

Assessment of the interdisciplinary and surgical management of pancreatic neuroendocrine tumours (pNET)

This survey is conducted to assess the current status of surgical management of pancreatic neuroendocrine tumours (pNET) across Europe. Your information and opinion are important and will be helpful to improve the quality of pNET management within Europe.

If you like, you have the possibility to provide your email address in case you would like to be updated about results, and publication of this work. The data will be anonymously analyzed irrespective of whether you provide your address or not.

This survey was prepared by the EYSAC Research Academy in conjunction with ESSO. For any queries, please contact info@essoweb.org. This survey takes 7-10 minutes. Thank you for your time.

What is your core specialty?

- ☐ General Surgeon
- ☐ Endocrine Surgeon
- ☐ HPB- Surgeon
- ☐ Upper GI
- ☐ Surgical Oncologist
- ☐ Colorectal
- ☐ Other

Which of the following best describes your position?

- ☐ Consultant / Attending
- ☐ Fellow ☐ Resident
- ☐ Student ☐ Other (please specify)

Please specify your job title/position/role in relation to the treatment of patients with pNET.

In which country do you practice?

- ☐ Afghanistan
- ☐ Albania
- ☐ Algeria
- ☐ American Samoa
- ☐ Andorra
- ☐ Angola
- ☐ Anguilla
- ☐ Antarctica
- ☐ Antigua and Barbuda
- ☐ Argentina
- ☐ Armenia
- ☐ Aruba
- ☐ Australia
- ☐ Austria
- ☐ Azerbaijan
- ☐ Bahamas, The
- ☐ Bahrain
- ☐ Bangladesh
- ☐ Barbados
- ☐ Belarus
- ☐ Belgium
- ☐ Belize
- ☐ Benin
- ☐ Bermuda
- ☐ Bhutan
- ☐ Bolivia
- ☐ Bosnia and Herzegovina
- ☐ Botswana
- ☐ Bouvet Island
- ☐ Brazil
- ☐ British Indian Ocean Territory
- ☐ British Virgin Islands
- ☐ Brunei
- ☐ Bulgaria
- ☐ Burkina Faso
- ☐ Burma
- ☐ Burundi
- ☐ Cambodia
- ☐ Cameroon
- ☐ Canada
- ☐ Cape Verde
- ☐ Cayman Islands
- ☐ Central African Republic
- ☐ Chad
- ☐ Chile
- ☐ China
- ☐ Christmas Island
- ☐ Cocos (Keeling) Islands
- ☐ Colombia
- ☐ Comoros
- ☐ Congo, Democratic Republic of the
- ☐ Congo, Republic of the
- ☐ Cook Islands
- ☐ Costa Rica
- ☐ Cote d'Ivoire
- ☐ Croatia
- ☐ Cuba
- ☐ Curacao
- ☐ Cyprus
- ☐ Czech Republic
- ☐ Denmark
- ☐ Djibouti
- ☐ Dominica
- ☐ Dominican Republic
- ☐ Ecuador
- ☐ Egypt
- ☐ El Salvador
- ☐ Equatorial Guinea
- ☐ Eritrea

- ☐ Estonia
- ☐ Ethiopia
- ☐ Falkland Islands (Islas Malvinas)
- ☐ Faroe Islands
- ☐ Fiji
- ☐ Finland
- ☐ France
- ☐ France, Metropolitan
- ☐ French Guiana
- ☐ French Polynesia
- ☐ French Southern and Antarctic Lands
- ☐ Gabon
- ☐ Gambia, The
- ☐ Gaza Strip
- ☐ Georgia
- ☐ Germany
- ☐ Ghana
- ☐ Gibraltar
- ☐ Greece
- ☐ Greenland
- ☐ Grenada
- ☐ Guadeloupe
- ☐ Guam
- ☐ Guatemala
- ☐ Guernsey
- ☐ Guinea
- ☐ Guinea-Bissau
- ☐ Guyana
- ☐ Haiti
- ☐ Heard Island and McDonald Islands
- ☐ Holy See (Vatican City)
- ☐ Honduras
- ☐ Hong Kong (SAR China)
- ☐ Hungary
- ☐ Iceland
- ☐ India
- ☐ Indonesia
- ☐ Iran
- ☐ Iraq
- ☐ Ireland
- ☐ Isle of Man
- ☐ Israel
- ☐ Italy
- ☐ Jamaica
- ☐ Japan
- ☐ Jersey
- ☐ Jordan
- ☐ Kazakhstan
- ☐ Kenya
- ☐ Kiribati
- ☐ Korea, South
- ☐ Kosovo
- ☐ Kuwait
- ☐ Kyrgyzstan
- ☐ Laos
- ☐ Latvia
- ☐ Lebanon
- ☐ Lesotho
- ☐ Liberia
- ☐ Libya
- ☐ Liechtenstein
- ☐ Lithuania
- ☐ Luxembourg
- ☐ Macau (SAR China)
- ☐ Macedonia
- ☐ Madagascar
- ☐ Malawi
- ☐ Malaysia
- ☐ Maldives
- ☐ Mali
- ☐ Malta

