

## Hungary: Pancreatitis Working Groups and Resources

Péter Hegyi

Andrea Párniczky

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TRANSLATIONAL  
MEDICINE



TM

2011-2019

HUNGARIAN  
PANCREATIC  
STUDY GROUP

PITTSBURGH

2019

# TRANSLATIONAL MEDICINE

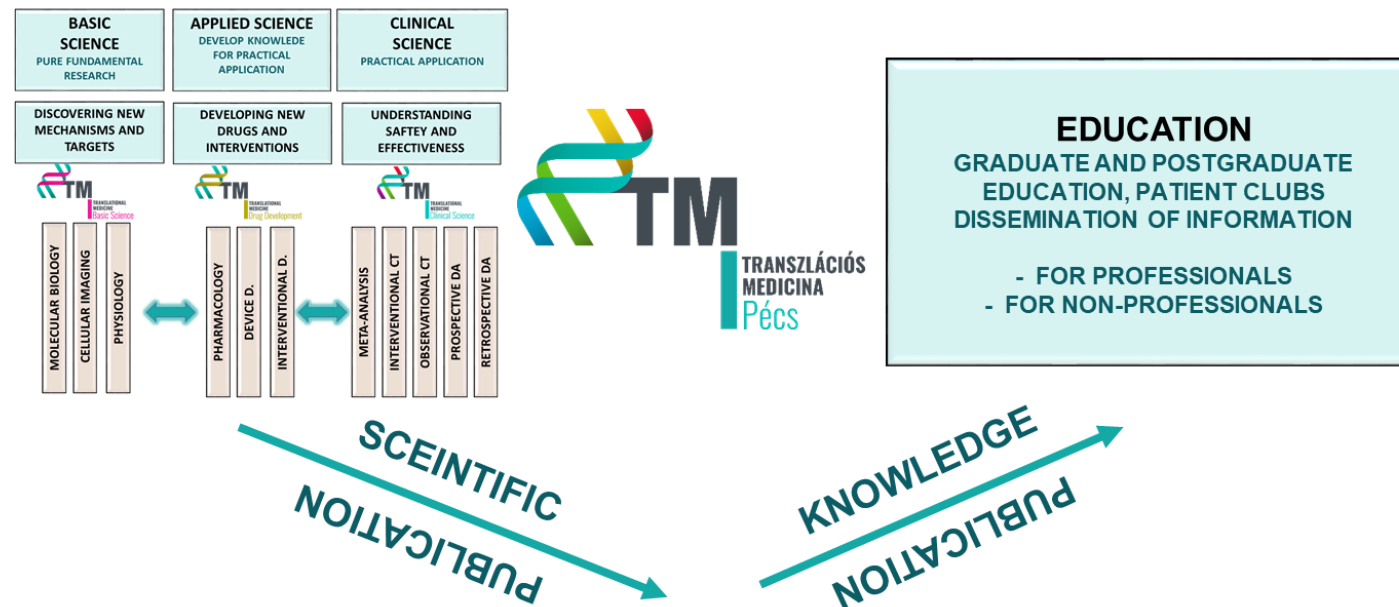
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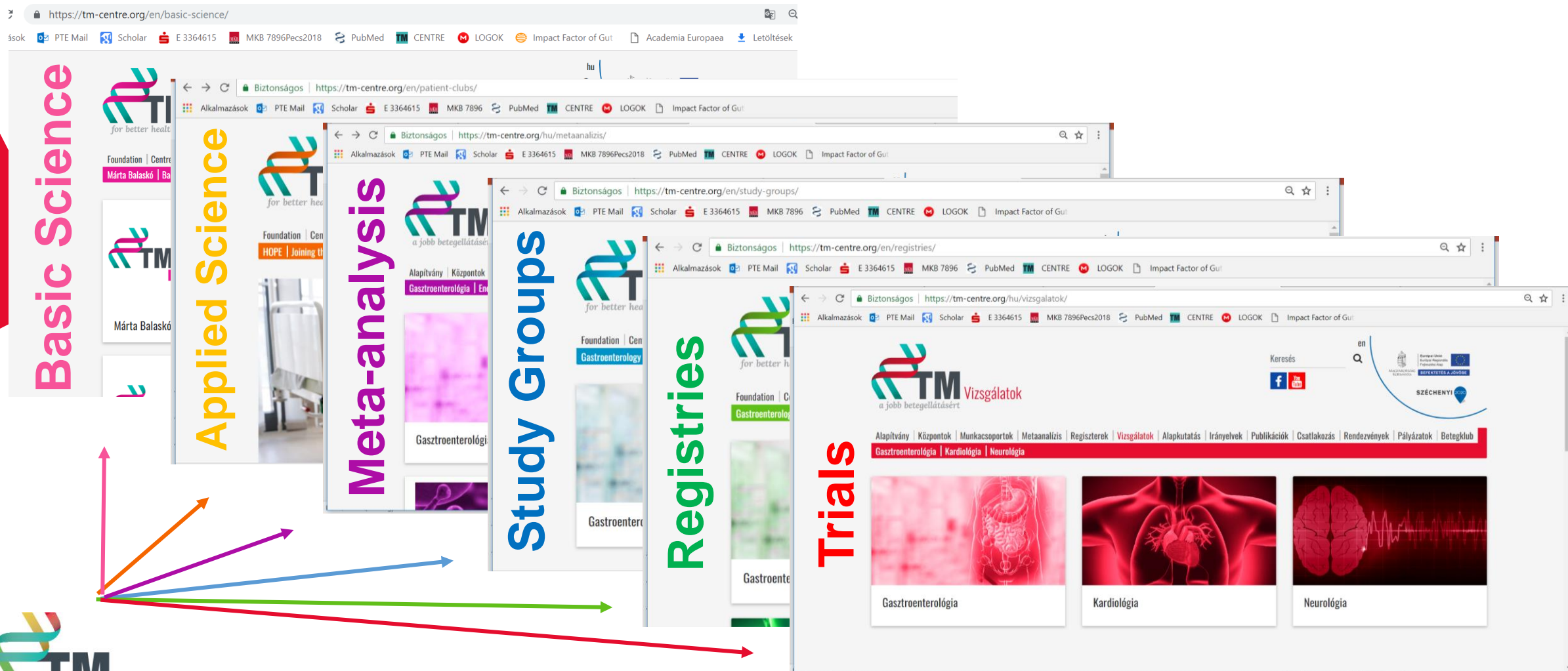


## HEALTH CARE

## SCIENCE

## EDUCATION





The collage displays several screenshots of the TM Centre website, each labeled with a category and an arrow pointing towards the 'Trials' page:

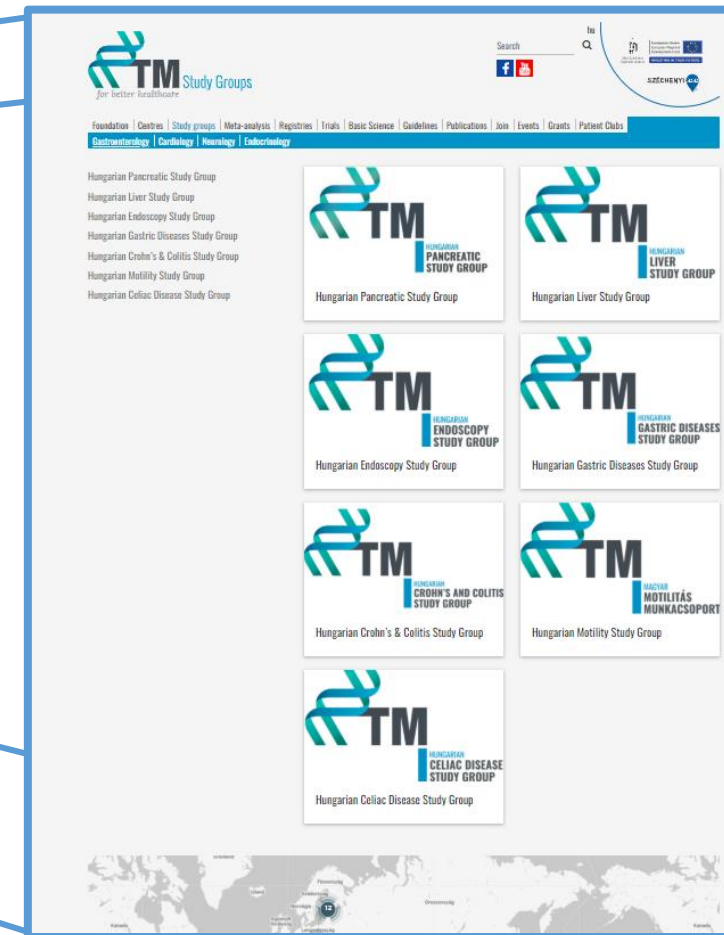
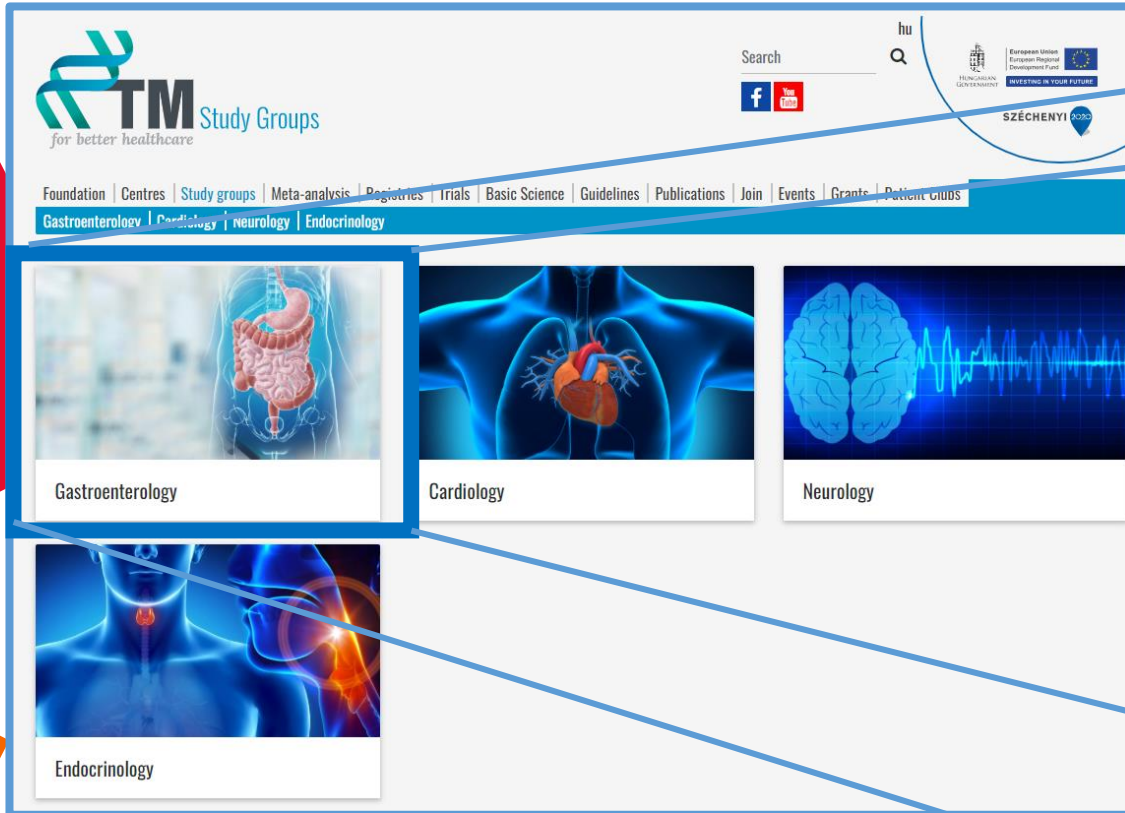
- Basic Science** (pink text, points to <https://tm-centre.org/en/basic-science/>)
- Applied Science** (yellow text, points to <https://tm-centre.org/en/patient-clubs/>)
- Meta-analysis** (purple text, points to <https://tm-centre.org/hu/metaanalizis/>)
- Study Groups** (blue text, points to <https://tm-centre.org/en/study-groups/>)
- Registries** (green text, points to <https://tm-centre.org/en/registries/>)
- Trials** (red text, points to <https://tm-centre.org/hu/vizsgalatok/>)

