NANETS
NORTH AMERICAN NEUROENDOCRINE TUMOR SOCIETY

COVID-19 Information for NET Patients and Caregivers

SECTION I: GENERAL QUESTIONS

1. What can I do to avoid getting COVID-19?

COVID-19, or coronavirus disease 2019, is caused by a corona virus named SARS-COV-2. This virus belongs to a large family of viruses that can cause mild illnesses, such as the common cold, or more severe diseases, such as Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). These viruses attack the lungs and airways. They spread from person to person through small droplets created when an infected person coughs or sneezes. These droplets then spread through the air and land on surfaces. Others become infected when they breathe in the droplets or touch their nose or mouth after touching the virus on surfaces. There is a lot of research going on to develop vaccines and drugs for COVID-19 but we do not have a cure yet.

The best way to protect against COVID-19 is to avoid being exposed to the virus. Here are some ways to decrease your risk of being exposed to the virus:

- Avoid close contact with sick people and stay at home as much as possible. When you must leave home, avoid being in groups of people and stay at least 6 feet away from others.
- Wash your hands frequently with soap and water for at least 20 seconds (or use hand sanitizer with at least 60% alcohol content). Do not touch your face with unwashed hands.
- Wear a facemask covering your mouth and nose in public settings where it is difficult to stay 6 feet from others (for example grocery stores and pharmacies).
- Closely follow guidance on travel restrictions, keeping 6 feet from others (social distancing), and other precautions by the Centers for Disease Control and Prevention (CDC), and your local authorities. These guidelines are rapidly changing.

2. Am I at a higher risk of getting COVID-19 or developing complications from COVID-19 due to my neuroendocrine tumor (NET)?

Other countries have been dealing with COVID-19 for longer than the US. We have learned from their experience with the disease. For example, people in China who had cancers, had a higher risk of being infected with COVID-19 than those without cancers. We do not understand the reason for this. It may be that people with cancer see their health care team more often and so have more testing than others. Another explanation may be that patients with cancer are more often exposed to virus because they are visiting hospitals and doctors' offices. Another explanation may be that patients with cancer can have decreased immunity to infection due to the cancer or the treatment for the cancer.

About 80% of people in China who developed COVID-19 had mild disease. However, people with cancer who developed COVID-19 were more likely to get sicker and need admission to a hospital. This was especially true if they had chemotherapy in the month before COVID-19 infection. This study did not include patients with NETs because NETs are rare cancers. It is likely that some people with NETs will develop complications of COVID-19 more often than others. For example, patients with more widespread NET would be at higher risk than those who had localized tumor removed by surgery.

We are not sure how much each type of NET treatment increases the risks of COVID-19. However, patients on chemotherapy (such as capecitabine/temozolomide or platinum/etoposide) and some other agents (such as everolimus) that can decrease the immune response to infection, are likely to be at greater risk than those on somatostatin analogs (lanreotide, octreotide). We do not know whether peptide receptor radionuclide therapy (PRRT) with lutetium Lu177 dotatate (Lutathera) changes the risk of COVID-19, although PRRT can decrease white blood cell count, which may increase the risk of getting infections.

3. How might the treatment of my NET change during the COVID-19 outbreak?

Each person's situation is different, and is influenced by treatments received previously, other medical conditions, extent of tumor burden, and where the tumor started. Moreover, tumors grow at different rates, so the urgency for therapy varies between patients. In addition, the potential impact of COVID-19 may depend on the type of treatment under consideration. Your community and hospitals are also dealing with different levels of COVID-19 outbreak. For these reasons, it is important to talk to your local health care team about how your treatment will be affected during this time. **Two main principles guide patient care during this COVID-19 outbreak:**

- **Decrease the risk of exposure to COVID-19 virus as much as possible.**
- **Aim to reserve medical resources to treat the increasing number of patients with severe COVID-19 infection.**

For patients with NETs, these principles will need to be balanced with the need for continuing their current cancer treatment. Keeping these issues in mind, you may see the following changes in your care:

- Home based management, including telephone or video visits (telemedicine) are likely to play a much larger role in your care.
- You will be screened for risk factors and symptoms of COVID-19 before any in-person visits (and tested for COVID-19 as needed).
- There may be restricted access to caregivers and family members in hospitals and clinics. For example, it is likely that only patients will be allowed to enter patient care areas, both as outpatients and inpatients.
- Non-urgent tests, treatments and doctor visits may be postponed. Examples of this are discussed below.
- Participation in clinical trials may be restricted.