- ☐ Marshall Islands
- ☐ Martinique
- ☐ Mauritania
- ☐ Mauritius
- ☐ Mayotte
- ☐ Mexico
- ☐ Micronesia, Federated States of
- ☐ Moldova
- ☐ Monaco
- ☐ Mongolia
- ☐ Montenegro
- ☐ Montserrat
- ☐ Morocco
- ☐ Mozambique
- ☐ Namibia
- ☐ Nauru
- ☐ Nepal
- ☐ Netherlands
- ☐ New Caledonia
- ☐ New Zealand
- ☐ Nicaragua
- ☐ Niger
- ☐ Nigeria
- ☐ Niue
- ☐ Norfolk Island
- ☐ Northern Mariana Islands
- ☐ Norway
- ☐ Oman
- ☐ Pakistan
- ☐ Palau
- ☐ Panama
- ☐ Papua New Guinea
- ☐ Paraguay
- ☐ Peru
- ☐ Philippines
- ☐ Pitcairn Islands
- ☐ Poland
- ☐ Portugal
- ☐ Puerto Rico
- ☐ Qatar
- ☐ Reunion
- ☐ Romania
- ☐ Russia
- ☐ Rwanda
- ☐ Saint Barthelemy
- ☐ Saint Helena, Ascension, and Tristan da Cunha
- ☐ Saint Kitts and Nevis
- ☐ Saint Lucia
- ☐ Saint Martin
- ☐ Saint Pierre and Miquelon
- ☐ Saint Vincent and the Grenadines
- ☐ Samoa
- ☐ San Marino
- ☐ Sao Tome and Principe
- ☐ Saudi Arabia
- ☐ Senegal
- ☐ Serbia
- ☐ Seychelles
- ☐ Sierra Leone
- ☐ Singapore
- ☐ Sint Maarten
- ☐ Slovakia
- ☐ Slovenia
- ☐ Solomon Islands
- ☐ Somalia
- ☐ South Africa
- ☐ South Georgia and the Islands
- ☐ South Sudan
- ☐ Spain
- ☐ Sri Lanka
- ☐ Sudan

- ☐ Suriname
- ☐ Svalbard
- ☐ Swaziland
- ☐ Sweden
- ☐ Switzerland
- ☐ Syria
- ☐ Taiwan, Province of China
- ☐ Tajikistan
- ☐ Tanzania
- ☐ Thailand
- ☐ Timor-Leste
- ☐ Togo
- ☐ Tokelau
- ☐ Tonga
- ☐ Trinidad and Tobago
- ☐ Tunisia
- ☐ Turkey
- ☐ Turkmenistan
- ☐ Turks and Caicos Islands
- ☐ Tuvalu
- ☐ Uganda
- ☐ Ukraine
- ☐ United Arab Emirates
- ☐ United Kingdom (UK)
- ☐ United States (USA)
- ☐ United States Minor Outlying Islands
- ☐ Uruguay
- ☐ Uzbekistan
- ☐ Vanuatu
- ☐ Venezuela
- ☐ Vietnam
- ☐ Virgin Islands
- ☐ Wallis and Futuna
- ☐ West Bank
- ☐ Western Sahara
- ☐ Yemen
- ☐ Zambia
- ☐ Zimbabwe

What is your gender?

- ☐ Female
- ☐ Male
- ☐ Non-binary
- ☐ Prefer not to say

What is your age?

- ☐ < 30
- ☐ 30 - 40
- ☐ 41 - 50
- ☐ 51 - 60
- ☐ 61 - 70
- ☐ Prefer not to say

How many years have you been in surgical practice
(since the end of your surgical training)?

- ☐ < 5
- ☐ 6-10
- ☐ 11-20
- ☐ >20

If you would like to receive updates on this work,
please enter your email address.

(This is optional.)

In which type of institution are you working?

- ☐ University / Academic / Teaching hospital
☐ Specialized cancer center
☐ Community hospital
☐ Private practice
☐ Other
☐ Not applicable
-

How many different patients with pNET do you see in clinic per month?

0 5 11

▬

(Place a mark on the scale above)

Do you routinely biopsy pNET for grading?

- ☐ Yes
☐ No
-

Do you routinely perform functional imaging (such as Ga-DOTATOC) prior to operative planning?

- ☐ Yes ☐ No
-

How many different patients with pNET do you operate per month?

0 5 11

▬

(Place a mark on the scale above)

Do you refer your patients with pNET to a different hospital/unit?

- ☐ Yes ☐ No
-

Do you have a neuroendocrine tumour board in your institution?

- ☐ Yes ☐ No
-

Do you attend/participate in a MDT, in which pNET are discussed?

- ☐ Yes ☐ No
-

If you have a MDT for pNET, how often do you meet?

- ☐ Weekly ☐ Every two weeks
☐ Monthly ☐ other: please specify.
-

Please specify how often your MDT meets

Which specialties are represented in your MDT?

