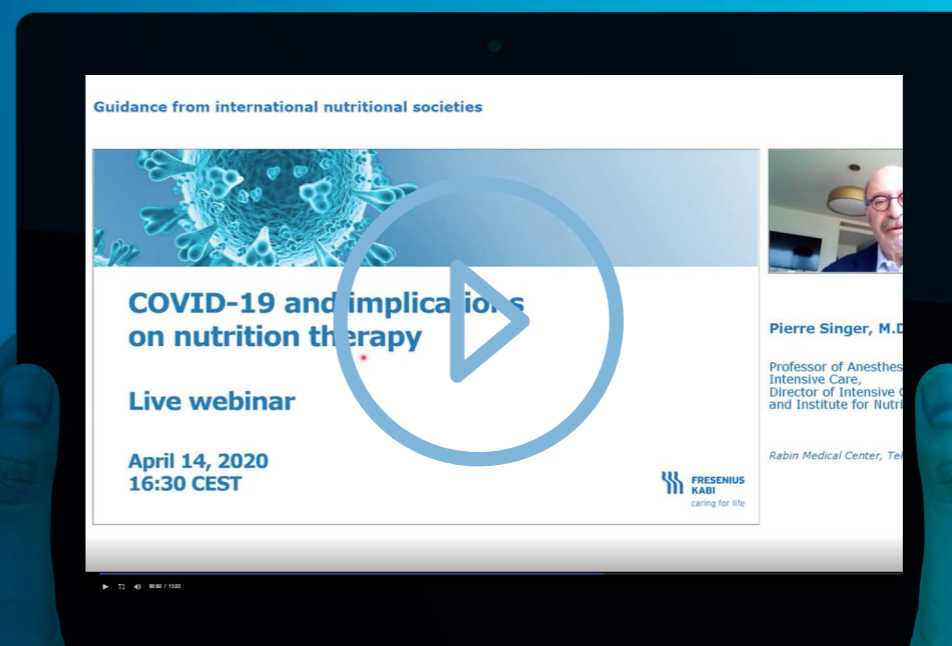
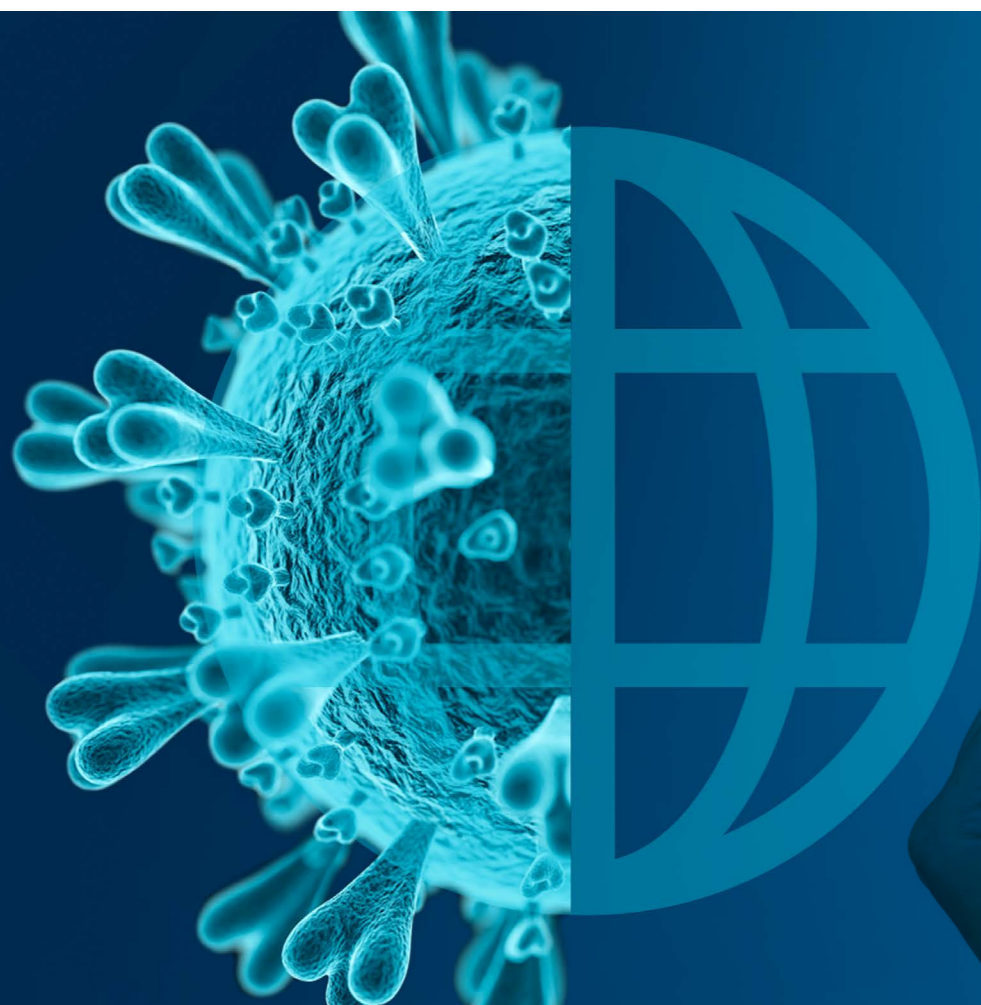


