New Espen Guidelines

ESPEN GUIDELINES ON NUTRITIONAL SUPPORT IN PANCREATIC DISEASES
(ACUTE AND CHRONIC PANCREATITIS)

M. Bezmarević (RS)
New ESPEN guidelines
Nutritional support in pancreatitis

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Department of HPB Surgery, Unit for Perioperative Nutrition
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University of Defense, Belgrade, Serbia
Upcoming ESPEN Guidelines

• ESPEN guidelines on nutritional support in pancreatic diseases (acute and chronic pancreatitis)

• Dr. Mihailo Bezmarević
• On behalf of ESPEN Guidelines Development Group
There are no conflicts of interest to disclose
ESPEN guidelines on nutritional support in pancreatic diseases (acute and chronic pancreatitis)

Guidelines Development Group

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ESPEN Guidelines Coordinator: Stephane Bischoff and Anna Schweinlin - ESPEN Guideline Office
Existing guidelines

ESPEN guidelines on nutrition in acute pancreatitis

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ESPEN Guidelines on Enteral Nutrition: Pancreas

R. Meier,*, J. Ockenga, M. Pertkiewicz, A. Pap, N. Milinic, J. MacFie, DGEM: C. Löser, V. Keim

ESPEN Guidelines on Parenteral Nutrition: Pancreas

Development of the New ESPEN Guidelines on pancreatitis

- From December 2017 assembling the Group
- From January to June 2018 defining and allocation of the PICO questions
- The first meeting during ESPEN Congress Madrid 2018
- The first draft in November 2018
- Delphi round between February 14 to March 17 2019
- ESPEN guidelines consensus conference April 29 2019
- In May 2019: final draft
We hope guidelines will be published by the end of 2019
What is New?

• New methodology for ESPEN guidelines
• New classification of AP (Atlanta 2012)
• New treatment approach for AP
• More structured

• Multidisciplinary, multinational approach remains
• Dependent on systematic review and meta analysis when this is possible
Editorial

Standard operating procedures for ESPEN guidelines and consensus papers

Stephan C Bischof, Pierre Singer, Michael Koller, Rocco Barazzoni, Tommy Cederholm, André Van Gossum
What is New?

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Classification of acute pancreatitis—2012: revision of the Atlanta classification and definitions by international consensus

Peter A Banks, Thomas L Bollen, Christos Dervenis, Hein G Gooszen, Colin D Johnson, Michael G Sarr, Gregory G Tsiotos, Santhi Swaroop Vege, Acute Pancreatitis Classification Working Group

Box 3 Grades of severity

- Mild acute pancreatitis
  - No organ failure
  - No local or systemic complications
- Moderately severe acute pancreatitis
  - Organ failure that resolves within 48 h (transient organ failure) and/or
  - Local or systemic complications without persistent organ failure
- Severe acute pancreatitis
  - Persistent organ failure (>48 h)
    - Single organ failure
    - Multiple organ failure
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History of MIS for AP: Technology

Improving ICU Care

1985

- Percutaneous Drains for SAP
  *van Sonnenberg, 1985
  *Freeny, 1988

1990

- Laparoscopy
  *Cuschieri & Reddick, 1990
  *Gagner, 1996

2000

- Laparoscopic
  *Gagner, 1996
- Lumboscopy
  *Gambiez, 1998
- NOTES (transgastric)
  *Baron, 1996

Delayed Surgery = Lower Mortality
History of MIS for AP: Technology

Delayed Surgery = Lower Mortality

Improving ICU care

2000
Percutaneous Necrosectomy
* Carter, 2000
VARD
* Horvath, 2001

2010
SILS *Technology*
* Cuesta & others, 2007

“Step-up approach”
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ESPEN Guidelines on clinical nutrition in pancreatitis

- 31 PICO questions
- Two main chapters: Acute and Chronic Pancreatitis
- 42 recommendations
- 6 statements
- SIGN grading system was used for grading literature
### ESPEN Guidelines on clinical nutrition in pancreatitis

#### • SIGN 50 grading system

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1++</td>
<td>High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias</td>
</tr>
<tr>
<td>1+</td>
<td>Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias</td>
</tr>
<tr>
<td>1-</td>
<td>Meta-analyses, systematic reviews, or RCTs with a high risk of bias</td>
</tr>
<tr>
<td>2++</td>
<td>High quality systematic reviews of case control or cohort or studies. High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal</td>
</tr>
<tr>
<td>2+</td>
<td>Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal</td>
</tr>
<tr>
<td>2-</td>
<td>Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal</td>
</tr>
<tr>
<td>3</td>
<td>Non-analytic studies, e.g. case reports, case series</td>
</tr>
<tr>
<td>4</td>
<td>Expert opinion</td>
</tr>
</tbody>
</table>
# ESPEN Guidelines on clinical nutrition in pancreatitis