4. What should I do to be prepared during these uncertain times?

The CDC and American Society of Clinical Oncology (ASCO) websites provide useful information. Below are key points to remember:

- Minimize your risk of developing COVID-19 (see above *"What can I do to avoid getting COVID-19?"*).
- Get information regularly from **trustworthy sources.** There is a lot of misinformation out there. The WHO website has a list of "mythbusters". A list of recommended sources is provided at the end of the document.
- Make sure you have enough essential medications for at least a month. Discuss the merits of obtaining a larger supply of medications to cover a longer duration, with your health care team and insurance provider.
- Prepare your family and yourself as much as you can. Talk to your household members and friends to discuss what to do if a COVD-19 outbreak occurs in your community. For example, if one or more household members are affected, discuss how to practice home quarantine. Create a list of emergency contact information for your family, friends, health care team, utility providers, local public health departments, aid organizations and other community resources.

- Plan for potential changes in your workplace and consider discussing your needs with your employer.
- If you haven't been contacted already, contact your doctor's office about upcoming appointments to discuss whether they need to be rescheduled.
- If you need to go to an appointment at a doctor's office or a hospital, learn ahead of time about any changes in access, parking, cafeteria hours and visitation policies. During the visit, protect yourself from exposure to COVID-19. Also consider carrying your own paper, pen and snacks if possible.
- Be your own advocate. Given the extraordinary circumstances we are facing, you may need to be more involved and proactive in your care. Prepare questions and concerns in advance when interacting with your healthcare team. Be informed about all the ways to stay in touch with your team, including telehealth apps and other digital methods. You may need to be more patient and persistent during these times to stay in touch with your team.
- Social distancing may affect your physical and mental well-being. Be familiar with information on stress, tips to support physical and mental well-being, and links to additional resources. The CDC website provides further information on appropriate self-care during this time.
- Finally, it's very important to have your wishes for your care in writing in case you are too sick to be able to make those decisions for yourself in the form of an advanced directive. This will allow your loved ones to know what your desires and goals are for your care. If not already done, you should consider doing it now; this is especially important since many hospitals and health care facilities have restricted visitation policies. Further information on advance care is available at The Center to Advance Palliative Care and UCSF Meri Center for Education and Palliative Care at Mt Zion.

5. What if a household member or I have developed symptoms suggestive of COVID-19?

Contact your doctor and public health departments if you have symptoms of COVID-19 infection. The affected person may need to be isolated until testing negative or for a certain period. Your doctor will recommend the duration of isolation. CDC provides additional information If You Are Sick or Caring for Someone. The Infectious Disease Society of America and CDC websites provide information about guidelines and locations for COVID-19 testing. Update your health care team regularly and seek immediate medical attention if your symptoms worsen.

SECTION II: QUESTIONS SPECIFIC TO NET PATIENT CARE

1. Should I delay or stop getting my SSA injections (octreotide [Sandostatin] or lanreotide [Somatuline])?

If you stop your SSA injections, there is a risk that your cancer might progress, or your symptoms might become worse. It can be difficult to balance this risk with the increased risk of getting COVID-19 infection at the medical center. It is important to talk to your health care team about whether to make any changes in your SSA treatment during this time. You and your doctor should consider factors such as the risk of cancer progression if SSA therapy is changed, whether your tumor is functional (making hormones that cause symptoms), and how you are tolerating the treatment. Some specific examples are as follows:

- If you have stable or slowly growing, nonfunctional, NETs, you might temporarily stop getting your SSA, get your injections at a clinic closer to home, increase the time between injections, or request a home injection (information available through www.ipsencares.com or www.us.sandostatin.com/carcinoid-syndrome/patient-support/mobile-administration-program [this may not be available to all patients, so discuss with your medical and insurance provider]).

- If you have a functional NET, you will probably need to start or continue your SSA for symptom control. Options you can discuss with your doctor include: continue monthly lanreotide or octreotide injections in the clinic, get your injections at a clinic closer to home, increase the time between injections (if this does not cause increased symptoms), request a home injection (as above), or use daily subcutaneous octreotide at home for symptoms. Rarely, your doctor may discuss liver directed therapy (hepatic artery embolization or ablations) if you have severe symptoms. Your doctor may also recommend additional antidiarrheal drugs (such as loperamide [Imodium] / diphenoxylate and atropine [Lomotil]), telotristat [Xermelo]) and other medications for better symptom control.
- If you have stable or slowly growing nonfunctional NETs, you may consider delaying therapy, if you are not yet on it.
- If you have a NET tumor that could be removed by surgery, you might start an SSA as a temporary alternative to surgery. However, a few months of observation without therapy is likely be safe in most patients waiting for surgery.