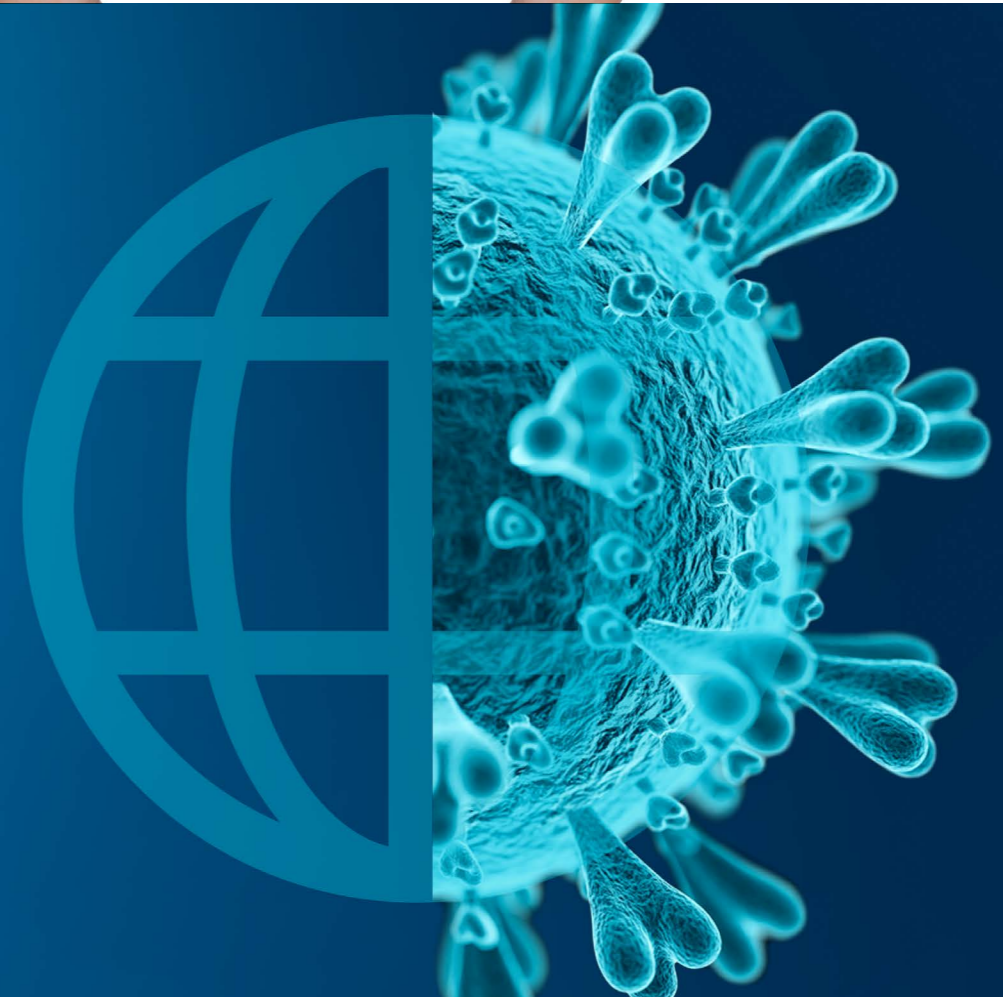
COVID-19 and implications on nutrition therapy