## Grades of recommendation

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>At least one meta-analysis, systematic review, or RCT rated as 1++, and directly applicable to the target population; or A body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results</td>
</tr>
<tr>
<td>B</td>
<td>A body of evidence including studies rated as 2++, directly applicable to the target population; or A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 1++ or 1+</td>
</tr>
<tr>
<td>0</td>
<td>Evidence level 3 or 4; or Extrapolated evidence from studies rated as 2++ or 2+</td>
</tr>
<tr>
<td>GPP</td>
<td>Good practice points/expert consensus: Recommended best practice based on the clinical experience of the guideline development group</td>
</tr>
</tbody>
</table>
ESPEN Guidelines on clinical nutrition in pancreatitis

• 36 recommendations reached an agreement ≥ 90%
• All 6 statements reached an agreement ≥ 90%
• 6 recommendations reached an agreement of 75-90%
• 0 recommendations had an agreement ≤ 75 %
CHAPTER 1

Acute Pancreatitis
Acute Pancreatitis

Recommendation 1

All patients with predicted mild to moderate AP should be screened using validated screening methods such as the Nutritional Risk Screening – 2002 (NRS-2002); however, the patients with predicted severe AP should be always considered at nutritional risk.

Grade of Recommendation B – Strong consensus (100% agreement)
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

Is early oral feeding feasible in patients with predicted mild AP?
**ESPEN Guidelines on clinical nutrition in pancreatitis**

**Acute Pancreatitis**

*Is early oral feeding feasible in patients with predicted mild AP?*

**Recommendation 2**

Oral feeding shall be offered as soon as clinically tolerated and *independently from serum lipase concentrations* in patients with predicted mild AP.

**Grade of Recommendation A – Strong consensus (100% agreement)**
Recommendation 4

In patients with AP and inability to feed orally, enteral nutrition (EN) shall be preferred to parenteral nutrition (PN).

Grade of Recommendation A – Strong consensus (97.4% agreement)

12 RTCs & 11 MAs
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

What is the optimal timing for initiating enteral nutrition in patients with AP?
What is the optimal timing for initiating enteral nutrition in patients with AP?

Recommendation 5

EN should start early, within 24-72 hours from admission, in case of intolerance of oral feeding.

Grade of Recommendation B – Strong consensus (92.1% agreement)
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

*How should medical nutrition be provided in case of necrosectomy (endoscopically or by minimally invasive surgery) in patients with severe AP?*
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

How should medical nutrition be provided in case of necrosectomy (endoscopically or by minimally invasive surgery) in patients with severe AP?

Recommendation 9

Oral food intake in patients undergoing minimally invasive necrosectomy is safe and feasible and should be initiated in the first 24 hours after the procedure, if the clinical state (hemodynamic stability, septic parameters, gastric emptying) of the patient allows it.

Grade of Recommendation GPP – Strong consensus (94.7% agreement)
Acute Pancreatitis

How should medical nutrition be provided in case of necrosectomy (endoscopically or by minimally invasive surgery) in patients with severe AP?

Recommendation 10

In patients undergoing minimally invasive necrosectomy who are unable to be fed orally, EN is indicated via nasojejunal as preferred route.

Grade of Recommendation B – Strong consensus (91.2% agreement)
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

Nutrition in AP patients with high intra-abdominal pressure (IAP & IAH), abdominal compartment syndrome (ACS) and open abdomen
Recommendation 12

In patients with severe AP and intraabdominal pressure (IAP) <15 mmHg early EN shall be initiated via nasojejunal, as preferred route, or nasogastric tube. IAP and clinical condition of patients during EN shall be monitored continuously.

Grade of Recommendation A – Strong consensus (91.2% agreement)
**ESPEN Guidelines on clinical nutrition in pancreatitis**

**Acute Pancreatitis**

**Recommendation 13**

In patients with severe AP and IAP > 15 mmHg EN should be initiated via nasojejunal route starting at 20 mL/hour with increasing the rate according to the tolerance. Temporary reduction or discontinuation of EN should be considered when intra-abdominal pressure values further increase under EN.

**Grade of Recommendation B – Strong consensus (93.9% agreement)**
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

*Nutrition in AP patients with high intra-abdominal pressure (IAP & IAH), abdominal compartment syndrome (ACS) and open abdomen*
### Recommendation 15

In patients with severe AP and open abdomen EN should be performed, at least in a small amount. If required for achievement of nutritional requirements, supplementary or total PN should be added.

**Grade of Recommendation B – Strong consensus (97.1% agreement)**

6 cohort studies
ESPEN Guidelines on clinical nutrition in pancreatitis

Acute Pancreatitis

Immunonutrition in severe AP?
Acute Pancreatitis

Immunonutrition in severe AP?

Recommendation 16

When EN is not feasible or contraindicated and PN is indicated, parenteral glutamine should be supplemented at 0.20 g/kg per day of L-glutamine. Otherwise, there is no role for immunonutrition in severe AP.

