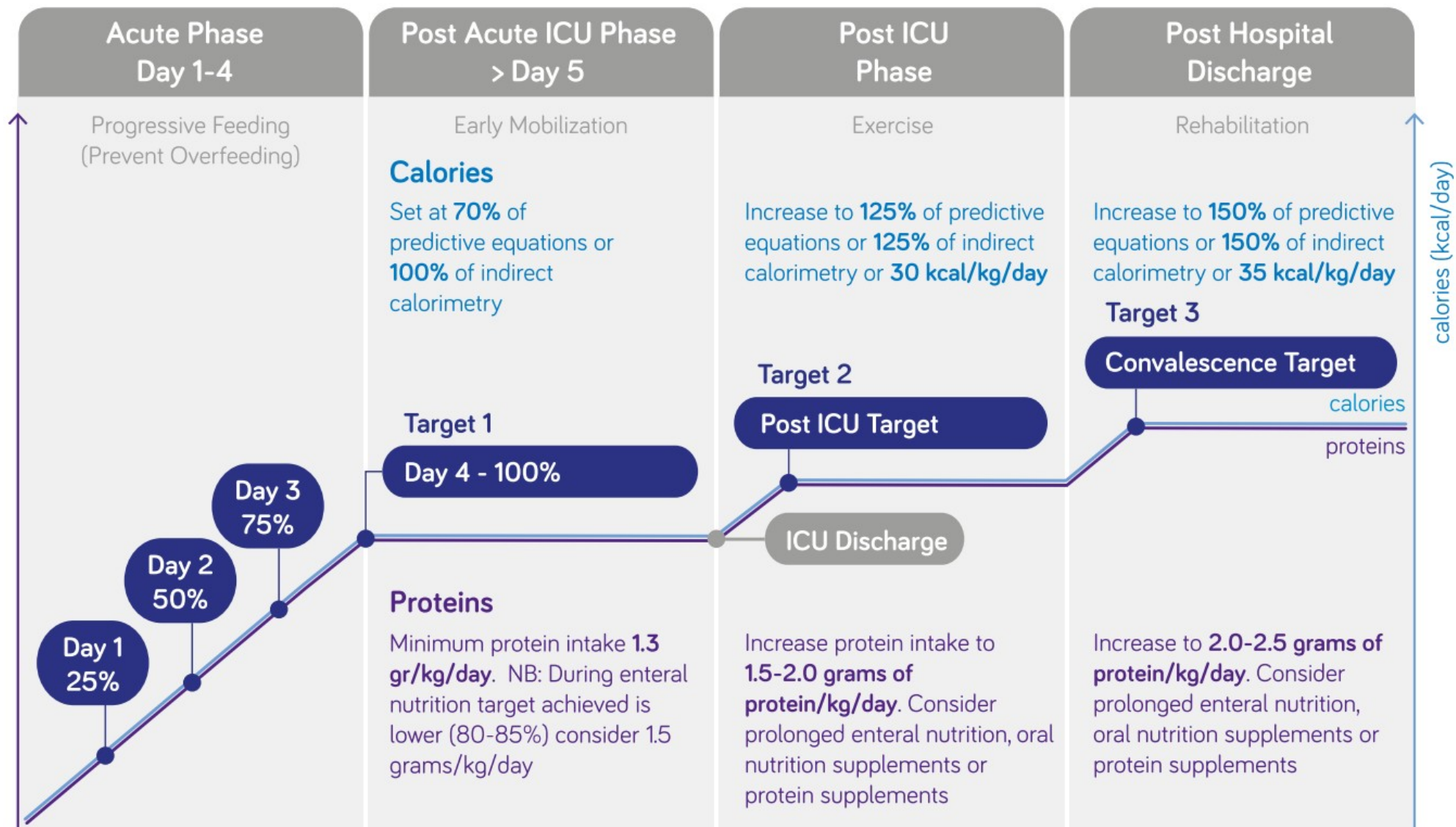


Fig. 2. Description of the acute and late phases following infection/stress/injury. After injury, the acute phase is composed of an early and a late period. Then the post-acute phase can be progressing to convalescence and rehabilitation or chronicity and Prolonged Inflammatory and Catabolic Syndrome (PICS).