Webinar Series



COVID-19 and implications on nutrition therapy

Webinar Series



COVID-19 Webinar Series

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The site, which is freely available to the world's healthcare professionals, provides insights on how nutrition improves patients' outcomes in the different clinical settings and the relevance of the appropriate macronutrient delivery to the patients.

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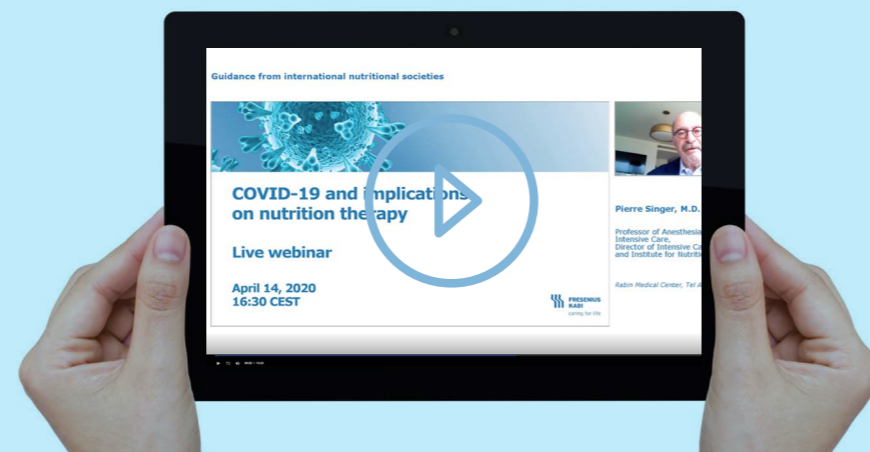
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COVID-19 Webinar Series

Faculty Speakers



Feeding the critically ill COVID-19 patient

**Pierre Singer,
M.D., Ph.D. (Chair)**

Rabin Medical Center,
Tel Aviv University, Tel Aviv, Israel



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**Juan Carlos
López-Delgado, M.D.**

L'Hospitalet de Llobregat
Barcelona, Spain



[Watch Video](#)

Romano Tetamo, M.D.

COVID Hospital Guastalla,
AUSL, Reggio Emilia, Italy



[Watch Video](#)

COVID-19: How to optimize nutrition on the road to recovery?

**Michael Hiesmayr,
M.D., Ph.D. (Chair)**

Medical University of Vienna,
Vienna, Austria



[Watch Video](#)

**Elisabeth De Waele,
M.D., Ph.D.**

UZ Brussel, Vrije Universiteit
Brussel (VUB), Brussels, Belgium



[Watch Video](#)

**Martin Brodsky,
M.D, Ph.D.**

Johns Hopkins University School of
Medicine, Baltimore, United States



[Watch Video](#)

COVID-19 patient: Worldwide experience from ICU to discharge

**Robert Martindale,
M.D., Ph.D. (Chair)**

Oregon Health & Science University
Portland, United States



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Peng Zhiyong, M.D., Ph.D.

Zhongnan Hospital, Wuhan, China



[Watch Video](#)

Cristina de la Cuerda, M.D.

Hospital General Universitario
Gregorio Marañón, Madrid, Spain



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Albert Albay, M.D.

Manila Doctors Hospital, Manila, Philippines



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Danielle Bear, RD, MRes

Guy's and St Thomas' NHS Foundation
Trust, London, United Kingdom



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Feeding the critically ill COVID-19 patient

Introduction **Pierre Singer, M.D., Ph.D.**



The first in this series of Webinars will focus on feeding the critically ill patient suffering from COVID-19.

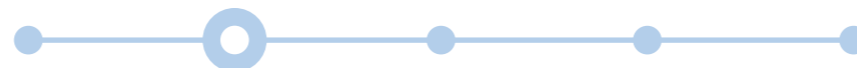
The disease is not very well described, but we know that it progresses through several phases. From the early stages of infection to the severe phase, requiring intensive care and oxygen support, and further on to the critical phase, often necessitating prolonged mechanical ventilation for 14 days or more.