The 'Trials' page screenshot shows the following structure:

- Header: **TM Vizsgálatok** (a jobb betegellátásért)
- Navigation: Alapítvány | Központok | Munkacsoportok | Metaanalizis | Regiszterek | **Vizsgálatok** | Alap kutatás | Irányelvek | Publikációk | Csatlakozás | Rendezvények | Pályázatok | Betegklub
- Sub-navigation: Gasztroenterológia | Kardiológia | Neurológia
- Content Area: Three featured trial images with labels:
  - Gasztroenterológia (Gastroenterology)
  - Kardiológia (Cardiology)
  - Neurológia (Neurology)

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for better healthcare

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Introductory course Pécs




Introductory course Szeged




Gastroenterology




Energy balance




Psychiatry



Immunology



Anesthetics and intensive therapy



Gynecology

	2016 Jan	2016 Sep	2017 Feb	2017 Sep és 2018 Jan	
	ROUND I.	ROUND II.	ROUND III.	ROUND V	SUMMARY
PUBLISHED	13	14	3	4	34
ACCEPTED	0	1	1	0	2
SUBMITTED	2	3	2	8	15
IN PREPARATION	0	8	6	28	42
	15	26	12	40	93

Q1	31
Q2	4
Q3	0
Q4	0
Data updated	2018.12.25



TRANSLATIONAL  
MEDICINE  
Meta Analysis

7th META-ANALYSIS ROUND

organized by



University of Pécs  
Centre for  
TRANSLATIONAL  
MEDICINE

7-1 INTRODUCTORY COURSE  
27-28 February, 2019, Pécs

7-2 INTRODUCTION OF NEW PROJECTS

7-3 DECISION  
Meta-analysis or systematic review?

7-4 DISCUSSION  
Interpretation, conclusions, publication strategy

PARTICIPATION IS FREE OF CHARGE!


[tm-centre.org](#)


[metatm-centre.org](#)

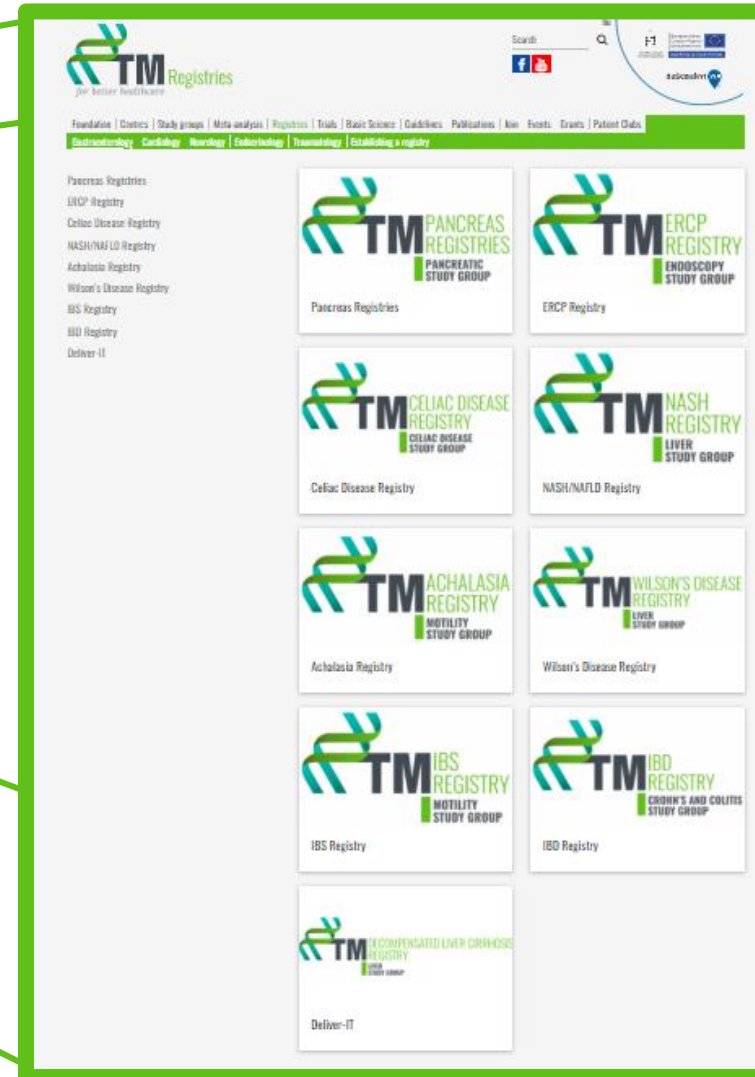
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The screenshot shows the TM Registries website with a green header and navigation bar. The main content area features a grid of medical illustrations and category labels with counts:

- Gastroenterology: 9
- Cardiology: 2
- Neurology: 1
- Endocrinology: 2
- Traumatology: 1
- Establishing a registry

