A Letter from Lee

This summer was the first since 2004 that we haven’t held the Neutropenia Family Conference—and though it gave us a chance to restructure and plan for changes—we missed it. We missed meeting new families and patients and connecting with those from previous years. We’re looking forward to next July when we will once again gather with patients, families, and doctors for an informative, stimulating and sometimes life-changing experience.

In this newsletter you will find stories of people who have struggled with various types of chronic neutropenia. Brian Gamely’s story goes back more than sixty years, is wrought with difficulties, but in the end he finds a surprising new lease on his health and a deep desire to help others grappling with the problems he once faced.

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Brian, Davon, and Kristin all plan to attend the Conference. Their compelling narratives give an idea of the kind of stories patients and families will share as they gather in groups designed to encourage open conversations about living with neutropenia either as a patient or a family member. Other sessions will be chock full of medical information about neutropenia, its causes, treatment, dosing, pain management, transplants, bone health etc.

We’ve made some changes to our format thanks to feedback from past participants. In prior years we have kicked off the weekend at 4:00 on Friday. This year we will start at 1:00 on Friday July 11. The physician consultations will take place on Saturday afternoon following all the educational sessions. Many past attendees have said their one-on-one with a physician would have been more productive after attending conference sessions. We’ve added a second Neutropenia Kids Camp for the 3 to 5 year olds, and we’re planning children’s programs for Friday and Saturday.

Conference registration will be available at neutropenianet.org after January 15. We will be sending e-newsletter updates throughout 2014. If you would like to be included in those updates, please send your email to: nnnconference@live.com

I’m looking forward to a wonderful weekend this July 11-13. I hope you can join us. For those who cannot attend, we will follow up with articles and stories to make sure everyone has access to important Conference information.

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Potential New Therapies for SCN

Most patients with severe chronic neutropenia benefit greatly from treatment with granulocyte colony-stimulating factor (G-CSF or Neupogen). Across the spectrum of causes for neutropenia, G-CSF almost always raises neutrophils and reduces the risk of infections. Almost all patients can be treated for long periods with daily, every other day, or a few times a week Neupogen given as a subcutaneous injection. Neupogen stimulates the body to make more neutrophils from the stem cells in the bone marrow. It accelerates neutrophil formation and the release of neutrophils from the bone marrow into the blood. In fact, G-CSF is the natural stimulus that our bodies use when we get bacterial infections to increase the supply of neutrophils to fight the infection. Our body’s natural surge in production of G-CSF is how we get over infections, such as Strept (Streptococcal) infections in the skin, abscesses with Staph, (usually Staphylococcus aureus) pneumonia, urinary tract infections and many other problems. You can say G-CSF is our friend, either as produced in our body or given as injections, when necessary.

It is also important to know that not everybody responds to G-CSF/Neupogen. G-CSF/Neupogen shots cause pain at the sites for injections and aching pain in the bones.

For the last several years, we have tried to identify new therapies for neutropenia. The old therapies: steroids, immunoglobulin shots (IVG), hormones and immunosuppressive drugs and removal of the spleen rarely are helpful. So we have looked for oral drugs, because taking a pill would be easier and probably less expensive than injections. It is important to know that to discover and develop new drugs requires knowing the “target”, that is, knowing exactly how you could interfere with the problem causing neutropenia. Getting this information often requires years of basic research.

One promising idea for patients with neutropenia due to ELANE mutations is to inhibit the mutant enzyme when it is first produced in the developing very young neutrophils. We believe such an inhibitor might prevent the premature death of the neutrophils in the bone marrow, which is the primary cause for neutropenia. We now have good laboratory studies to support this idea and we have filed an NIH grant to fund the research. We also have an agreement with Merck, the company having a potential drug to inhibit the enzyme neutrophil elastase. We hope that we can begin a clinical study in a year or so.

We continue to work on ideas for therapies for neutropenia. We will use the NNN newsletter to keep you informed. We will be happy to answer your questions and welcome you ideas.

Thanks for your help and support for our research.

David Dale MD, first became interested in inflammation, neutrophils, and the clinical problems of neutropenia, during his six years at the National Institute of Health from 1968 to 1974. He is a co-founder of the Severe Chronic Neutropenia International Registry which will celebrate its 20 year anniversary in 2014. He continues to serve the neutropenic patient community as a co-director of the SCNIR with Dr. Karl Welte who lives in Hannover, Germany.
Two Birthdates for Brian

Two birthdays, that’s how some transplant survivors refer to their lives. Brian Gamely was born on November 17, 1953. His second birthday came nearly sixty years later in 2011.