Finally, in case of treatment success, this phase is followed by extubation and rehabilitation.

This pandemic has overwhelmed the world at a speed that has left us no time to prepare for the vital decisions that we now have to make every day. Numerous problems must be overcome to provide the highest standard of treatment to the patient in the face of challenges such as contamination risk, shortage of material, and work overload. In the present Webinar, ICU-specialists from two European countries particularly affected

by COVID-19, Spain and Italy, and myself from Israel will share with you, **our experience on how to provide safe and effective nutritional support at the ICU during the COVID-19 pandemic.**

Starting from the level of the recent guidelines the speakers will proceed from theory to practical advice. In the course of this journey, some highly relevant topics will be tackled, such as prone position, GI-tolerance, non-invasive ventilation, ECMO and alternative feeding regimens during a shortage.



Feeding the critically ill COVID-19 patient



Guidance from international nutritional societies



Pierre Singer, M.D., Ph.D.

- Medical nutrition therapy as a key aspect in the treatment of COVID-19 patients
- Guidance on how to translate the recommendations by the International Societies into safe and effective practices at bedside
- Preferred routes, targets and specific limitations of nutrition support across the different phases of the disease

What to consider when usual nutrition practice is challenged? Lessons learned from Spain



Juan Carlos López-Delgado, M.D.

- Specific clinical issues of COVID-19 patients, nutritional implications, and practical solutions
- Pragmatic evidence “from the frontline”, such as a pragmatic nutrition algorithm and easy-to-use calculation tools
- Importance of nurse-driven protocols to assist in the treatment of complications and reduce workload

What to consider when usual nutrition practice is challenged? Lessons learned from Italy



Romano Tetamo, M.D.

- Characteristics, comorbidities and outcomes of COVID-19 patients admitted to the ICU in Italy
- Practical nutritional strategies to cope with pre-existing malnutrition, comorbidities, invasive ventilation, and proning
- Strategies to reduce oxygen consumption and minimize iatrogenic damage, with a focus on caloric targets, protein and lipid intake including the role of propofol

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COVID-19: How to optimize nutrition on the road to recovery?



Introduction **Michael Hiesmayr, M.D., Ph.D.**



In the following presentations, we will progress from the ICU to the next step, which is nutrition on the road to recovery from COVID-19.

We are all aware that, after prolonged ICU stay, patients have to cope with severe long-term consequences, such as muscle weakness leading to impaired mobility and functioning, impaired ability for self-care, impaired participation in activities of daily living, and work, as well as (neuro)psychological problems. The accumulating experience from surviving COVID-19 patients

post-ICU suggest that the challenges they have to face are comparable to those known from patients with post-intensive care syndrome.

Three speakers will share their expertise in dealing with this highly important issue. The first speaker is Prof. Elisabeth de Waele, a well-known intensivist from Brussels who has dedicated her work to metabolic research and nutrition care. She will address the challenges COVID-19 patients have to face post-ICU in getting back to their normal lives.

The second speaker, Prof. Martin Brodsky, is a specialist in physical medicine and rehabilitation from Baltimore. He will address post-extubation dysphagia in COVID-19 patients and its impact on the initiation of oral feeding during rehabilitation. Myself, Prof. Michael Hiesmayr, an intensivist from Vienna engaged in nutrition epidemiology, will give the third talk, addressing the important issue of promoting autonomy and self-care capacity during rehabilitation by combining intervention and patient education.



COVID-19: How to optimize nutrition on the road to recovery?



Nutrition therapy after critical illness: Practical guidance for post-ICU and long-term convalescence in COVID-19 patients

Elisabeth de Waele, M.D., Ph.D.

- Strategies how to cope with common problems that occur with nutrition care post-ICU and experience with ICU survivors in the Brussels area
- Practical recommendations for post-ICU nutrition, including requirements of energy and protein during rehabilitation
- Organizational aspects of nutrition care after hospital discharge



Effective therapy post-extubation: Recovery from dysphagia in ARDS survivors

Martin Brodsky, M.D., Ph.D.