Singer P, Blaser AR, Berger MM, Alhazzani W, Calder PC, Casaer MP, Hiesmayr M, Mayer K, Montejo JC, Pichard C, Preiser JC, van Zanten ARH, Oczkowski S, Szczeklik W, Bischoff SC. ESPEN guideline on clinical nutrition in the intensive care unit. Clin Nutr. 2019 Feb;38(1):48-79. doi: 10.1016/j.clnu.2018.08.037. Epub 2018 Sep 29. PMID: 30348463.



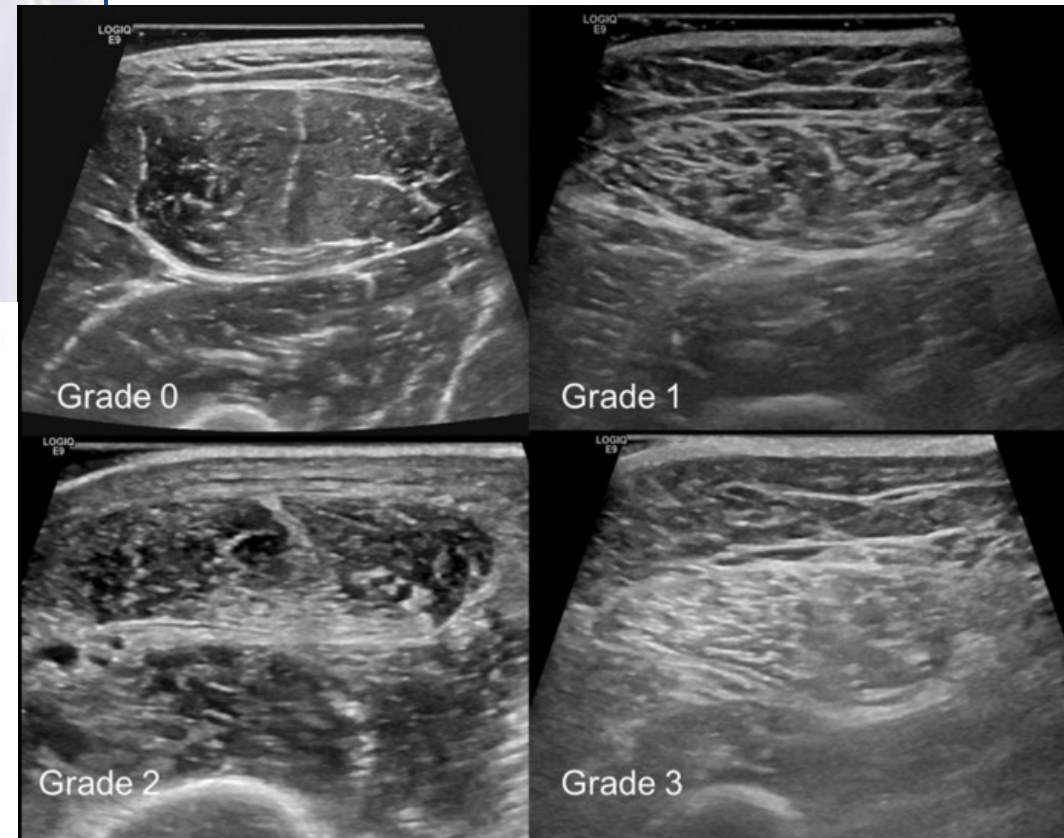
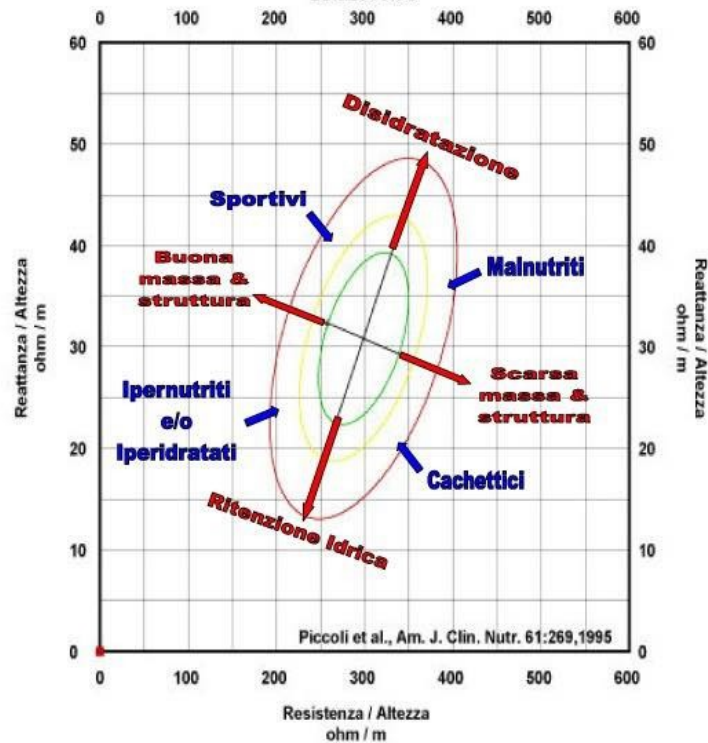
van Zanten, A.R.H., De Waele, E. & Wischmeyer, P.E. Nutrition therapy and critical illness: practical guidance for the ICU, post-ICU, and long-term convalescence phases. Crit Care 23, 368 (2019). <https://doi.org/10.1186/s13054-019-2657-5>



