

CV of ASSMN 2024 Invited Faculty



Tsann-Long Hwang

Country

Taiwan

Position & Organization

Professor, Department of Surgery, Chang Gung Memorial Hospital

Major Field

General Surgery, Surgical Metabolism and Nutrition

Short Bio (in 300 words)

Tsann-Long Hwang is an attending faculty and surgeon in general surgery in Chang Gung Memorial Hospital in Taipei, Taiwan, where he was also the director of the Pancreatic Cancer Team, and Chairman of the Committee of Enteral and Parenteral Nutrition and Committee of Stem Cells and Tissue Engineering Research. He is also a Professor of Surgery in the Chang Gung University, College of Medicine, in Taiwan. Professor Hwang got International Visiting Professorship Award of the Association of Academic Surgery in 2009. He has published more than 300 papers in peer-reviewed journals. He has contributed extensively in professional activities in his areas of expertise. He is past vice President of World ICS, and the chairman of the Pancreatic Cancer Group of the Taiwan Cooperative Oncology Group. He is also the editor of Nutrition, Journal of Hepato-Biliary Pancreatic Sciences, World Journal of Gastrointestinal Oncology, Asian Journal of Surgery, and Formosan Journal of Surgery.

Surgical Nutrition

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Malnutrition includes chronic caloric deficiency and acute protein depletion. The former represents a patient with low ideal body weight and the latter represents a patient with edema or hypoalbuminemia. The surgical cancer patient with malnutrition needs more aggressive nutritional support especially the patients combined with both types of malnutrition. In addition to assess the patient's nutritional status, the energy expenditure of patients may be calculated with Harrison-Benedict's equation. The important issues of surgical nutrition in multidisciplinary care include: 1. Awareness of malnutrition, 2. Assessment of nutritional status and energy expenditure, 3. Start feeding as early as possible, 4. ERAS (Early recovery after surgery), 5. Immunomodulation.

Glutamine-containing parenteral or enteral nutrition has been widely adopted in patients after surgery. There have been few good-quality randomized controlled trials with adequate statistical power to evaluate glutamine use in these patient groups. In critical illness there is dramatic over-amplification of the inflammatory response, probably together with cellular immune dysfunction, whereas after surgery patients experience much less cytokine activation and some suppression of cell-mediated immunity, which increases the risk of infection.

The other important immunonutrient is omega-3 PUFAs, which can exert a positive action by reverting the microbiota composition in these diseases, and increase the production of anti-inflammatory compounds, like short-chain fatty acids. In addition, accumulating evidence in animal model studies indicates that the interplay between omega-3 fatty acids, and immunity helps to maintain the intestinal wall integrity and interacts with host immune cells. Human and animal studies have highlighted the ability of omega-3 PUFAs to influence the gut-brain axis, acting through gut microbiota composition.

Keywords: Malnutrition, Immunomodulation, ERAS, Glutamine, Omega-3 fatty acid