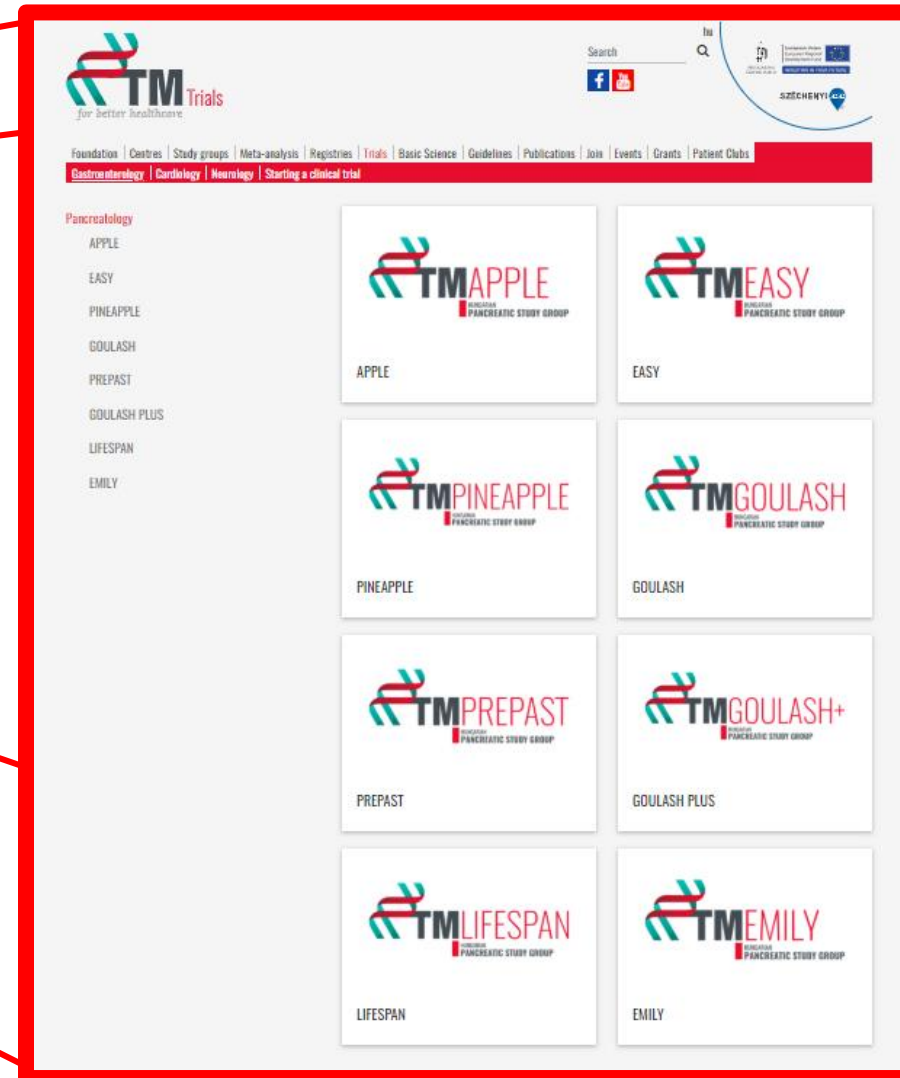
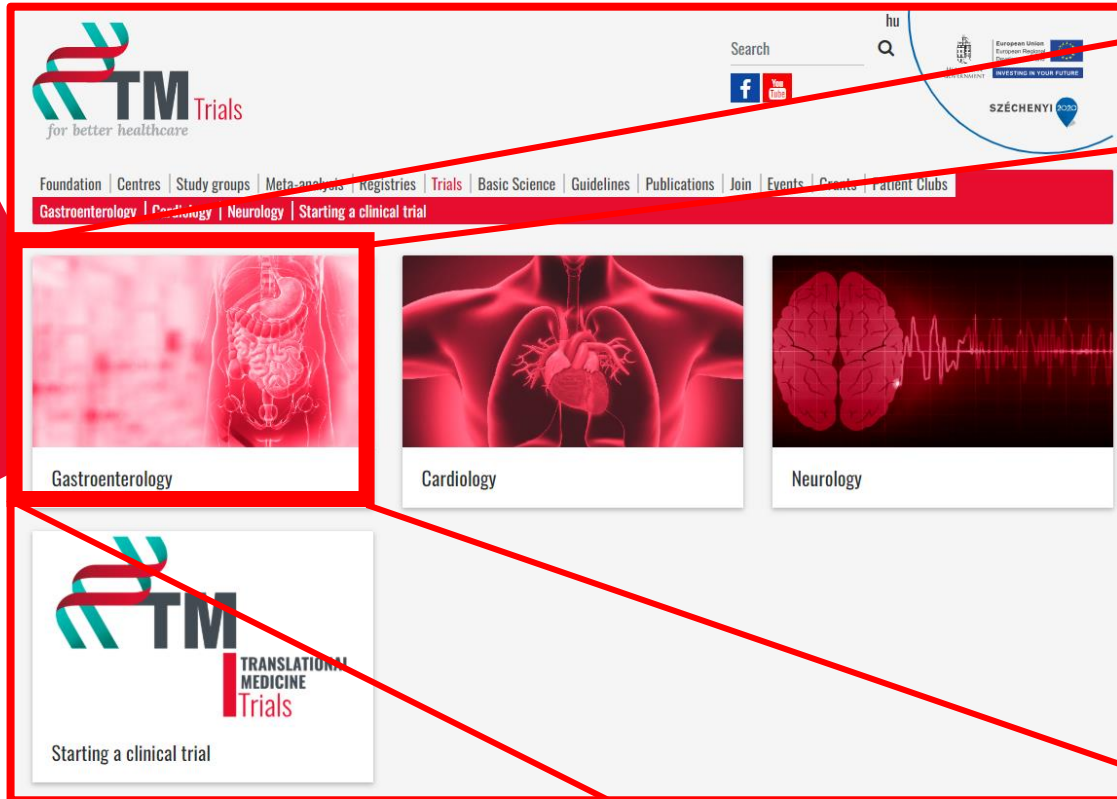


This screenshot provides a detailed view of the registries listed on the TM Registries website. The registries are organized into a grid:

- Pancreas Registries:**
  - TM PANCREAS REGISTRIES PANCREATIC STUDY GROUP
  - TM ERCP REGISTRY ENDOSCOPY STUDY GROUP
- Celiac Disease Registry:**
  - TM CELIAC DISEASE REGISTRY CELIAC DISEASE STUDY GROUP
- NASH/NAFLD Registry:**
  - TM NASH REGISTRY LIVER STUDY GROUP
- Achalasia Registry:**
  - TM ACHALASIA REGISTRY MOTILITY STUDY GROUP
- Wilson's Disease Registry:**
  - TM WILSON'S DISEASE REGISTRY LIVER STUDY GROUP
- IBS Registry:**
  - TM IBS REGISTRY MOTILITY STUDY GROUP
- IBD Registry:**
  - TM IBD REGISTRY CROHN'S AND COLITIS STUDY GROUP
- Deliver-IT**

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## CENTRAL INTERDISCIPLINARY UNIT



Péter Hegyi



Andrea Szentési

### INTERDISCIPLINARY RESEARCH SUPPORT GROUP



Bálint Erőss



Katalin Márta



Judit Antal



Noémi Zádori



Zsolt Szakács



Vivien Vass



Dalma Erdősi

### MEDICAL GROUP COORDINATORS

MEDICAL  
GROUP

CLINICAL TRIAL COORDINATORS

META-ANALYSIS  
COORDINATOR

REGISTRY  
COORDINATOR

REGISTRY  
COORDINATOR

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Emőke Miklós

DATA MANAGEMENT  
GROUP



Krisztina Heid

ETHICAL  
COORDINATOR



Richárd Farkas

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GROUP



Nóra Farkas

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Antal Zemplényi

HEALTH ECONOMICS  
GROUP

2019

## ADULT (AP – CP) PANCREATITIS

**Péter Hegyi**



## PEDIATRIC PANCREATITIS

**Andrea Párniczky**

## GENETICS

**Balázs Németh**

**WORKING GROUPS**





## ADULT (AP – CP) PANCREATITIS

**Péter Hegyi**

## WORKING GROUPS



TRANSLATIONAL  
MEDICINE  
Meta-Analysis

10

frontiers  
in Physiology

SYSTEMATIC REVIEW  
published: 02 April 2019  
doi: 10.3389/fphys.2019.00328

frontiers  
in Physiology

ORIGINAL RESEARCH  
published: 01 October 2018  
doi: 10.3389/fphys.2018.01360

[www.nature.com/scientificreports](http://www.nature.com/scientificreports)

## ORIGINAL ARTICLE

OPEN

### Pancreatitis-Associated Genes and Pancreatic Cancer Risk *A Systematic Review and Meta-analysis*

Irina Mihaela Cazacu, MD,\*† Nelli Farkas, PhD,‡ András Garami, MD, PhD,\* Márta Balaskó, MD, PhD,\*  
Bernadett Mosdósi, MD, PhD,§ Hussain Alizadeh, MD, PhD,|| Zoltán Gyöngyi, MD, PhD,¶  
Zoltán Rakonczay, Jr, MD, PhD,# Éva Vigh, MD,\*\* Tamás Habon, MD, PhD,†† László Czopf, MD, PhD,††  
Marilena Alina Lazarescu, MD,\* Bálint Erőss, MD, PhD,\*  
Miklós Sahin-Tóth, MD, PhD,‡‡ and Péter Hegyi, MD, PhD, DSc(Med)§§|||

Recei  
Accep  
Publi

Toh

Sana Klinik

**Objective:** The aim of this study was to evaluate the connection between pancreatic cancer (PC) and genetic variants associated with chronic pancreatitis via systematic review and meta-analysis.

**Methods:** The data search was performed in 3 major databases (PubMed, Embase, and Cochrane Library). The selected studies have looked into the presence of the pancreatitis-associated genes in patients with PC and in control subjects, the outcome being the frequency of the mutations in the 2 groups. For the binary outcomes, pooled odds ratio (OR) and 95% con-

**Key Words:** chronic pancreatitis, *CFTR*, pancreatic cancer, *SPINK1*  
(*Pancreas* 2018;47: 1078–1086)

Pancreatic cancer (PC) is one of the most lethal and therapeutically resistant malignancies, with a grim prognosis that is related to the late clinical presentation and the rapid progression of the disease. Despite extensive research, the etiology and pathomechanism remain



TRANSLATIONAL  
MEDICINE  
Trials

9

Discussion

Open Access

Protocol

BMJ Open High versus low energy administration

Open access

Protocol

BMJ Open Endoscopic sphincterotomy for  
delaying cholecystectomy in mild acute  
biliary pancreatitis (EMILY study):  
protocol of a multicentre randomised  
clinical trial

Levente Pál Kucserik,<sup>1</sup> Katalin Márta,<sup>2,3</sup> Áron Vincze,<sup>2,4</sup> György Lázár,<sup>5</sup>  
László Czákó,<sup>6</sup> Zsolt Szentkereszty,<sup>7</sup> Mária Papp,<sup>8</sup> Károly Palatka,<sup>8</sup> Ferenc Izbéki,<sup>9</sup>  
Áron Altorjay,<sup>10</sup> Imola Török,<sup>11</sup> Sorin Barbu,<sup>12</sup> Marcel Tantau,<sup>12</sup> András Vereczkei,<sup>13</sup>  
Lajos Bogár,<sup>14</sup> Márton Dénes,<sup>15</sup> Imola Németh,<sup>16</sup> Andrea Szentesi,<sup>17,18</sup>  
Noémi Zádori,<sup>2</sup> Judit Antal,<sup>2</sup> Markus M Lerch,<sup>19</sup> John Neoptolemos,<sup>20</sup>  
Miklós Sahin-Tóth,<sup>21</sup> Ole H Petersen,<sup>22</sup> Dezső Kelemen,<sup>23</sup> Péter Hegyi<sup>2,24</sup>

**To cite:** Márta K, Szabó AN,  
Pécsi D, *et al.* High versus low  
energy administration in the  
early phase of acute pancreatitis  
(GOULASH trial): protocol of a  
multicentre randomised double-  
blind clinical trial. *BMJ Open*  
2017;7:e015874. doi:10.1136/  
bmjopen-2017-015874

**To cite:** Kucserik LP, Márta K,  
Vincze Á, *et al.* Endoscopic  
sphincterotomy for delaying  
cholecystectomy in mild  
acute biliary pancreatitis  
(EMILY study): protocol of  
a multicentre randomised  
clinical trial. *BMJ Open*  
2019;9:e025551. doi:10.1136/  
bmjopen-2018-025551

## ABSTRACT

**Introduction** According to the literature, early  
cholecystectomy is necessary to avoid complications  
related to gallstones after an initial episode of acute biliary  
pancreatitis (ABP). A randomised, controlled multicentre  
trial (the PONCHO trial) revealed that in the case of  
gallstone-induced pancreatitis, early cholecystectomy  
was safe in patients with mild gallstone pancreatitis  
and reduced the risk of recurrent gallstone-related

## Strengths and limitations of this study

- The study is designed as a prospective, ran-  
domised-controlled trial to achieve conclusion on the  
highest evidence level to provide the first evidence  
concerning the possible benefits of sphincterotomy  
(ES) on timing cholecystectomy, it is (i) multinational,  
(ii) multicentric, (iii) internationally registered and (iv)  
the prestudy protocol is published.

