The prevalence of pancreatic neuroendocrine neoplasms with dedifferentiation during their natural history

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Objectives

- Neuroendocrine neoplasms (NENs) are neoplasms with a slow progression and a 5-year survival 77-95%.
- Secondary deposits of NENs may dedifferentiate during the natural history of the disease, presenting a more aggressive biological behaviour.
- The aim of the study was to investigate the prevalence of secondary foci dedifferentiation of pancreatic NENs (p-NENs).

Results

- 5 (3%) patients, all with sporadic pNENs, presented dedifferentiation
- Mean age 58.8 ± 4.3 yrs

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<th>Table 1: Patients’ characteristics</th>
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<td>Gender</td>
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- 2 with functional syndrome
- 1 carcinoid syndrome
- 1 insulinoma
- 2 (40%) underwent surgery
- 1st line treatment
  - 2(40%) Somatostatin analogs (SAs)+everolimus
  - 1(20%) SSAs + everolimus + Peptide receptor radionuclide therapy (PRRTs)
  - 1(20%) SSAs
  - 1(20%) follow up

- Progression-free survival (PFS) after 1st line treatment
  - 39.3±25.9 months
  - PFS after further therapies (8 lines)
    - 13.4±11.2 months to 6.3±7.0 months

- Mean time from diagnosis until dedifferentiation
  - 65.6±61.0 months
  - 2(40%) patients deceased
  - OS 158.7±50.9 months
  - Total follow up
  - 86.6±70.7 months

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<th>Table 2: Total survival of all patients with pNENs</th>
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<td>5yr survival</td>
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<td>Patient with pNENs</td>
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- From the patients with dedifferentiation 2 were alive after 5 and 10 years of follow up
- 1 deceased after 10.2 yrs
- 1 deceased after 16.2 yrs

Conclusions

- The dedifferentiation of NENs implies a more aggressive biological behaviour and worse overall survival despite the use of different therapies.

References

- Binderup et al. (2019). The Journal of Nuclear Medicine, vol.51, No. 5.