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Review

> [Lancet](#). 2021 Nov 20;398(10314):1927-1938. doi: 10.1016/S0140-6736(21)01451-3.

Epub 2021 Oct 14.

Management of disease-related malnutrition for patients being treated in hospital

Philipp Schuetz¹, David Seres², Dileep N Lobo³, Filomena Gomes⁴, Nina Kaegi-Braun⁵, Zeno Stanga⁶

Affiliations + expand

PMID: 34656286 DOI: [10.1016/S0140-6736\(21\)01451-3](#)

*High-quality randomised trials have provided evidence that **nutritional therapy can reduce morbidity and other complications associated with malnutrition in some patients**. Screening of patients for risk of malnutrition at hospital admission, followed by nutritional assessment and **individualised nutritional interventions for malnourished patients, should become part of routine clinical care and multimodal treatment in hospitals worldwide**.*

SPECIAL ARTICLE

Food and nutritional care in hospitals: how to prevent undernutrition—report and guidelines from the Council of Europe

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Abstract—In 1999 the Council of Europe decided to collect information regarding *Nutrition programmes in hospitals* and for this purpose a network consisting of national experts from eight of the Partial Agreement member states was established. The aim was to review the current practice in Europe regarding hospital food provision, to highlight deficiencies and to issue guidelines to improve the nutritional care and support of hospitalized patients. Five major problems seemed to be common in this context: 1) lack of clearly defined responsibilities; 2) lack of sufficient education; 3) lack of influence of the patients; 4) lack of co-operation among all staff groups; and 5) lack of involvement from the hospital management. To solve the problems highlighted, a combined 'team-effort' is needed from national authorities and all staff involved in the nutritional care and support, including hospital managers. © 2001 Harcourt Publishers Ltd.

5 punti chiave

- Mancanza di responsabilità chiaramente definite
- Mancanza di adeguata formazione
- Mancanza di influenza da parte dei pazienti
- Mancanza di cooperazione tra i gruppi di staff
- Mancanza di coinvolgimento del management ospedaliero.

Early rehabilitation of hospitalized patients can reduce muscle weakness, physical impairments and delirium. Yet achieving these outcomes is no simple task. Beyond understanding the science, it requires **collaboration and coordination between clinicians who have traditionally worked in “silos.”**

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10th



(n) complexity *(From: complex)*

PRONUNCIATION:

/kəm'plek.sə.ti/ *UK*

/kəm'plek.sə.ti/ *US*

DEFINITION:

1. (n.) The quality of being intricate and compounded. (*he enjoyed the complexity of modern computers*)
2. (n.) A development that complicates a situation.

The joy of complexity!

La complessità come sfida,
l'integrazione e la collaborazione come risposte



INTERDIPENDENZA



Grazie per l'attenzione