- Factors affecting the incidence of post-extubation dysphagia - the role of intubation duration
- Practical considerations for conducting post-extubation screening for dysphagia: suitable tools and optimal timing
- Nutrition support in ICU patients with dysphagia and alternative options to oral feeding: thickeners and pre-thickened liquids



Relevant rehabilitative interventions: hospital re-organization in relation to the COVID-19 pandemic

Michael Hiesmayr, M.D., Ph.D.

- Introduction to the 'FRAME' concept as a practical approach to manage the transition from the ICU to autonomous living in the face of structural limitations during the COVID-19 pandemic
- Nutrition support during the journey through recovery from COVID-19: targets, routes, and risk factors for insufficient intake
- Criteria to be fulfilled for discharge home: the 'FRAME' diary as a practical recording tool and decision aid

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COVID-19 patient: Worldwide experience from ICU to discharge



Introduction **Robert Martindale M.D., Ph.D.**



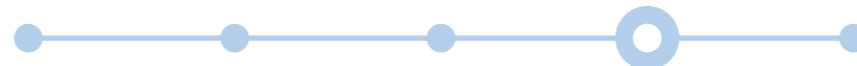
The third webinar of this series will address the global experience with COVID-19 patients, from ICU to discharge.

During the present pandemic, we are all facing numerous challenges and uncertainties, as our guiding principles relevant for nutrition care must be offset against the guiding principles relevant for the treatment of COVID-19.

Typically, COVID-19 patients requiring hospitalization and/or intensive care are older and suffer from one or more comorbidities. The high malnutrition risk is

obvious, yet, assessing nutritional needs, e.g. by indirect calorimetry, is complicated by the increased risk of virus exposure. Existing protocols need to be adapted to ensure the safety of the caregivers and to account for shortages of personnel and resources. Concerns arise about the feasibility of enteral tube feeding during prone position and the risks of GI dysfunction in highly sedated patients. It is imperative to implement continued nutrition support far beyond ICU-discharge, at the ward and during rehabilitation at home.

Most of the knowledge we have presently attained for the nutritional management of patients with COVID-19 is still based on personal experience and a few pilot studies. Thus, it is particularly valuable that, in the present webinar, **international experts share and discuss their expertise, hands-on experience and best practices. Nutrition has become a key player for survival in the COVID-19 pandemic**, and we need to carry on as the pandemic continues to spread over the world.



COVID-19 patient: Worldwide experience from ICU to discharge



Experience from the United States



Robert Martindale, M.D., Ph.D.

- Latest facts from the U.S. about the typical patient characteristics and clinical consequences in COVID-19 ICU patients
- Nutritional interventions for COVID-19 ICU patients
- Omega-3 fatty acids from fish oil and resolution of inflammation

Experience from China



Peng Zhiyong, M.D.

- First analysis of key characteristics of COVID-19 patients from the centre of the outbreak, Wuhan, China: medical symptoms, comorbidities, clinical process of the disease, laboratory parameters, as well as implemented treatments
- Summary of relevant treatment guidelines recommended by the Chinese Society including practical experiences and nutrition support

Experience from Europe



Cristina de la Cuerda, M.D.

- Experience of a hospital hit particularly hard during the pandemic
- Provides an overview of the implemented feeding protocols including nutritional solutions for: non-invasive ventilation, invasive mechanical ventilation, and the post-intubation period, to ensure the right caloric and protein targets

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COVID-19 patient: Worldwide experience from ICU to discharge



Experience sharing from The Philippines



Albert Albay, M.D.