2. Should my surgery be cancelled or delayed?

If you already had surgery planned, you will need to discuss again the risks, benefits and timing of surgery with your doctor. The discussion will cover the risks of delaying your surgery versus your risk of COVID-19 infection while in the hospital and whether the hospital is already overwhelmed with COVID-19 patients. The timing of the peak of COVID-19 in your hospital will affect the timing of your surgery.

Most hospitals are not allowing elective surgeries. Based on the number of COVID-19 patients in the hospital and the available hospital resources, surgeons have established 3 levels of priority for performing surgery:

- In hospitals with the most severe COVID-19 outbreaks, surgery will only be performed on critically ill patients who may otherwise die within a few hours without emergent surgery.
- In hospitals where there are many COVID-19 patients or the numbers are quickly increasing, surgery will only be performed on urgent patients who may otherwise die within a few days.
- In hospitals where there are few COVID-19 patients and where resources such as personal protective equipment and personnel are not depleted, surgery can be potentially performed on semi-urgent patients, who would be harmed if surgery were delayed more than 3 months.

By these criteria, most surgeries for NETs can be postponed. NET tumors are generally slow growing, and other medical treatments can be used when there is a need to delay surgery. Situations that may be semi-urgent or even urgent might include:

- Patients with complications of small bowel NETs, such as perforation would require emergent surgery; bowel obstruction, bleeding and/or severe pain could qualify for urgent surgery.
- Functional pancreatic NETs where symptoms cannot be controlled medically; or non-functional pancreatic NETs with symptoms such as bleeding, or obstruction of the bile duct, pancreatic duct or bowel, could also be considered, if failing non-operative management.
- Well-differentiated NETs with that are growing quickly may also sometimes require urgent surgery.

Non-surgical treatments are available in most situations. These treatments can be considered for safely putting off surgery until after the COVID-19 outbreak. For example, your doctor might recommend using lanreotide or octreotide, everolimus or sunitinib, PRRT, or chemotherapy for well-differentiated NETs requiring therapy. Chemotherapy or external beam radiation therapy could be used instead of surgery for poorly differentiated neuroendocrine carcinomas or more quickly growing NETs. In other cases, simply delaying surgery may make sense.

3. Should my upper endoscopy/colonoscopy be postponed?

The decision to have an endoscopic procedure requires balancing the risks of your cancer or symptoms getting worse, with your risk of getting COVID-19 in the hospital, the risk to hospital personnel performing the endoscopy, and the availability of hospital resources (which depends on the severity of COVID-19 in your community). Decisions regarding such procedures must be made after discussing with your doctors and family members.

The Joint GI Society Message (March 19, 2020) recommended rescheduling most non-urgent endoscopic procedures. Most endoscopic procedures in NET patients are non-urgent. These include routine procedures for patients with certain types of small or slow growing NETs in the stomach (called "type 1 or type 2 gastric carcinoid") and pancreas (especially if less than 2 cm). However, some non-urgent procedures may provide information important for your treatment. In such cases, your doctors may recommend proceeding with the endoscopic or colonoscopic procedures (e.g., tumor biopsy for diagnosis). Finally, there may be an urgent need for endoscopy or colonoscopy. This may be the case in patients with symptoms such as difficulty swallowing, jaundice, obstruction or bleeding.

Endoscopic procedures pose significant risk of COVID-19 exposure to medical staff performing these procedures. Therefore, it is recommended that medical staff wear adequate protective equipment during these procedures. In addition, if you are undergoing endoscopy you will be evaluated for the risk of having and transmitting COVID-19 prior to the procedure. Such evaluations may become easier as new tests become widely available that provide results quickly. Once these tests are available, some of these recommendations may change allowing more patients to get endoscopic procedures.

4. Should my blood work and scans be postponed?

Expert groups including the CDC and the American College of Radiology, recommend that non-urgent hospital visits be postponed. Therefore, only tests essential for your immediate care should be done. Below are some examples.