# TRANSLATIONAL MEDICINE

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12

G Model  
YDL-4042; No. of Pages 6

ARTICLE IN PRESS

Digestive and Liver Disease xxx (2019) xxx-xxx



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Balá  
Barr  
Báliu

<sup>a</sup> Szent  
<sup>b</sup> Instit  
<sup>c</sup> Instit  
<sup>d</sup> Bajcs  
<sup>e</sup> First I  
<sup>f</sup> First I  
<sup>g</sup> Heim  
<sup>h</sup> BMK  
<sup>i</sup> BMK  
<sup>j</sup> Bács-I  
<sup>k</sup> Dr. Bt  
<sup>l</sup> Marku  
<sup>m</sup> First  
<sup>n</sup> MTA-



C

## OPEN ACCESS

**Citation:** Párniczky A, Kui B, Szentesi A, B; Szűcs Á, Mosztbacher D, et al. (2016) Pro: Multicentre, Nationwide Clinical Data from Cases of Acute Pancreatitis. PLoS ONE 11:e0165309. doi:10.1371/journal.pone.0165

ORIGINAL RESEARCH

Pancreatolgy xxx (xxxx) xxx-xxx

Contents lists available at ScienceDirect

Pancreatolgy

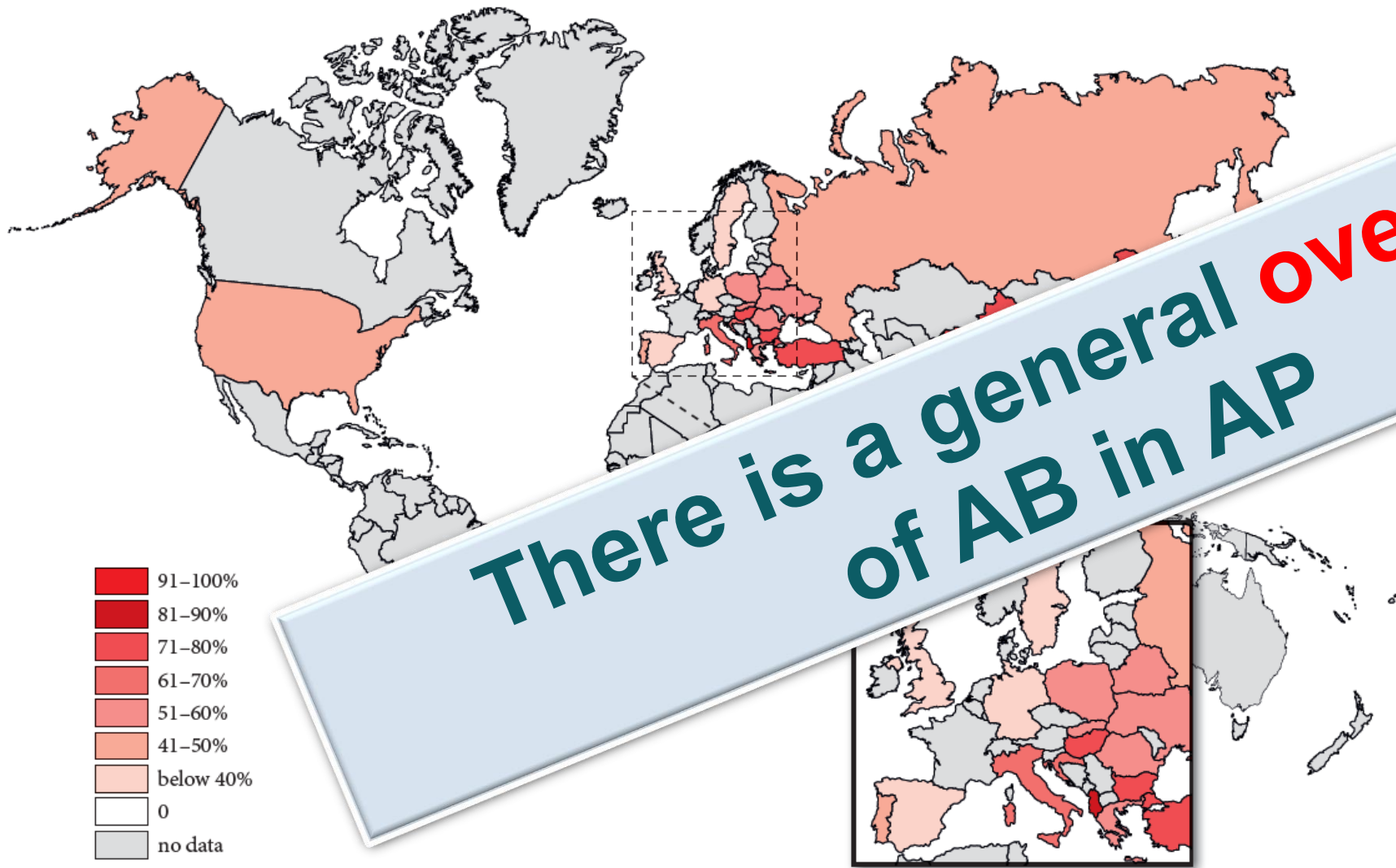
journal homepage: www.elsevier.com



## Antibiotic therapy in acute pancreatitis: From global overuse to evidence based recommendations

Andrea Párniczky <sup>a, b, 1</sup>, Tamás Lantos <sup>c, 1</sup>, Eszter Margit Tóth <sup>d, e, 1</sup>, Zsolt Szakács <sup>a</sup>, Szilárd Gódi <sup>f</sup>, Roland Hágendorn <sup>g</sup>, Dóra Illés <sup>e</sup>, Balázs Koncz <sup>e</sup>, Katalin Márta <sup>a</sup>, Alexandra Mikó <sup>h</sup>, Dóra Mosztbacher <sup>a, i</sup>, Balázs Csaba Németh <sup>e</sup>, Dániel Pécsi <sup>a</sup>, Anikó Szabó <sup>a</sup>, Ákos Szűcs <sup>j</sup>, Péter Varjú <sup>a</sup>, Andrea Szentesi <sup>a, e</sup>, Erika Darvasi <sup>e</sup>, Bálint Erőss <sup>a</sup>, Ferenc Izbéki <sup>k</sup>, László Gajdán <sup>k</sup>, Adrienn Halász <sup>k</sup>, Áron Vincze <sup>f</sup>, Imre Szabó <sup>f</sup>, Gabriella Pár <sup>f</sup>, Judit Bajor <sup>f</sup>, Patrícia Sarlós <sup>f</sup>, József Czimmer <sup>f</sup>, József Hamvas <sup>l</sup>, Tamás Takács <sup>e</sup>, Zoltán Szepes <sup>e</sup>, László Czákó <sup>e</sup>, Márta Varga <sup>m</sup>, János Novák <sup>d</sup>, Barnabás Bod <sup>n</sup>, Attila Szepes <sup>o</sup>, János Sümegi <sup>p</sup>, Mária Papp <sup>q</sup>, Csaba Góg <sup>r</sup>, Imola Török <sup>s</sup>, Wei Huang <sup>t</sup>, Qing Xia <sup>u</sup>, Ping Xue <sup>u</sup>, Weiqin Li <sup>v</sup>, Weiwei Chen <sup>w</sup>, Natalia V. Shirinskaya <sup>x</sup>, Vladimir L. Poluektov <sup>y</sup>, Anna V. Shirinskaya <sup>y</sup>, Péter J. Hegyi <sup>a, z</sup>, Marian Bátovský <sup>z</sup>, Juan Armando Rodriguez-Oballe <sup>aa</sup>, Isabel Miguel Salas <sup>aa</sup>, Javier Lopez-Diaz <sup>ab</sup>, J. Enrique Dominguez-Munoz <sup>ab</sup>, Xavier Molero <sup>ac</sup>, Elizabeth Pando <sup>ad</sup>, Maria Lourdes Ruiz-Rebollo <sup>ac</sup>, Beatriz Burgueño-Gómez <sup>ac</sup>, Yu-Ting Chang <sup>af</sup>, Ming-Chu Chang <sup>af</sup>, Ajay Sud <sup>ag</sup>, Danielle Moore <sup>ag</sup>, Robert Sutton <sup>ag</sup>, Amir Gougol <sup>ah</sup>, Georgios I. Papachristou <sup>ah</sup>, Yaroslav Mykhailovych Susak <sup>ai</sup>, Illia Olehovych Tiuliukin <sup>ai</sup>, António Pedro Gomes <sup>aj</sup>, Maria Jesus Oliveira <sup>aj</sup>, David João Aparicio <sup>aj</sup>, Marcel Tantau <sup>ak</sup>, Floreta Kurti <sup>al</sup>, Mila Kovacheva-Slavova <sup>am</sup>, Stephanie-Susanne Stecher <sup>an</sup>, Julia Mayerle <sup>an</sup>, Goran Poropat <sup>ao</sup>, Kshaunish Das <sup>ap</sup>, Marco Vito Marino <sup>aq</sup>, Gabriele Capurso <sup>ar</sup>, Ewa Malecka-Panas <sup>as</sup>, Hubert Zatorski <sup>as</sup>, Anita Gasiorowska <sup>at</sup>, Natalia Fabisiak <sup>at</sup>, Piotr Ceranowicz <sup>au</sup>, Beata Kuśnierz-Cabala <sup>au</sup>, Joana Rita Carvalho <sup>av</sup>, Samuel Raimundo Fernandes <sup>av</sup>, Jae Hyuck Chang <sup>aw</sup>, Eun Kwang Choi <sup>ax</sup>, Jimin Han <sup>ay</sup>, Sara Bertilsson <sup>az, ba</sup>, Hanaz Jumaa <sup>bb</sup>, Gabriel Sandblom <sup>bc</sup>, Sabite Kacar <sup>bd</sup>, Minas Baltatzis <sup>be</sup>, Aliaksandr Vladimir Varabei <sup>bf</sup>, Vityazh Yeshv <sup>bg</sup>, Serge Chooklin <sup>bh</sup>, Andriy Kozachenko <sup>bi</sup>