- Importance of providing maximum benefits to the patient while ensuring safety of the caregiver dealing with COVID-19
- Challenges to be overcome by HCPs regarding nutritional management of COVID-19 patients e.g nutritional assessment, duration of mechanical ventilation and weaning, high need for sedation increasing GI complications, and possible solutions

Experience sharing from the United Kingdom



Danielle Bear, RD, MRes

- Overview of the Critical Care Specialist group guidance on the management of nutrition and dietetic services during the pandemic
- Focus on the clinical characteristics of the patients and the challenges of performing enteral feeding
- Guidance on how to perform nutrition during proning, fluid balance, dealing with shortages in enteral feeding pumps and nutrition follow up on post-ICU patients

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COVID-19 patient: Worldwide experience from ICU to discharge



Discussion

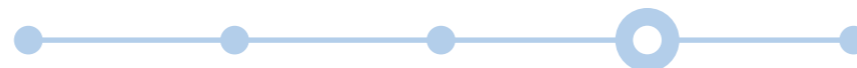
All Speakers

In this Q&A session, some important practical aspects of nutrition therapy are addressed, such as the route of administration, risks of intolerance, and considerations regarding the timing and initiation of nutrition.

Experience with high protein formulas in COVID-19 patients is shared by the experts and the protein targets applying in their countries are reported.

Further highly relevant points of discussion include the role of omega-3 fatty acids in enteral and parenteral nutrition, nutrition during the rehabilitation phase, and personal experience with shortage of resources.

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COVID-19 Webinar Series

Speaker Biographies

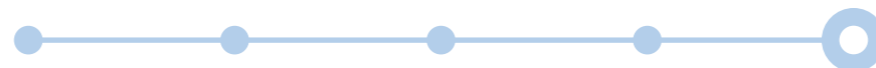


Pierre Singer, M.D., Ph.D.

Professor of Anesthesia and Intensive Care,
Director of Intensive Care Dept. and Institute
for Nutrition Research, Rabin Medical Center,
Tel Aviv University, Tel Aviv, Israel



Prof. Pierre Singer has over 30 years of clinical and academic experience. He is currently Director of the General Intensive Care Department, Rabin Medical Center, Petah Tikva, Israel. He was Chairman of ESPEN (2010-2014). His research interests centre around sepsis, respiratory & technologies, and nutrition and metabolism. Prof. Singer has presented over 160 lectures and had more than 175 invited papers at scientific meetings. Prof. Singer has published more than 100 original articles, 16 case reports, 26 review articles, 23 book chapters, and 100 abstracts. He is also former Chairman of the European Society for Clinical Nutrition and Metabolism (ESPEN). Prof. Singer is the first author of the ESPEN guideline on clinical nutrition in the intensive care unit published in 2019 and last author of the "ESPEN expert statements and practical guidance for nutritional management of individuals with SARS-CoV-2 infection" published online on March 31, 2020.



COVID-19 Webinar Series

Speaker Biographies

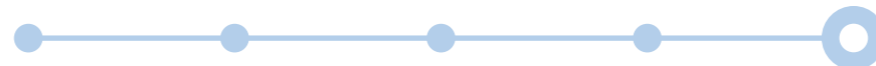


Juan Carlos López-Delgado, M.D.

Intensive Care Unit Consultant,
L'Hospitalet de Llobregat
Barcelona, Spain



Dr. Juan Carlos López-Delgado has over 15 years of clinical, research and academic experience in Intensive Care Medicine. Since 2010 he is Consultant Physician in the Department of Intensive Care Medicine at the Hospital Universitari de Bellvitge. In addition, he is an active Clinical Research investigator at the Institut d' Investigació Biomèdica Bellvitge (Biomedical Investigation Institute of Bellvitge), and part of the working Group of Inmunidad Innata y Patología del Enfermo Crítico (Innate Immunity and Critical Care Research) since January 2016. He has published over 40 articles and book chapters in Critical Care Medicine.



COVID-19 Webinar Series

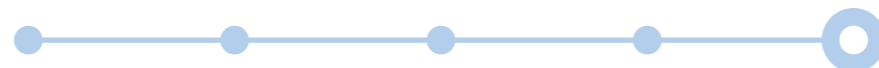
Speaker Biographies



Romano Tetamo, M.D.

Former Head of Emergency Department
and ICU, Ospedale Civico, Palermo
Currently ICU consultant to COVID Hospital
Guastalla, AUSL Reggio Emilia, Italy

Dr. Romano Tetamo is a Specialist in Intensive Care and Anaesthesiology, with over 30 years of experience of clinical, research and academic fields in Intensive Care Medicine. He has been Head of Intensive Care and Anaesthesiology Unit, Il Servizio Anestesia e Rianimazione, ARNAS Civico, Palermo, Italy since August 2002. He is currently in the frontline in the COVID-19 challenge. His fields of interest are: Clinical nutrition and Quality in ICU.