- ***If you recently had a scan that unexpectedly showed findings suspicious for NET:*** Discuss with your doctors about the risk of this tumor growing or spreading over the next few weeks. If the risk is low, further testing may be delayed.
- ***If you recently had a new diagnosis of NET/NEC:*** Discuss with your doctor about what information is needed to make treatment decisions for the next few weeks. Other non-essential tests may be postponed.
- ***If you have a history of NET/NEC and are being monitored for recurrence:*** Unless your doctor or you are very concerned about recurrence, these tests can be postponed. For example, experts usually provide time ranges for each test (such as scans every 3-6 months). In such situations, it is reasonable to do the tests at the longest possible interval.
- ***If you have active cancer that is being monitored:*** Decisions regarding testing will depend on many factors. These include how aggressive your cancer is and how far its spread. In addition, how you are feeling currently and what treatments you are on are important. As discussed above, it is reasonable to do the tests at the longest possible interval that is safe.

5. Should my radiation treatments be delayed? Can I interrupt or postpone additional planned radiation if already in progress?

If you have a rapidly progressing, potentially curable tumor (for example a localized, poorly differentiated neuroendocrine carcinoma) or have serious complications from your cancer (such as severe pain or a tumor pressing on the spinal cord) needing radiation, the risks of delay in such radiation treatment may outweigh the risks of COVID-19 exposure or infection. However, if you are receiving radiation for less severe symptom control, you may be at lower risk of harm due to changes in the schedule for radiation or delay in treatments. You should discuss with your Radiation Oncologist the most appropriate timing of your treatment.

6. **Should liver embolization be performed? Is one method preferable to another?**

As with other procedures, as discussed above, it is recommended that non-urgent interventional radiology procedures be postponed. Determination of what qualifies as non-urgent should be made on a case-by-case basis. Such decisions will need to consider why the procedure is needed, other treatment options available and risk of complications from the procedure. In addition, the risk of being exposed to COVID-19 and the severity of COVID-19 in your community and hospital will also need to be considered. Additional guidance is provided by the Society of Interventional Radiology. If you have slow growing tumors not causing any symptoms and not interfering with liver function, you may consider delaying liver embolization safely. On the other hand, if you have fast growing tumors, tumors that are involving a large part of your liver, especially if these tumors are at risk of interfering with normal liver functioning, your doctors may consider you for liver embolization. If you have symptoms related to tumors in the liver, you may also similarly be considered for embolization. Your doctors may recommend that these procedures be done as an outpatient to minimize hospitalization. If follow up is needed after the procedure, your doctors may recommend telehealth visits. If your local community is early on the curve of the epidemic, with a low level of infection and ample hospital resources, your doctor may discuss accelerating treatment plans so that you complete your embolization therapy before hospital resources become stressed and virus exposure risk increases.

7. **PRRT (Lutetium Lu177 dotatate, Lutathera therapy): Should my PRRT be delayed if not yet started? Should the next treatment cycle be postponed if I am in the middle of the planned PRRT course?**

You should discuss with your doctor the risks and benefits of PRRT at this time, in order to decide whether to start or continue PRRT. The discussion should include the benefit of controlling your tumors' growth and/or your symptoms. These benefits must be balanced with your risk of exposure to COVID-19 and whether the hospital facilities are already overwhelmed with the care of COVID-19 patients.

A delay of weeks (or longer in some situations) may be reasonable if: your tumor is growing very slowly, you have a low amount of tumor in your body that is not likely to cause complications if it grows slightly, or your tumor is non-functional. You should also consider delaying PRRT if you are older than 65, have other health issues, or have travel challenges. This is because you have a higher risk of getting COVID-19 or having more complications of the disease. However, PRRT should be started or continued if you have difficulty controlling hormone-related symptoms caused by your tumor, your tumors are growing more rapidly, you have a large amount of tumor in your body, or your tumors have stopped responding to other treatments.

If you have already started on PRRT, you should work with your health care team to reduce follow-up hospital visits, by converting these to telephone or video (telemedicine) visits, if possible. You can also discuss the possibility of increasing the interval between PRRT treatments. Reducing hospital visits may decrease your risk of COVID-19 exposure.

Iobenguane I 131 (Azedra) therapy: All the statements about PRRT above, also apply to those planning to start or continue Iobenguane I 131 (Azedra) for pheochromocytoma or paraganglioma. However, the risk of exposure to COVID-19 may be higher and the burden on the hospital facilities is higher with Iobenguane I 131 (Azedra) because patients receiving this treatment are admitted to the hospital for up to 5 days.