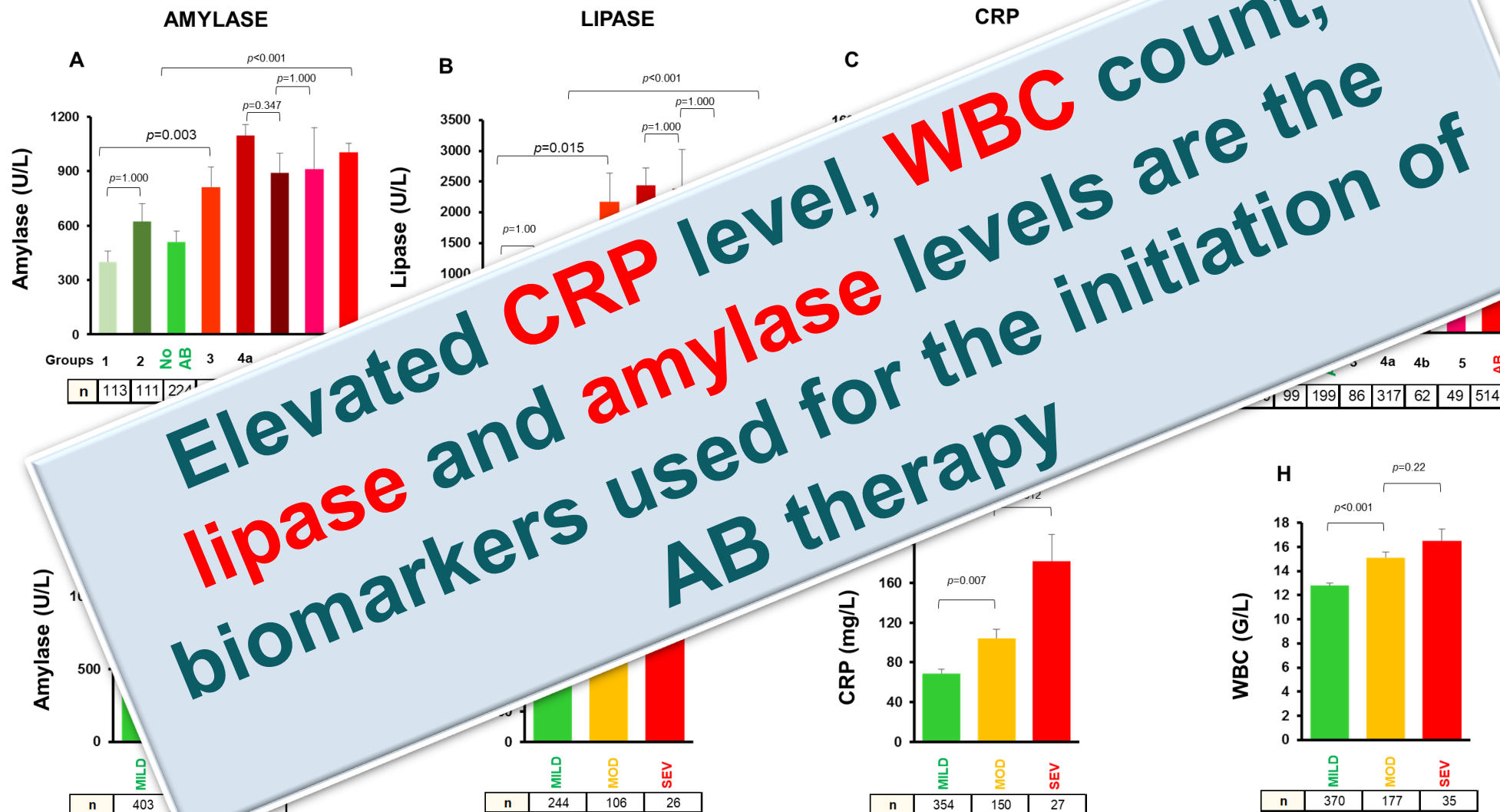
23 countries  
62 patients

57%

Spain: 31.8%  
Sweden: 32.6%  
Germany: 34.9%

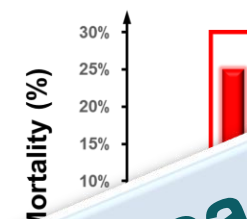
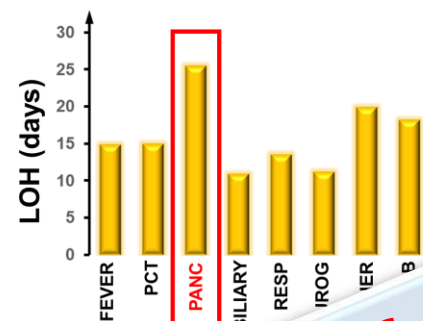
Albania: 81.7%  
South Korea: 89.3%  
Taiwan: 80.6%





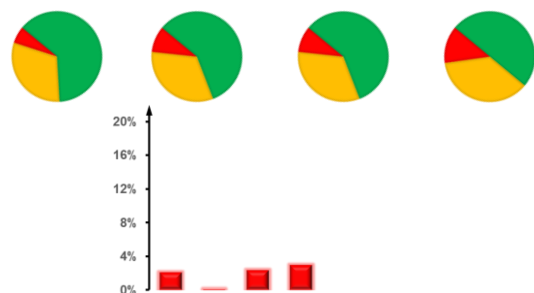
	LAB	START OF AB THERAPY			
		Day1	Day2	Day3	Day4
3	8,1 ± 0,4	72,5%	10,0%	8,3%	9,2%
4a	7,9 ± 0,2	74,0%	11,7%	5,5%	8,8%
4b	13,1 ± 1,3	76,5%	6,9%	6,9%	
5	16,2 ± 1,5	72,4%	10,5%		
AB	9,6 ± 0,3	74,0%			

**90% of AB therapy started in the first 3 days of AP**



**Pancreatic infection causes the worst outcome in AP.**

Severity  
mortality



RESPIRATORY

UROGENITALY

OTHER

COMBINED

	%
1	12,7%
2	12,7%
noAB	25,4%
3	12,5%
4a	43,7%
4b	10,6%
5	7,9%
AB	74,6%

N = 962 patients

PREVENTIVE  
EMPIRIC  
NEG BACT  
POS BACT

## CRP

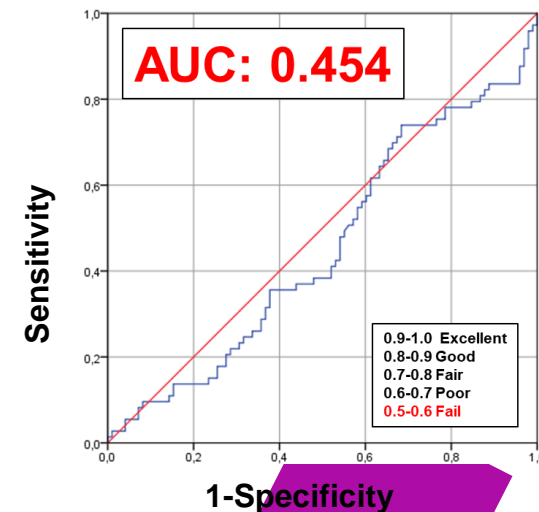
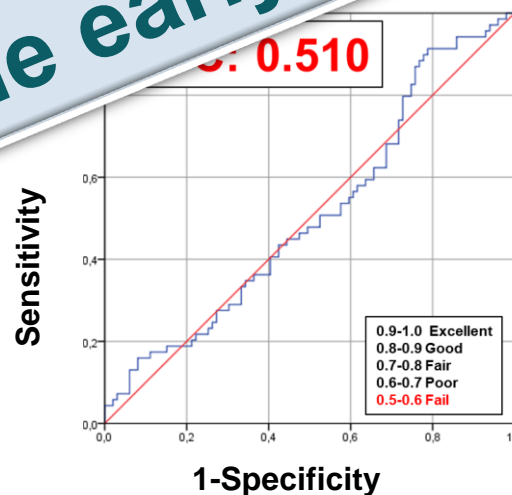


NEG BACT

NEG BACT

POZ BACT

**Elevation of CRP, WBC, lipase or amylase levels are NOT associated with infection in the early phase of AP**



PCT (ng/mL)

90  
80  
70  
60  
50  
40  
30  
20  
10  
0

A

Pancreatology 19 (2019) 488–499

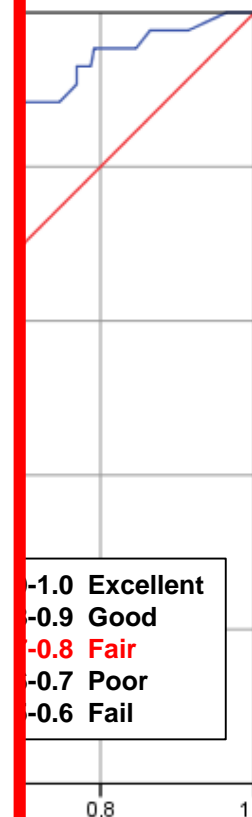
Contents lists available at ScienceDirect