COVID-19 Webinar Series

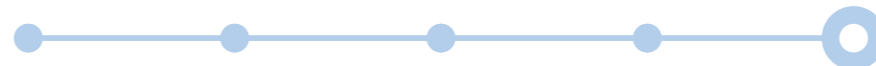
Speaker Biographies



Michael Hiesmayr, M.D., Ph.D.

Medical University of Vienna,
Head Division Cardiac Thoracic Vascular
Anaesthesia & Intensive Care
Vienna, Austria

Prof. Michael Hiesmayr has been Head of Division Cardiac Thoracic Vascular Anaesthesia & Intensive Care at Medical University Vienna from 2008 to 2019, the largest academic medical center in Austria. Since 2019 he is Senior researcher at Center for Medical Statistics, Informatics and Intelligent Systems (CEMSIIS), Medical University Vienna. He has an outstanding publication list with more than 200 publications in international, peer reviewed journals in the field of intensive care medicine and clinical nutrition.



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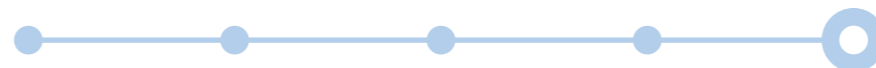
Speaker Biographies



Elisabeth De Waele, M.D., Ph.D.

Intensive Care Unit and Department of Nutrition,
UZ Brussel, Vrije Universiteit Brussel (VUB)
Brussels, Belgium

Prof. Elisabeth De Waele is currently head of clinics in ICU, Universitair Ziekenhuis Brussels, responsible for the postoperative treatment of cardiac surgery patients. Since 2012 she is President of the Nutrition Team at Vrije Universiteit Brussel/Universitair Ziekenhuis Brussel. Her scientific work is focused on clinical research in critically ill patients with a focus area on energy expenditure. The domains of expertise comprise of nutrition in critical care setting, metabolism and nutrition of ICU and cardiac surgery patients and nutrition in oncology.



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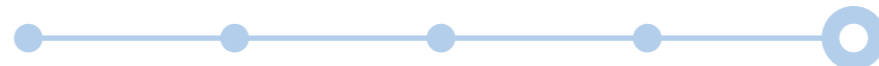
Speaker Biographies



Martin Brodsky, M.D., Ph.D., Sc.M., CCC-SLP, F-ASHA

Department of Physical Medicine and Rehabilitation,
Johns Hopkins University School of Medicine,
Baltimore, United States

Assoc. Prof. Martin B. Brodsky, is Associate Professor of Physical Medicine and Rehabilitation and a member of the Outcomes After Critical Illness and Surgery (OACIS) Group, a multidisciplinary clinical and research group dedicated to understanding and improving patient outcomes after critical illness and surgery at Johns Hopkins University. His peer-reviewed research publications and book chapters focus on swallowing and swallowing disorders, and laryngeal injury after endotracheal intubation. His clinical practice specializes in adult swallowing and neurologic communication disorders.



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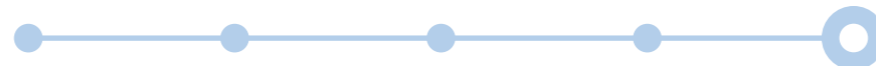
Speaker Biographies



Robert Martindale, M.D., Ph.D.

Oregon Health & Science University
Portland, United States

Prof. Robert Martindale is Professor in the Division of General Surgery and Gastrointestinal Surgery & Medical Director for Hospital Nutrition Services at the Oregon Health & Science University, Portland, Oregon. Prof. Martindale is on the editorial board for several surgical and nutritional journals, as well as an editorial reviewer for over 15 peer reviewed journals, and is the author of over 350 publications. Primary focus throughout his professional career has been in surgical education and treating patients with complex surgical and nutritional issues. He was Co-Chair of the Society of Critical Care Medicine (SCCM)/ American Society of Parenteral and Enteral Nutrition (ASPEN) ICU Nutritional Guidelines in 2009 and 2016. He is also co-author of the 2017 ESPEN guidelines Clinical Nutrition in Surgery and first author of "Nutrition Therapy in the Patient with COVID-19 Disease Requiring ICU Care" published online on April 2, 2020.