- ☐ Surgery ☐ Medical Oncology
☐ Radiation Oncology ☐ Radiology
☐ Nuclear Medicine ☐ Palliative Care
☐ Endocrinology ☐ Pathology
☐ Other
(Please select all that apply.)
-

You selected "Other", regarding which specialties are represented in your MDT. Please specify

Which guidelines do you apply considering the treatment of pNET?

- ☐ ENETS consensus guidelines
☐ NCCN guidelines ☐ ESMO clinical practice guidelines
☐ NANETS guidelines
☐ Other ☐ None
(Please select all that apply.)

Which factors determine the applicability of surgical treatment for patients with pNET?

- ☐ tumour staging ☐ differentiation
☐ size ☐ tumor functionality
☐ location ☐ others: please specify
(Please select all that apply.)

You selected- Other- regrading which factors determine applicability of surgical treatment for patients with pNET.
Please specify.

Do you use the same criteria for local resectability as in pancreatic ductal adenocarcinoma (PDAC)?

- ☐ Yes ☐ No ☐ Sometimes

Do you think pNET should have their own resectability criteria (other than PDAC)?

- ☐ Yes ☐ No

Do you consider a local thrombus a contraindication for surgery?

- ☐ Yes ☐ No

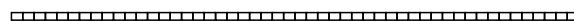
Which factors exclude patients with pNET from surgical treatment with curative intent?

- ☐ Age ☐ Frailty ☐ Co-morbidities
☐ Vascular invasion ☐ Metastasis
☐ Other (please specify)
(Please select all that apply.)

You selected "Other" regarding - Which factors exclude patients with pNET from surgical treatment with curative intent? Please specify.

Please estimate how many patients receive neoadjuvant therapy for pNET at your institution?

0% 50% 100%



(Place a mark on the scale above)

If patients receive neoadjuvant therapy , which type of therapy is administered?

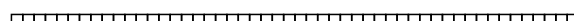
- ☐ Somatostatin Analogues
☐ Molecularly targeted therapy
☐ Cytotoxic chemotherapy
☐ Radiation therapy ☐ Ablation
☐ PRRT
(Please select all that apply.)

In your practice/ at your institution, further surgery after primary resection is most commonly performed for which of the following:

- ☐ residual or recurrent local disease
☐ metastatic disease
☐ to treat local complications
☐ other

At your institution, please estimate how many patients with pNET have required more than one surgery for disease management?

0% 50% 100%



(Place a mark on the scale above)

Is size cut off (2cm) introduced in the selection process for or against surgical indication?

- ☐ Yes
☐ No

What type(s) of surgery do you apply to patients with pNET?

- ☐ minimally invasive
 - ☐ robotic surgery
 - ☐ ethanol cauterization or radiofrequency ablation (RFA) under endoscopic ultrasound (EUS)
 - ☐ classical surgery
 - ☐ parenchymal sparing operation e.g. enucleation
 - ☐ central pancreatectomy
 - ☐ total pancreatectomy
 - ☐ lymphadenectomy
 - ☐ cytoreduction of pNET liver metastases
- (Please select all that apply.)

Do you use intraoperative ultrasound for detection or treatment planning?

- ☐ Always
- ☐ In selected cases
- ☐ Never

For patients treated at your institution/ for patients that you treat, who is performing the postoperative follow-up after discharge from hospital?

- ☐ Surgeon ☐ Medical oncologist
- ☐ General practitioner ☐ Gastroenterologist
- ☐ Other: please specify.

You selected "Other" regarding the question- For patients treated at your institution/ for patients that you treat, who is performing the postoperative follow-up? Please specify

How could information exchange/ collaboration be improved for patients with pNET?

How well do patients understand their diagnosis/treatment of pNET?

- ☐ not at all ☐ not well
- ☐ somewhat ☐ good
- ☐ excellent.

How do you rate available resources and supports to patients with pNET?

- ☐ poor ☐ below average
- ☐ average ☐ above average
- ☐ excellent

How do you rate communications with other healthcare providers relating to the follow up of patients with pNET?

- ☐ poor ☐ below average
- ☐ average ☐ above average
- ☐ excellent

Please rate your agreement with the following statement:
"The management of pNET is sufficiently addressed in surgical education programs."

- ☐ Strongly disagree: The topic is not addressed at all or is only briefly mentioned.
- ☐ Disagree: The topic is not addressed in enough depth or detail.
- ☐ Neutral: The topic is somewhat addressed but could use more attention.
- ☐ Agree: The topic is adequately addressed in educational programs.
- ☐ Strongly agree: The topic is very well addressed in educational programs.

What would improve the treatment of patients with pNET from your point of view?

Is there a pNET database in your institute or country?

- ☐ Yes ☐ No ☐ I do not know

How do you rate the role of Societies for
communication, education and training of pNET

- ☐ poor ☐ below average
☐ average ☐ above average
☐ excellent
-

Are you a member of these NET treating/specialized
societies

- ☐ ENETS ☐ E-AHPBA
☐ Gastro ☐ EPC ☐ 5. None of the above
(Please select all that apply.)