In the 1950s and 60s when Brian was growing up, he was plagued with recurrent infections. Antibiotics and warm compresses were the treatments of choice back then. There was no Neupogen to spark the production of the neutrophils Brian lacked, and it would be many years before doctors would give a name to the bone marrow failure condition responsible for his persistent ailments: mouth sores, pneumonias, skin lesions and anal fissures. Dozens of biopsies were taken when Brian was a child but they never explained the cause of his illnesses.

Brian’s childhood memories include many missed school days and mysterious infections that made him feel like an outsider. One of his most difficult memories revolves around a visit to the dentist as a young boy. “Back then the dentist was under the impression that my red gums and mouth sores were the result of me not taking care of my teeth.” But Brian was vigilant about his mouth care. “I still have vivid memories of gargling with salt water, hoping it would make a difference.” He recalls nervously sitting in the dentist chair when he was ten. “He was filling a cavity, and I started to cry because my gums were so red and it was painful. The dentist got very impatient and slapped me. My mother thought I was being a baby and told me to grow up. They just didn’t understand what I was going through.”

The worst childhood infection he can remember came after his tonsils were removed when he was hospitalized for six weeks. “I took antibiotics all the time as a child,” said Brian. “They gave me so much penicillin I think that might be why I can’t take it anymore.”

Sports were the centerpiece of life the small Northern Canadian town where Brian grew up. His favorites were hockey baseball and curling. Brian refused to let his infections get in the way of his love of sports, always choosing to participate unless he was absolutely too sick. He played catcher in baseball and goaltender in hockey, opting for these positions because they didn’t require a lot of running and the masks protected his fragile gums and teeth. “I’m grateful my parents let me play sports. I often felt like an outcast because of all my health problems and sports made me feel more normal.”

In 1987 when Brian was thirty four, a young intern took a special interest in his case and suggested he might have neutropenia. This led to a trip to Mayo Clinic in Rochester Minnesota where he underwent many tests which led to a diagnosis of leukemia. This hit him hard as his wife was expecting their second child, and another family member was battling leukemia at that time. He was relieved three days later when the doctors said further review of his bone marrow biopsy led to a new diagnosis of a very rare condition called chronic neutropenia. What a relief: no leukemia and something to finally explain the bewildering illnesses Brian had suffered throughout his life. The Mayo Clinic doctors also told him it was time to lower the “industrial” doses of Prednisone he’d been taking for years. This was good news as the Prednisone had taken a toll on his health. He was fifty pounds overweight, bloated and uncomfortable. He had also been trying to manage debilitating back pain caused by degenerating discs.

In 1991, Brian had back surgery for three deteriorated discs. A septic infection followed nearly costing him his life. Out of desperation Brian’s wife began her own research on neutropenia and discovered there was a new wonder drug that might help her husband. She lobbied hospital physicians...
for five days until they agreed to try Neupogen. The new drug worked—spurring Brian’s bone marrow to produce the powerful bacteria-killing neutrophils he lacked. It wasn’t long before he took a turn for the better and was discharged from the hospital. Brian went back to work as soon as he could manage but was knocked back again when he suffered a heart attack. He was thirty seven.

Brian soldiered on for the next six years. The Neupogen he took regularly helped, but he still suffered from low grade infections, persistent mouth sores and lung problems. Exhausted, stressed and clinically depressed at the age of forty four Brian made the difficult decision to go on disability.

For the next fifteen years without the stress of his work as an insurance adjuster, Brian’s was better able to take it easy and enjoy his family, but he continued to fight infections and take antibiotics when the Neupogen wasn’t enough. He also had a lobectomy for a persistent lung infection.

Then in 2011 his hematologist called him and said he needed to come to Winnipeg as a recent blood test showed some cause for concern. They performed a bone marrow biopsy which revealed leukemic blasts. He was told his only option for survival was a bone marrow transplant. “I listened to all the risks. We had a family meeting, (about ten seconds) and I told them I was going for the BMT, and that was that.”

The search for a match began in May and by August they had found a donor. “On October 5, 2011 I was given my second chance at life,” Brian said. The transplant wasn’t easy. It required chemo, weeks in isolation and more time at home recuperating—but it was a success. After fifty eight years of neutropenia Brian Gamely’s bone marrow was fully functioning.

Brian refers to his donor, a young mother from Kentucky, as his angel. After his transplant, nurses gave Brian a deeply moving letter his donor had sent at the time she donated her marrow. This October Brian and his wife made the trip to Kentucky to meet his “angel.” He gave the young woman who saved his life a big tearful hug. “It’s a moment I will never forget,” Brian said. “She is a wonderful person, kind and generous. I feel so privileged to have met her.”

Brian is grateful to the NNN for bringing neutropenia awareness to the medical field and for our family support programs. He attributes his survival through so many difficult times to his wife, Karen, his two sons, Ryan and Sean, the medical personnel who took the time to understand him, and of course the thirty year old mother in Kentucky who was willing to help a perfect stranger get a second chance at life.