COVID-19 Webinar Series

Speaker Biographies



Peng Zhiyong, M.D., Ph.D.

Zhongnan Hospital
Wuhan, China

Prof. Zhiyong Peng is Chair and Professor of Critical Care Medicine at Zhongnan Hospital and Vice-Director of the Center of Clinical Trials at Wuhan University, in Wuhan. He is in addition a member of the Editorial Board of the Journal of Critical Care (USA) & Blood Purification (Europe). He was one of the senior authors of a team of 14 physicians who published this year an article in JAMA entitled "Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China." The article provided important insights into clinical management issues that Chinese physicians encountered in managing the first COVID-19 cases in Wuhan.



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Speaker Biographies

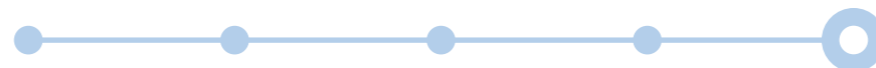


Cristina de la Cuerda, M.D.

Hospital General Universitario Gregorio Marañón
Madrid, Spain



Dr. Cristina Cuerda Compés is an attending physician at the Nutrition Unit of Hospital General Universitario Gregorio Marañón Madrid. She is endocrinologist and has had different positions in the ESPEN society. She has been a member of the HAN-CIF (Home Artificial Nutrition-Chronic Intestinal Failure) group of ESPEN since 2006. She is Chair of the Educational and Scientific Committee of SENPE (Spanish Society for Clinical Nutrition and Metabolism). Dr. Cuerda Compés is the author of over 160 publications and her main research and areas of interest are Nutrition in Intensive Care Patients, Home Enteral and Parenteral Nutrition, Chronic Intestinal Failure, and Home Parenteral Nutrition, Metabolic Syndrome and Nutrition in Psychiatric Disorders.



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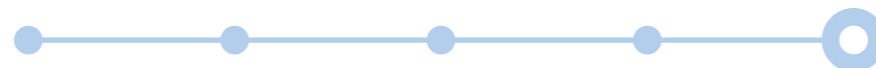
Speaker Biographies



Albert Albay, M.D.

Manila Doctors Hospital
Manila, Philippines

Assoc. Prof. Albert Albay is Clinical Associate Professor at the University of the Philippines Manila College of Medicine and Head of the Central Intensive Care Unit at Philippine General Hospital (PGH), which is a major COVID-19 center in Manila. He is also currently Head of the Intensive Care Unit, Manila Doctors Hospital (MDH). Assoc. Prof. Albay is the author of over 50 publications, including peer reviewed articles, and review articles. Some of his ongoing collaborations and research interests include: the Implementation and Evaluation of the Sepsis Bundle in the Department of Medicine of the Philippine General Hospital, and Catch Up Feeding Strategies to Bolus Tube Feeding in the Philippine General Hospital (CUFS-PGH).



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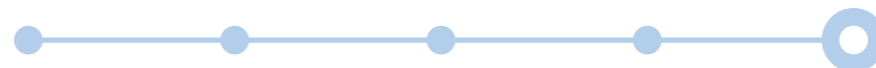
Speaker Biographies



Danielle Bear, RD, MRes

Guy's and St Thomas' NHS Foundation Trust
London, United Kingdom

Danielle Bear is the Principal Critical Care Dietitian at Guy's and St Thomas' NHS Foundation Trust (GSTT), London, and has recently been seconded to the Nightingale Hospital London as the lead dietitian during the COVID-19 pandemic. She recently completed a prestigious Health Education England / National Institute for Health Research (HEE/NIHR) Clinical Doctoral Research Fellowship, where she has been investigating measurement and prevention of skeletal muscle wasting in early critical illness and recovery. She has numerous recent publications within the area of critical care nutrition including the following topics; muscle metabolism in critical illness, intermittent vs continuous feeding, nutrition support in ECMO and the importance of nutrition based outcomes in future clinical trials.





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