



Lung Factsheet

The Facts

Neuroendocrine Neoplasm (NENs) is an umbrella term used to cover a group of cancers that start in neuroendocrine cells. These cancers may also be referred to as NETs, NECs, or even Carcinoids. NENs occur when neuroendocrine cells stop working normally and start to grow or behave abnormally.

There are 2 key types of NEN:

- 1. NETs (neuroendocrine tumours) are called 'well-differentiated' and tend to have a slow to moderate growth pattern.
- 2. NECs (neuroendocrine carcinomas) are called 'poorly differentiated' and tend to grow rapidly.

To simplify, we use the term NENs throughout this Factsheet.



The lungs are a pair of large, spongy organs that fill the chest and are either side of the heart.

Each lung consists of several distinct lobes; The right lung has 3 lobes - the superior, middle, and inferior lobes. The smaller left lung only has 2 lobes - superior and inferior.

Neuroendocrine cells are present throughout the respiratory tract (lungs) as part of the normal anatomy. Lung NENs account for up to 20% of all lung cancers.

To date 5 types of Lung NEN have been identified:

- 1. Typical Carcinoid (TC) low grade neuroendocrine tumour (NET)
- 2. Atypical Carcinoid (AC) mid-grade neuroendocrine tumour (NET)
- 3. Small cell neuroendocrine carcinoma (NEC)
- 4. Large cell neuroendocrine carcinoma (NEC)
- 5. MiNEN or mixed cell carcinoma (MiNEN) where Neuroendocrine cells occur within the same tumour as another form of cancer.



Grading

Grading is based on how cells look under a microscope (differentiation) and how quickly they are dividing to form new, cancerous cells. Your care team will want to grade your NET/NEC so they can plan the best treatment for you.

Expert opinion recommends a slightly different way of grading Lung NENs than that used in other NEN's – and advocates using Mitotic Rate rather than Ki67% as the assessment/measurement tool.

Mitotic Rate is a measure of how fast cancer cells are dividing and growing. To find the mitotic rate, the number of cells dividing in a certain amount of cancer tissue is counted.

Staging and Grading

Lung NEN staging and grading is based on a combination of several factors, including:

- The size and location of the tumour
- Whether it has spread to the lymph nodes (and if so where / which side)
- Whether it has spread to other parts of the body

Lung Grading Spectrum LUNG NEN NET TC AC Well-differentiated SCLC LCNEC Poorly-differentiated

Causes and / or risk factors

We do not know exactly what causes NENs, however research is ongoing, to truly understand both the pathology and the biology with the hope that this will lead to a much better understanding of the causes.

Most NENs do not run in families; however, there are a number of rare conditions that may increase your risk. Therefore, if other members of the family have been diagnosed with a particular cancer (especially aged 50 years or less) or cancer-associated genetic condition, it is important that you tell your specialist team about not only your medical history, but also any family medical illnesses or conditions.

So how is it treated?

For all patients, there are many things to consider in planning treatments. Your treatment will be personalised to you and the type of NEN you have.

Even if you have a diagnosis that sounds the same as another patient, your treatment and follow up plan may be different.

Your care team will discuss your treatment options with you - giving you both written and verbal information - to help you make an informed choice. Together you can agree on the most appropriate treatment for you. There is consensus agreement that all NEN patients should be reviewed by a specialist MDT.

Treatment options will depend on the type, position and size of your NEN, and whether (or to where) it has spread. It will also depend on whether you have any other health concerns and / or illnesses and your general health and fitness. A big part of meeting with your doctors or specialist nurse/team, is to make sure you get the information you need to understand your condition.

There is a comprehensive 'Lung Handbook' which is available to download on our website.

Talking with your team about treatments

A big part of meeting with your doctors, or specialist nurse, is to make sure you get the information you need to understand what's happening, so that you can make an informed choice about your care.

Suggestions that may help when talking to your team:

- Prepare a list of questions that are important to you
- Ask for simple explanations do not be worried about asking your nurse or doctor to repeat what they have said
- Take someone with you or ask if you can record the conversation.
- If you have a nurse specialist keep in touch. They can be a great source of information and support for you.

Questions to ask at your appointment:

- What treatments are most suitable for me and my NEN? Do I have to have treatment?
- What is the aim of treatment?
- What are the possible side effects?
- How could the treatments affect my everyday life?
- What do you hope the impact of treatment will be?
- Will I be able to keep working during treatment? Or do I need to arrange time—off (e.g. for surgery and recovery)?
- How will I be involved about decisions about my treatment?
- Can I choose where I go for treatment?
- Can I get a second opinion about my treatment?

The key aim of treatment, should be to help you have the best possible care and quality of life, by ensuring access to appropriate treatment, management of symptoms and addressing what's most important to you. One or more of the approaches below may be suggested:

Removal of all or part of your NEN

 Control of your disease, by slowing or stopping the growth of your NEN

• Palliation, or easing of, your symptoms.

Treatment options include:

- Surgery
- Somatostatin analogues (SSAs)
- Chemotherapy
- Targeted Molecular Therapies
- Peptide receptor radionuclide therapy (PRRT)
- Radiotherapy
- Endoscopic procedure
- · Interventional radiology
- Clinical Trials
- Symptom Control
- Surveillance can be used to assess how well treatment is working or in periods between treatments (which may be months/ years).

Visit our website for explanations on all treatments available in the UK.

Physical well-being

Staying active during and after cancer treatment makes a lot of sense and there is evidence to support this:

It can boost your energy levels and your mood

- It can help your bones, muscles and heart to stay strong
- It can help you to stay at a healthy weight.
- It can help you to sleep better and improve your appetite
- And it can increase your range of movement and control side effects like constipation.

Your care team can advise you on how much exercise or physical activity is right for you. Keeping a record of your progress can help, and so can reminding yourself of the benefits if you start to struggle. And make sure you choose activities you enjoy, otherwise it can be much harder to stick with them.

You may want to consider downloading the 'My NETs' mobile App from your App store. It can be used for day to day information gathering such as symptom tracking, managing and storing health details, (such as blood and other test results, diet, symptoms, medications and appointments).

What can I do to help myself?

Living well with NENs is possible, but may require adjusting expectations of what life following diagnosis may be like - many describe it as a "New Normal": a way to live that supports both your physical and mental well-being.

Finding out more about your diagnosis, the tests and treatments that may be involved, can help in both dealing with the effects of diagnosis and decision-making. It can help to restore a sense of control. But everyone takes in information in different ways: it can sometimes feel as though you are being bombarded with information - whilst at other times you may feel there's not enough.

What can we do to help you?

- A dedicated nurse freephone helpline: 0800 434 6476
- Our 'Natter' Support Groups are online or local, community based meetings that are available to offer an opportunity to meet others who are also affected
- Our Facebook (closed) groups provide a safe place for those affected to talk and help each other by sharing experiences and knowledge, to both give and receive advice, support and friendship
- A free, confidential counselling service for patients and supporters, family members or friends.

Visit our website for further details of the services listed above.



Neuroendocrine Cancer UK exists to support and inform patients and families from diagnosis, enabling access to the best care and treatment, whilst stimulating Neuroendocrine Cancer research, increasing national awareness and influencing improvements in outcomes.

Visit our website to read more about our work and for more in-depth information, additional resources and links related to everything that we have talked about in this leaflet.

Neuroendocrine Cancer UK www.neuroendocrinecancer.org.uk

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