**Pancreatology**

journal homepage: [www.elsevier.com/locate/pan](http://www.elsevier.com/locate/pan)

**Antibiotic therapy in acute pancreatitis: From global overuse to evidence based recommendations**

Andrea Párniczky<sup>a,b,1</sup>, Tamás Lantos<sup>c,1</sup>, Eszter Margócsy<sup>d,e,1</sup>, Zsolt Szakács<sup>a</sup>, Szilárd Gódi<sup>f</sup>, Roland Hágendorn<sup>g</sup>, Dóra Illés<sup>e</sup>, Bálint Koncz<sup>e</sup>, Katalin Márta<sup>a</sup>, Alexandra Mikó<sup>a,h</sup>, Dóra Mosztbacher<sup>a,i</sup>, László Csaba Németh<sup>e,bk</sup>, Dániel Pécsi<sup>a</sup>, Anikó Szabó<sup>a</sup>, Ákos Szücs<sup>j</sup>, Péter Várju<sup>k</sup>, Andrea Szentesi<sup>a,e</sup>, Erika Darvasi<sup>e</sup>, Bálint Erőss<sup>a</sup>, Ferenc Izbéki<sup>k</sup>, László Gajdán<sup>k</sup>, Adrienn Halász<sup>k</sup>, Áron Vincze<sup>f</sup>, Imre Szabó<sup>f</sup>, Gabriella Pár<sup>f</sup>, Judit Bócs<sup>l</sup>, Patrícia Sarlós<sup>f</sup>, József Czimmer<sup>f</sup>, József Hamvas<sup>l</sup>, Tamás Szakács<sup>e</sup>, Zoltán Szepes<sup>e</sup>, László Czákó<sup>e</sup>, Márta Varga<sup>m</sup>, János Novák<sup>d</sup>, Barnabás Bodó<sup>n</sup>, Attila Szepes<sup>o</sup>, János Sümegi<sup>p</sup>, Mária Papp<sup>q</sup>, Csaba Góg<sup>r</sup>, Imola Török<sup>s</sup>, Wei Huang<sup>t</sup>, Qing Xia<sup>t</sup>, Ping Xue<sup>u</sup>, Weiqin Li<sup>v</sup>, Weiwei Chen<sup>w</sup>, Natalia V. Shirinskaya<sup>x</sup>, Vladimir L. Poluektov<sup>y</sup>, Anna V. Shirinskaya<sup>y</sup>, Péter Jenő Hegyi<sup>a,z</sup>, Marian Bátorvský<sup>z</sup>, Juan Armando Rodriguez-Oballe<sup>aa</sup>, Isabel Miguel Salas<sup>aa</sup>, Javier Lopez-Diaz<sup>ab</sup>, J. Enrique Dominguez-Munoz<sup>ab</sup>, Xavier Molero<sup>ac</sup>, Elizabeth Pando<sup>ad</sup>, María Lourdes Ruiz-Rebollo<sup>ae</sup>, Beatriz Burgueño-Gómez<sup>ae</sup>, Yu-Ting Chang<sup>af</sup>, Ming-Chu Chang<sup>af</sup>, Ajay Sud<sup>ag</sup>, Danielle Moore<sup>ag</sup>, Robert Sutton<sup>ag</sup>, Amir Gougol<sup>ah</sup>, Georgios I. Papachristou<sup>ah</sup>



# TRANSLATIONAL MEDICINE

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## PEDIATRIC PANCREATITIS

**Andrea Párniczky**

## WORKING GROUPS

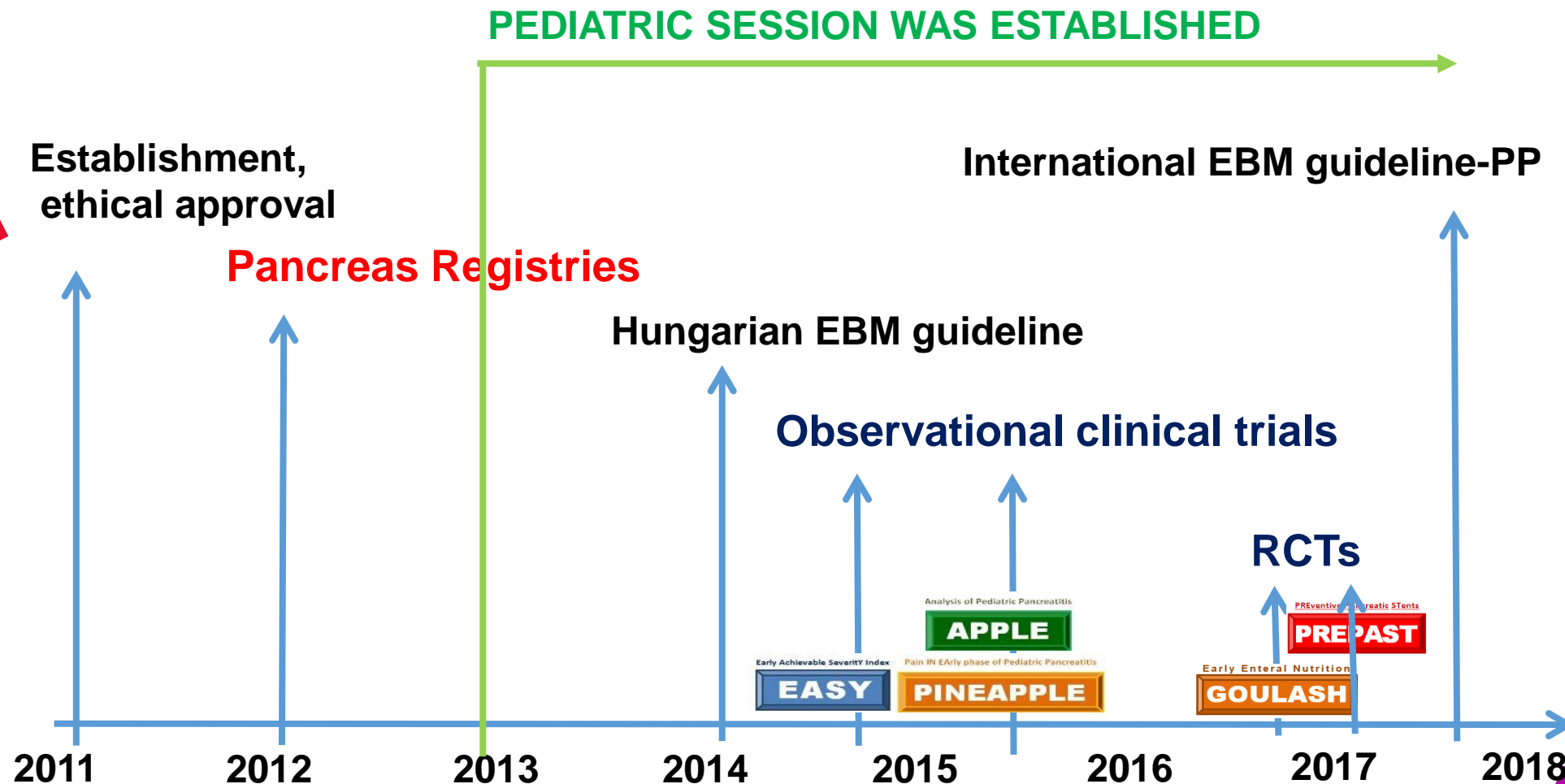


# TRANSLATIONAL MEDICINE

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## Hungarian Pancreatic Study Group 2011-2019





## Original Paper

### Analysis of Digestion

## Analysis of Digestion (APPLE) Multinational Study

Andrea Párnics  
Natália Lásztits  
Group and the

<sup>a</sup>1st Department of  
Group, and <sup>b</sup>Depart  
<sup>d</sup>Balassa János Hosp  
Medical University, S

Pancreatology 18 (2018) 146–160



Contents lists available at ScienceDirect

Pancreatology

journal homepage: [www.elsevier.com/locate/pan](http://www.elsevier.com/locate/pan)



## EPC/HPSG evidence-based guidelines for the management of pediatric pancreatitis

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Heiko Witt<sup>k</sup>, László Czákó<sup>l</sup>, Tassos Grammatikopoulos<sup>m, n</sup>, Ib Christian Rasmussen<sup>o</sup>,  
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## Pain IN the Early phase of Pediatric Pancreatitis

ISRCTN:

89664974

Start of trial:

February, 2015

Expected closure:

March, 2020

Enrolled patients:

PINEAPPLE-R:

46190

PINEAPPLE-P:

790

Number of centre:

10



## PINEAPPLE-R

n= 46190

Abdominal pain

Abdominal  
imaging

Amylase/lipase

ACUTE  
PANCREATITIS



n=6419



n=11733



n=15484



n=12554

4.1%

6%

11%

16%

41.6%

28%

39%

6%

63%

22%

13%

5%

1.1%  
(n=3)

0.5%  
(n=4)

0,2%  
(n=4)

0%  
(n=0)

$r^2 = 0,96$

## PINEAPPLE-P

### CURRENT PRACTICE

PINEAPPLE-R (n= 46190)

### EVIDENCE

PINEAPPLE-P (n=790)