Grade of Recommendation B – Strong consensus (93.6% agreement)
CHAPTER 2

Chronic Pancreatitis
### ESPEN Guidelines on Enteral Nutrition: Pancreas

**R. Meier**, **J. Ockenga**, **M. Pertkiewicz**, **A. Pap**, **N. Milinic**, **J. MacFie**, **DGEM:** **C. Löser, V. Keim**

#### Summary of statements: Chronic pancreatitis

<table>
<thead>
<tr>
<th>Subject</th>
<th>Recommendations</th>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Adequate nutritional therapy as well as pain treatment may have a positive impact on nutritional status. Caloric intake is increased after an attenuation of postprandial pain.</td>
<td>C</td>
<td>2.4</td>
</tr>
<tr>
<td>Indications</td>
<td>More than 80% of patients can be treated adequately with normal food supplemented by pancreatic enzymes.</td>
<td>B</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>10–15% of all patients require oral nutritional supplements. Tube feeding is indicated in approximately 5% of patients with chronic pancreatitis.</td>
<td>C</td>
<td>2.4</td>
</tr>
<tr>
<td>Specific contraindications</td>
<td>Stenosis of duodenum</td>
<td>C</td>
<td>2.5</td>
</tr>
</tbody>
</table>
Malnutrition is frequent in patients with CP due to pain-induced anorexia and to continuing alcohol abuse. Increased resting energy expenditure is also seen. PN may, on rare occasions, be indicated in patients with gastric outlet obstruction secondary to duodenal stenosis and in those with complex fistulating disease.
Recommendation 22

Malnourished CP patients should be advised to consume high protein, high-energy food in 5-6 small meals per day.

Grade of Recommendation GPP – Strong consensus (94.1% agreement)
Recommendation 23

In Patients with CP, diets very high in fiber should be avoided.

Grade of Recommendation B – Strong consensus (90.6% agreement)
RECOMMENDATION 27 AND 32

EN should be administered in patients with malnutrition who are not responding to oral nutritional support &
PN may be indicated in patients with gastric outlet obstruction and in those with complex fistulating disease, or in case of intolerance of enteral nutrition.

Grade of Recommendation GPP – Strong consensus (100% agreement)
When PEI is diagnosed through clinical signs and symptoms and/or laboratory tests of malabsorption, PERT shall be initiated. An accurate nutritional assessment is mandatory to detect signs of malabsorption.

Grade of Recommendation A – Strong consensus (100% agreement)
Recommendation 35

PH-sensitive, enteric-coated microspheres pancreatic enzyme replacement preparations shall be used for treating PEI.

Grade of Recommendation A – Strong consensus (100% agreement)
### Recommendation 38

The efficacy of PERT should be evaluated by the relief of GI symptoms and the improvement of nutritional parameters (anthropometric and biochemical). In non-responder patients, the evaluation should be extended to pancreatic function tests (fecal fat excretion or 13C-MTG-breath test).

**Grade of Recommendation B – Strong consensus (97.1% agreement)**
Recommen1on 40

Long-term PERT and nutritional status are similarly affected by all surgical procedures. Tissue-preserved procedures shall be preferred.

Grade of Recommendation A – Strong consensus (100% agreement)
ESPEN Guidelines on clinical nutrition in pancreatitis

Headlines from SR, RCT and MA

Grade A recommendations

• 5 for Acute pancreatitis
• 5 for Chronic pancreatitis
ESPEN Guidelines on clinical nutrition in pancreatitis

Headlines from studies

Grade A recommendations
• 5 for Acute pancreatitis
• 5 for Chronic pancreatitis

Grade B recommendations
• 8 for Acute pancreatitis
• 4 for Chronic pancreatitis
ESPEN Guidelines on clinical nutrition in pancreatitis

Headlines from studies

Grade A recommendations
• 5 for Acute pancreatitis
• 5 for Chronic pancreatitis

Grade B recommendations
• 8 for Acute pancreatitis
• 4 for Chronic pancreatitis

Grade 0 recommendations
• 1 for Acute pancreatitis
• 1 for Chronic pancreatitis
ESPEN Guidelines on clinical nutrition in pancreatitis

Headlines from studies

Grade A recommendations
• 5 for Acute pancreatitis
• 5 for Chronic pancreatitis

Grade B recommendations
• 8 for Acute pancreatitis
• 4 for Chronic pancreatitis

Grade 0 recommendations
• 1 for Acute pancreatitis
• 1 for Chronic pancreatitis

GPP recommendations
• 4 for Acute pancreatitis
• 14 for Chronic pancreatitis
ESPEN Guidelines on clinical nutrition in pancreatitis

Recommendations

- 10 recommendations with grade A
- 12 recommendations with grade B
- 2 recommendations with grade 0
- 18 recommendations with grade GPP
• ESPEN guidelines on nutritional support in pancreatic diseases (acute and chronic pancreatitis)

We need

• Larger and more power studies
• New and better research
Thank you

• All the co authors

• ESPEN Guidelines office

Thank you for your attention