Against the Odds: Davon’s Story

While changing her infant’s diaper, Reva J noticed a boil that looked so suspicious she packed her baby up and took him directly to Children’s Hospital in Detroit. She had no idea it would be the first of many hospital visits for little Davon whose blood work revealed the complete absence of neutrophils. The hematologist at Children’s diagnosed him with Severe Congenital Neutropenia, and within months she placed Davon on a daily dose of Neupogen. The injections helped, but they didn’t completely prevent infections and hospitalizations.

“I was in the hospital almost every month,” said Davon of his school years. “I missed a lot of school, and my Mom missed a lot of work. We were always
worried about germs, and I couldn’t go out and play. I had to stay in the house all day.” Davon said the most difficult part of having neutropenia was, “missing my childhood.”

When Davon was in middle school he met with an expert on congenital neutropenia at the University of Michigan in the nearby town of Ann Arbor. Davon hit it off with the new doctor and still sees the specialist at least once a year. Dr. Boxer split Davon’s Neupogen dose from one injection a day to two, and things got better. Davon said the new regimen seemed to diminish the infections and give him a break from the awful pain he felt in his leg, but it was hard to adjust to taking two shots a day. “I was mentally and emotionally tired. I didn’t want to take the shots all the time but I knew I didn’t have a choice.”

Davon echoed one of the common concerns of children with chronic illness as he recalled how he sometimes felt like a burden to his family. “I don’t really like to be helped. I want to be the one helping,” he said. “I know my family still worries about me, but I don’t want anyone worrying about me. I want to know my family is okay. Then I am okay.”

Now at the age of twenty Davon said he’s not exactly “at peace” with his neutropenia. “But I live with it. I know I have to. I get up every morning and do the same thing and go to bed every night doing the same thing,” he says referring to his shots. Still Davon is not bitter, “I stay positive. I run every day. I try to have a healthy diet, and I have a goal of one day finding a cure for my disease. Then I’ll be at peace with it—when I know other children won’t have to go through what I did. After all “children are our future,” said Davon.

Despite his the childhood illnesses and hospitalizations that kept him out of school Davon persevered with his education, and two years ago he was accepted at Wayne State University. Davon says neutropenia has made his life difficult, but it has also made him a hard worker with a thoughtful approach to life. “I know it’s made me more mature than other kids.” Davon says of his condition.

This August Davon’s educational dreams met a roadblock when he was short of funds to register for his junior year. Reva called the National Neutropenia Network looking for some help. At about the same time Liam, a nine year old boy in Ohio with congenital neutropenia was partnering with his brother to hold a garage sale with all proceeds going to the NNN. Magically Liam and Evan raised $305, the amount Davon needed to get back into school. The NNN pitched in some extra funds for books, and sent a $500 check to Davon who signed up for school and is now taking a full load of classes. “We were happy for the chance to contribute to Davon’s education,” said Lucy Lyman NNN president. “We look at it as an investment in a young man’s future.”

Kristin’s Story

“It all started in college,” said Kristin Hayes, as she discussed her long road to a diagnosis of idiopathic neutropenia. She kept getting frequent infections like bronchitis and cellulitis—nothing life-threatening, but the kind of infections that can make life very difficult for a high-school All-American recruited to play on the Harvard Women’s Lacrosse team. In her junior year, Kristin had earned her place as the team’s starting goalie. It was a dream come true, something she had worked hard for since her freshman year in high school.

It never occurred to Kristin that her recurrent bronchial infections, cellulitis and fatigue were anything more than the cost of carrying a full academic load and a rigorous athletic schedule, but routine blood work before a study abroad trip to Norway suggested there might be something
more underlying her malaise. The team doctor noted Kristin’s ANC count was 600; although he felt the number was not serious, he felt that her ANC count should be followed. The counts fluctuated between four and eight hundred and the chronic infections kept coming. Kristin managed to maintain her grades and keep up with her training regimen until a refractory case of bronchitis put her in the school infirmary. What followed was heartbreak for Kristin. “I lost my starting position as the team goalie, something I had worked so hard for. It might not seem like a big deal now, but I was devastated at the time. I came close to quitting after the end of the season, but I couldn’t. I loved the game and my team too much.”

This marked the start of Kristin’s journey towards a diagnosis of idiopathic neutropenia. Many readers will relate to what followed. The team doctor referred her to a hematologist in Boston who told her to relax and not to worry: she had chronic benign neutropenia, and this probably wasn’t the cause of her recurrent illnesses. This was unsettling as she felt run down and the infections always seemed to be smoldering beneath the surface. They were never life-threatening or bad enough to put her in the hospital, but she rarely felt her best and was on antibiotics almost constantly.