8. **Should I stop or interrupt my chemotherapy?**

At this time, expert groups such as the American Society of Clinical Oncology (ASCO) do not recommend stopping chemotherapy in everyone. You should discuss with your doctor risks or benefits of stopping treatment. Below are some examples:

- If your cancer is under good control, you may consider stopping chemotherapy after discussing with your doctor.
- If you are on intravenous chemotherapy, discuss with your doctor if there is an option to switch to chemotherapy you can take by mouth. This may reduce the number of times you have to visit the hospital.
- In some patients, chemotherapy may need to be continued to prevent cancer regrowth or spread. This may be the case for patients with aggressive cancers such as poorly differentiated neuroendocrine carcinomas. If you are in such a situation, discuss with your doctor if you should take medications to improve your blood counts and your ability to fight infections.
- **What if I have a chemotherapy port that is not being used regularly?** If you have a chemotherapy port, discuss with your team if you can take care of this at home. You may be allowed to flush your port at home. For this, you may need to obtain training and supplies. Another option is to have a home health referral if your insurance allows. Some experts also suggest that ports may be flushed as infrequently as every 12 weeks. This approach is recommended by ASCO.

9. Should I stop or interrupt everolimus (Afinitor) or sunitinib (Sutent)?

You should discuss with your doctor regarding the risks or benefits of stopping treatment. Below are some examples:

- If your cancer is under good control, you may consider stopping after discussing with your doctor.
- If your doctor recommends continuing treatment, discuss how to perform safe monitoring for side effects. One option would be to reduce the frequency of such visits. Your doctors may also recommend telemedicine visits.
- If you are starting these medications for the first time, you may need very careful follow up. Therefore, your doctor may discuss other safer options. These include postponing treatment, trying other medication such as SSAs or liver embolization.

10. If I develop COVID-19 infection, how will that affect my treatments?

Your doctors will likely recommend that you stop anti-cancer treatments if you develop COVID-19 infection. This is because continuing aggressive treatments during this time may cause serious complications of COVID-19. Currently, it is unclear when to re-start therapy. Advice from ASCO suggests following the CDC's recommendations on the wait period for stopping transmission-based precautions for patients. If you have a rapidly growing cancer, your doctors may discuss re-starting treatment earlier.

COVID-19 Resources for Patients and Caregivers

American Multiple Endocrine Neoplasia Support (AMENSupport)

Cancer.Net

The Carcinoid Cancer Foundation

Center to Advance Palliative Care

Healing NET Foundation

Ipsen Somatuline Home Injection Program

Los Angeles Carcinoid Neuroendocrine Tumor Society (LACNETS)

Neuroendocrine Cancer Awareness Network (NCAN)

Neuroendocrine Tumor Research Foundation (NETRF)

NorCal CarciNet

Novartis Sandostatin Home Injection Program

Patient Power

UCSF Meri Center for Education and Palliative Care at Mt Zion

Research and Clinical Trials

Virtual Research Study - Participate in a Virtual Research Study on Cancer and COVID-19 at Stanford: Impact of the novel Coronavirus (COVID-19) on Patients with Cancer (NIH)

Clinical Trials Related to COVID-19 Listed on ClinicalTrials.gov

General Information and Guidelines for COVID-19

National Institutes of Health (NIH)

Centers for Disease Control (CDC)

World Health Organization (WHO)

Infectious Disease Society of America

State Guidelines

For information and guidelines specific to your state, please find your State Department of Health at www.cdc.gov/publichealthgateway/healthdirectories/healthdepartments.html

Disclaimer

COVID-19 is an unprecedented, evolving public health emergency. The purpose of this document is to provide NET patients and their families information on how to cope with their diagnosis during this time. Answers to questions posted herein do not constitute definitive medical or legal advice nor endorsement of any specific course of diagnosis, treatment of management of COVID-19. Given the rapidly changing nature of this public health emergency, new or different information may emerge following the posting of this document or when it is read. NANETS strives to maintain updated information on its website, www.nanets.net. However, NANETS assumes no responsibility for any injury or damage to persons or property arising out of or related to any use of this information or for any errors or omissions. NANETS provides this information on an "as is" basis, and makes no warranty, express or implied, regarding the information. The information provided is for general guidance for patients and their families during the COVID-19 pandemic. This should not be considered definitive and may vary depending on the clinical situation and prevailing local conditions. All medical decisions must be made after consultation with your health care providers.

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AMENSupport

The Carcinoid Cancer Foundation

Healing NET Foundation

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