23%

FINAL US

100%

1

PANCREATIC ENZYME  
MEASUREMENT

100%

0.2%

10X

2.3%

NEW CENTERS ARE WELCOME



## Analysis of Pediatric Pancreatitis

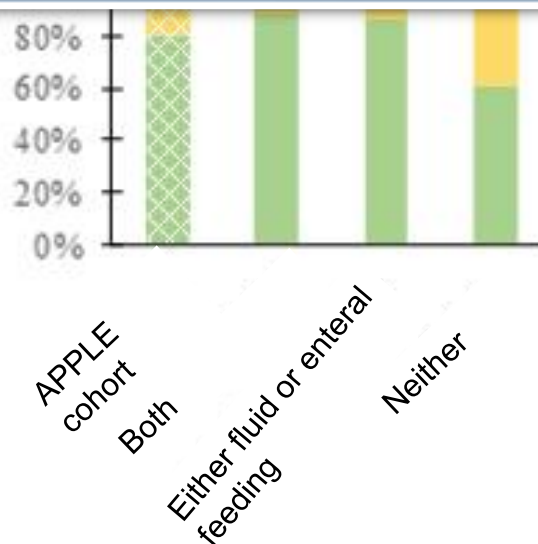
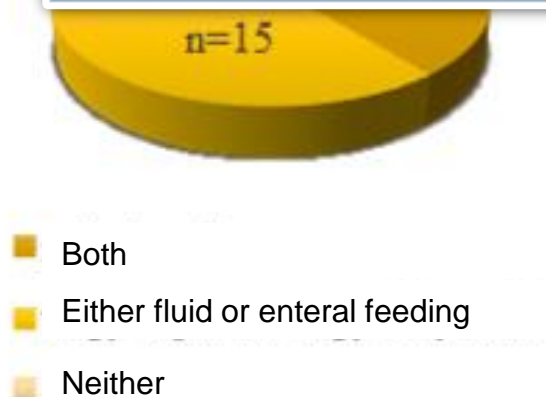
ISRCTN: 89664974  
Start of trial: February, 2015  
Expected closure: March, 2020  
Enrolled patients:  
    APPLE-R: 164  
    APPLE-P: 79  
Number of centrum: 16



## Therapeutic strategy

**Evidence-based guidelines should be followed strictly in order to reduce the length of hospitalization in APP**

34



Non-guideline



	with genetic risk (n=59)	all patients (n=121)
PRSS1	6.8%	2.5%

Pathogenic variants were identified in 63% of idiopathic cases and in 34% of non-idiopathic cases.

CFTR	25,4%	12,4%
------	-------	-------

Pathogenic variants were found in 32% of AP, 65% of ARP, 80% of CP.

NEW CENTERS ARE WELCOME

■ PRSS1 ■ CTSC ■ SPINK1 ■ CPA1 ■ CFTR

# TRANSLATIONAL MEDICINE

*taking discoveries for patients benefits*



## WORKING GROUPS

## GENETICS

**Balázs Németh**

# Genetic testing in Hungary for patients with pancreatitis

## Children

1. **acute / recurrent acute / chronic** pancreatitis
2. testing is **independent from etiology**
3. **pancreatitis under 19** years of age  
at the time of diagnosis  
independent from actual age

## Adults

1. **recurrent acute pancreatitis**  
at least 2 acute episodes
2. **chronic pancreatitis**
3. **pancreatitis** under 35 years of age  
at the time of diagnosis  
independent from actual age
4. Etiology is unknown (IDIOPATHIC)



# Genetic testing in Hungary for patients with pancreatitis



MIKLÓS SAHIN-TÓTH

12

PostScript

LETTER


Novel p.l causes n heredita autosom dominan

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*Am J Gastroenterol.* Author manuscript; available in PMC 2018 June 01.

Published in final edited form as:  
*Am J Gastroenterol.* 2017 December ; 112(12): 1896–1898. doi:10.1038/ajg.2017.393.

**Novel *PRSS1* mutation p.P17T validates pathogenic relevance of CTRC-mediated processing of the trypsinogen activation peptide in chronic pancreatitis**

**Balázs Csaba Németh<sup>1,2</sup>, Ákos Szücs<sup>3</sup>, Péter Hegyi<sup>4,5,\*</sup>, and Miklós Sahin-Tóth<sup>1,\*</sup>**

<sup>1</sup>Center for Exocrine Disorders, Department of Molecular and Cell Biology, Boston University Henry M. Goldman School of Dental Medicine, Boston, MA 02118

<sup>2</sup>First Department of Medicine, University of Szeged, Szeged, Hungary

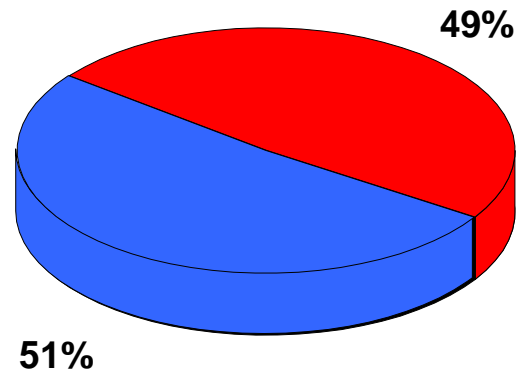
<sup>3</sup>First Department of Surgery, Semmelweis University, Budapest, Hungary

<sup>4</sup>Institute for Translational Medicine and First Department of Medicine, University of Pécs, Pécs, Hungary

<sup>5</sup>MTA-SZTE Translational Gastroenterology Research Group, Szeged, Hungary

**To the editor**

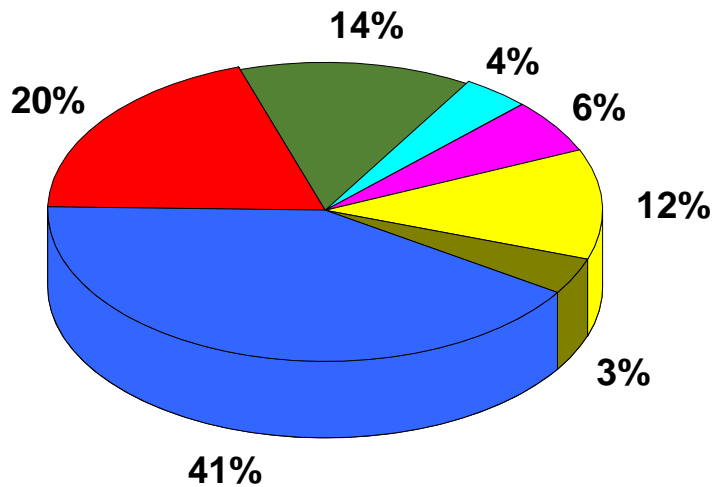
Mutations in *PRSS1* cause hereditary pancreatitis by reducing chymotrypsin C (CTRC)-dependent degradation of cationic trypsinogen and thereby promoting trypsinogen



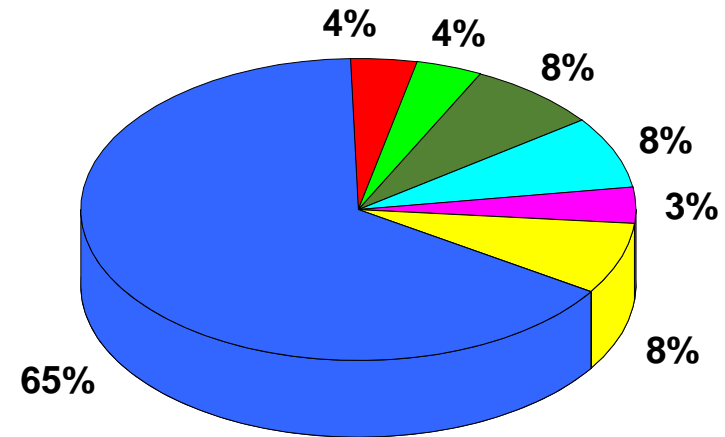
Without mutation  
Pathogenic mutation

**121 patients with childhood-onset pancreatitis were tested**

	Percentage of mutation carriers in patients
PRSS1	2.5%
CTRC	37.3%
SPINK1	9.9%
CPA1	2.5%
CFTR	12.4%



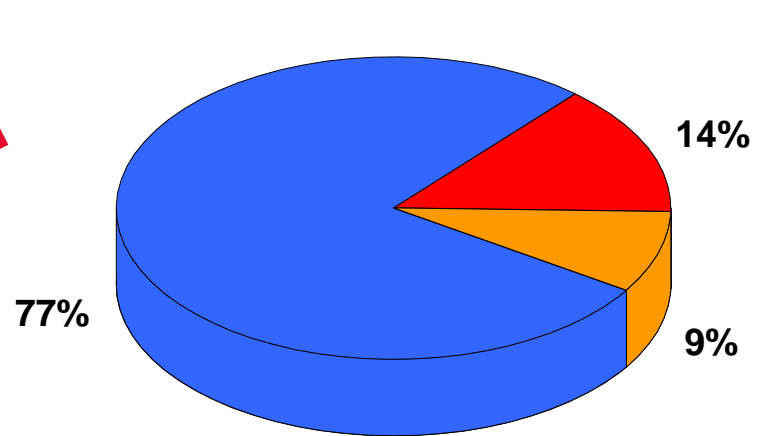
**No mutation**



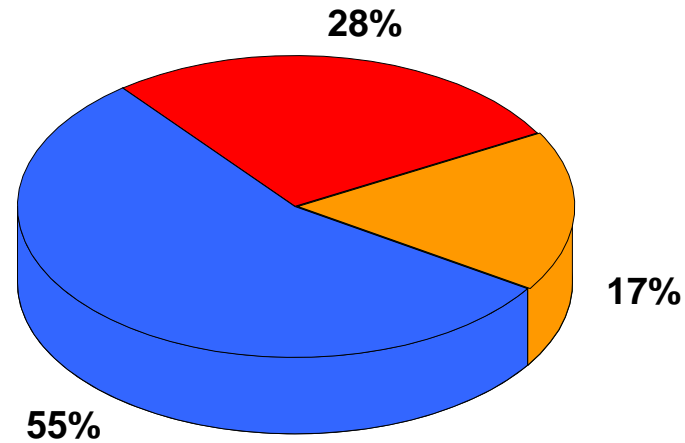
**CTRC**

- idiopathic
- biliary
- alcoholic
- anatomy
- virus
- drug
- IBD
- hyperlipidaemia

# Type of pancreatitis



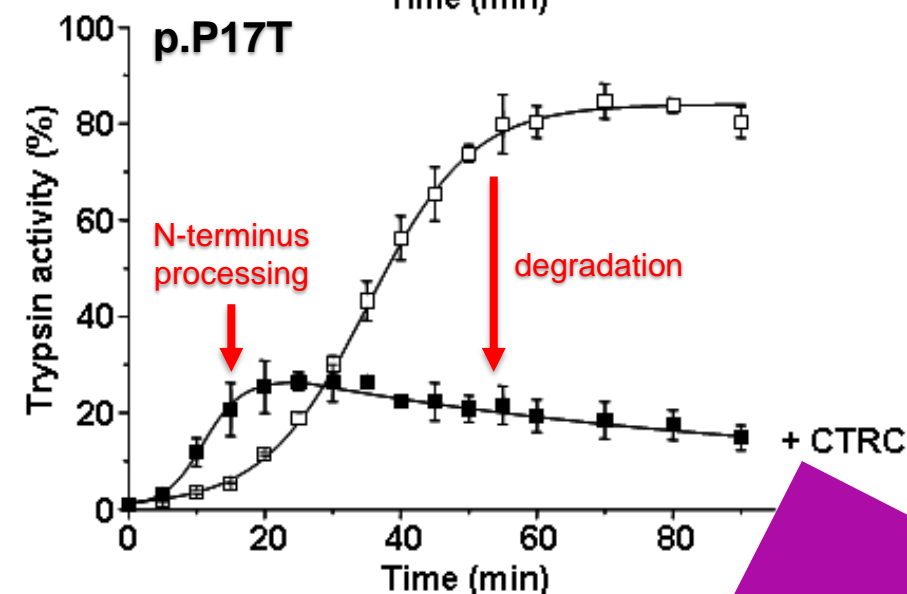
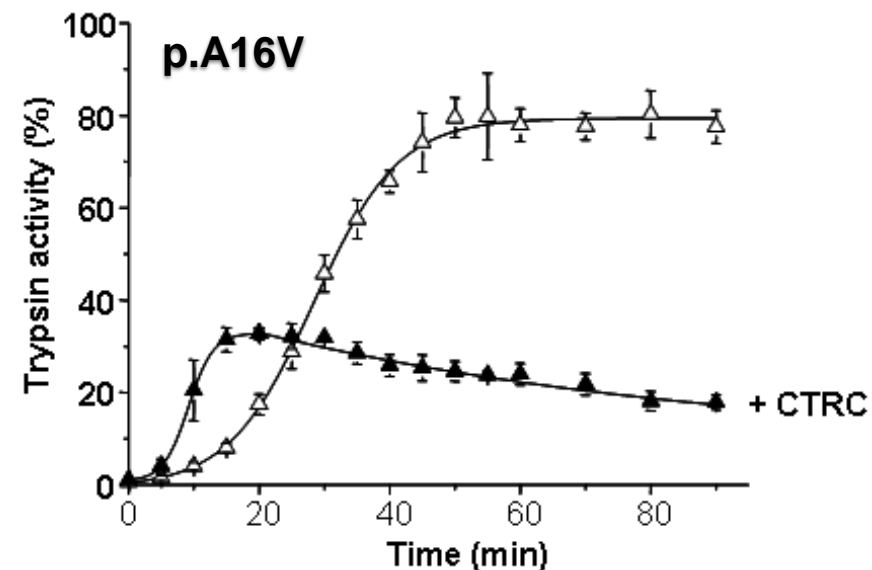
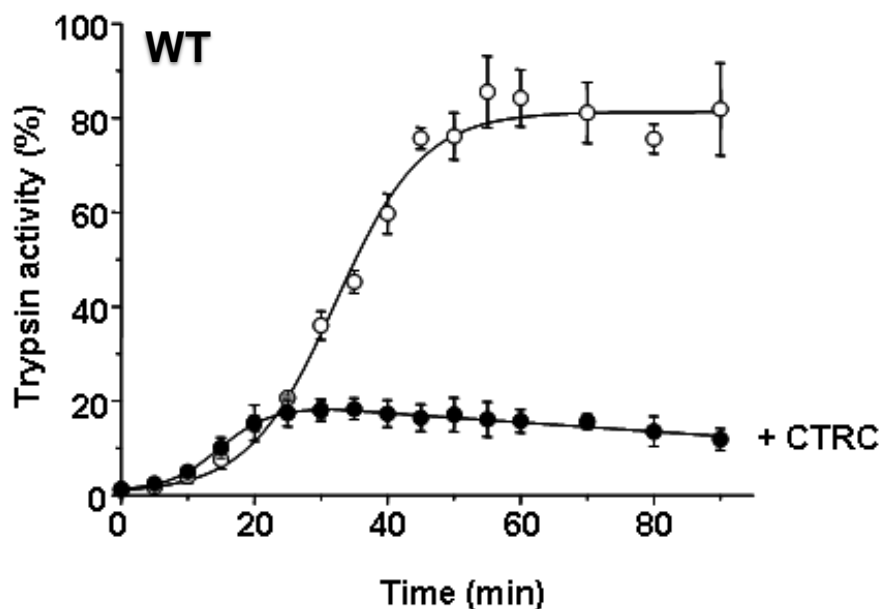
**No mutation**



**CTRC**

- Acute pancreatitis
- Recurrent acute pancreatitis
- Chronic pancreatitis

AP / (RAP+ CP) →  $p = 0.03$



Németh BC, Szücs Á, Hegyi P, Sahin-Tóth M.

**Novel PRSS1 Mutation p.P17T Validates Pathogenic Relevance of CTIRC-Mediated Processing of the Trypsinogen Activation Peptide in Chronic Pancreatitis.**

*Am J Gastroenterol.* 2017 Dec;112(12):1896-1898



# EPC - BERGEN



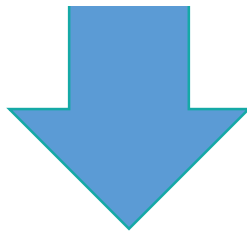
# TRANSLATIONAL MEDICINE

*taking discoveries for patients benefits*

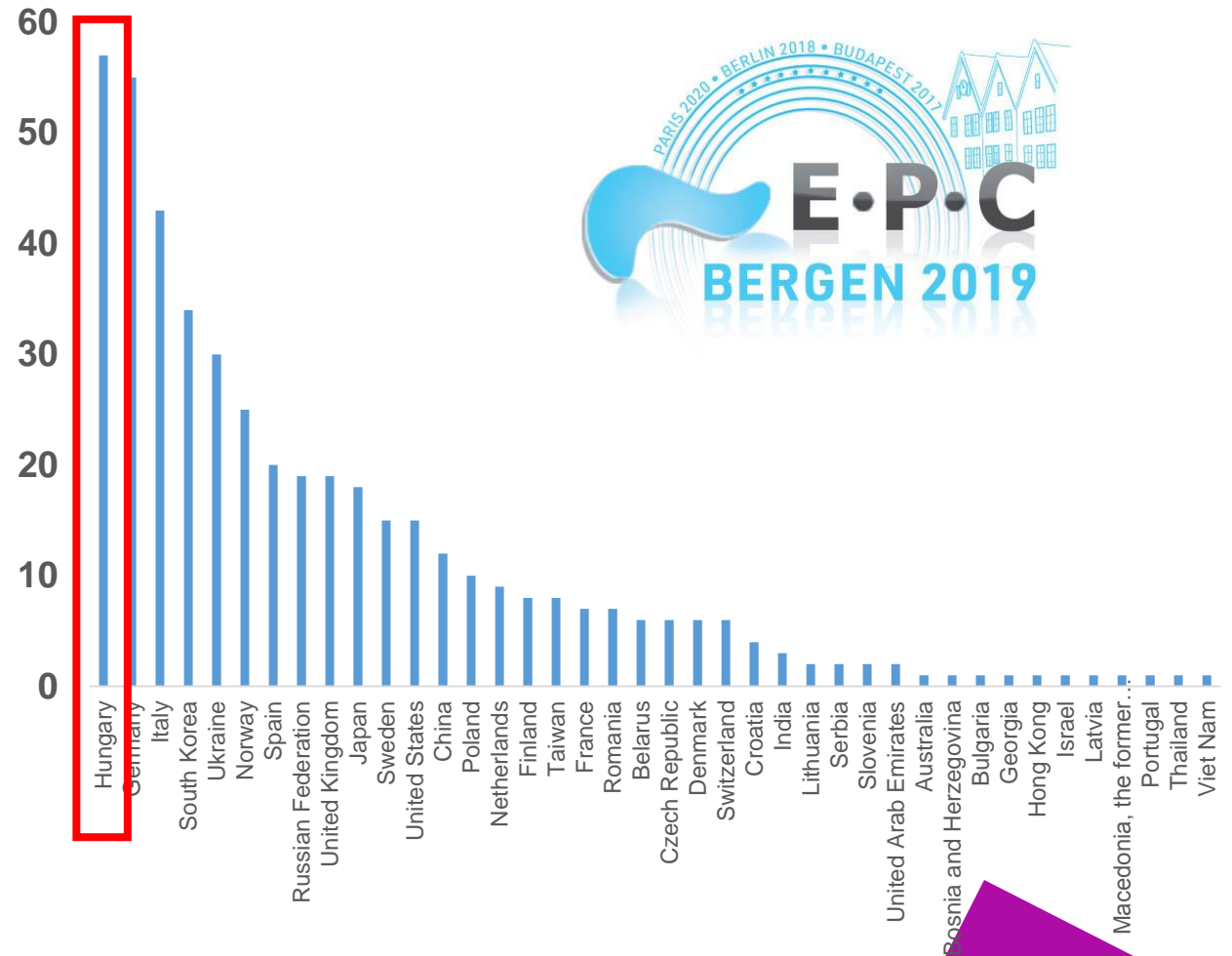
2011: 13 abstracts



**HUNGARY**



2019: 57 abstracts



## Thank you for your attention!



The Hungarian Pancreatic Study Group  
is committed to improving the lives of  
patients suffering from pancreatic  
diseases!



[www.pancreas.hu](http://www.pancreas.hu)