Two years later, Kristin decided to make a concerted effort to figure out what was going on. She went for a complete physical and waited over two weeks to hear from her physician. When she offhandedly remarked, “by the way, your ANC is at 200,” Kristin knew that she needed to find a different doctor—one who would help her understand and manage her condition.

She continued her search for a physician and finally found Dr. Nadeau at Beaumont Hospital in Michigan near her childhood home. “She was the first doctor who really tried to get to the root of the problem,” said Kristin. Dr. Nadeau diagnosed her with cyclic neutropenia because of the fluctuating nature of her neutrophil counts. “She started me on Neupogen, 300 micrograms twice a week.” The infections abated, but Kristin had problems with the high dose. “It made me very uncomfortable. I didn’t feel well at all.”

A year later Kristin moved to Wisconsin to attend medical school, and Dr. Nadeau recommended that she see a well-respected hematologist in the area. Kristin agreed, but not without the assurance that Dr. Nadeau, who had become a trusted friend, would continue to be available to her.

The hematologist in Wisconsin told her there was nothing really wrong with her; she could take Neupogen if she wanted, but it wasn’t necessary. “All the validation I’d gained was gone in an instant. He made me feel like a hypochondriac. I was embarrassed to take Neupogen, but I kept taking it for about a year. Then I got married and pregnant and I stopped.” Kristin did well during pregnancy as her counts stabilized at a higher level than usual. In 2011 she gave birth to a healthy daughter, Madeleine.

While she was living a full life as a medical resident, a wife and the mother of an infant, Kristin decided it was time once again to try and solve the riddle
of her unusual health condition. She sensed that the diagnosis of cyclical neutropenia might not be completely accurate. She had read about the Severe Chronic Neutropenia International Registry (SCNIR), but she hadn’t contacted them. She was afraid she would not fit the Registry’s criteria for chronic neutropenia, and after numerous physicians suggesting her condition was nothing to be concerned about, she did not want to waste anyone’s time.

Finally, she found the courage to contact the SCNIR and Audrey Anna Bolyard responded immediately, suggesting that Kristin’s history “sounds like our idiopathic patients.” Audrey Anna sent Kristin a series of articles which she read with great interest. “One abstract could have been written about me,” said Kristin. “The symptoms, the counts, the bone marrow all fit me to a tee.” She was reassured to have found an accurate description of her condition. “It was a big moment for me. I was really excited. People are not normally excited to find out they have a chronic disease, but giving a name to my condition was validating after so many years. I no longer had to say I have some weird neutropenia that no one else has and no one understands. I could simply say I have idiopathic neutropenia.”

Kristin continued to reach out for more information. She contacted the NNN, and Lee Reeves told her about a neutropenia expert in her own backyard, Laurence Boxer MD Professor of Pediatrics and Communicable Diseases University of Michigan, Executive Board Member Severe Chronic Neutropenia International Network. By the time of her first appointment with Dr. Boxer, Kristin had adjusted her dose according to the recommendations she read in medical publications. Taking small doses of Neupogen daily had given her acceptable ANC counts without the intense bone pain she’d experienced before. “I try not to miss a dose because if I do, it still gets pretty bad,” she said. Dr. Boxer was impressed and jokingly told her she didn’t need his help.

Kristin is pleased to know Dr. Boxer is available as her physician, but she hasn’t forgotten the doctor who first helped her—Dr. Nadeau. “She’s a wonderful doctor and person. I will always be grateful to her,” said Kristin. Kristin herself has developed an interest in caring for neutropenic patients and will be a featured speaker at the Family Conference in 2014. Her talk, covering women’s health and neutropenia, will be a first for the Family Conference.

When asked how she thinks her experience with neutropenia will affect her work as an OBGYN, Kristin says, “Many doctors don’t realize their patients can carry the small things they say for years. As physicians, it’s easy to be dismissive when you don’t know what to do. It’s important to always listen to what your patients are trying to tell you. You may not have the answer. But listening to your patients and validating their concerns can empower them to keep looking for a solution.”

Kristin’s presentation at the Neutropenia Family Conference will give women a chance to voice their concerns about neutropenia as it impacts their body, sexuality, and reproductive health. This is a first for the Conference—a presentation by a physician who has experienced neutropenia as a patient.

To help Dr. Hayes create a presentation of greatest value and interest to women with neutropenia, she is requesting that you share your concerns and questions. Please help out by sending your concerns and questions to lee@neutropenianet.org. Your name will not be disclosed, but your issue will be covered as best as possible.
Ask the Doctor

Transplant Options for SCN Patients

What is the difference between stem cell transplant and bone marrow transplant?
Which is preferred for SCN patients?

Peripheral blood stem cell transplant and bone marrow transplant refer to two different sources of hematopoietic stem cells. The term hematopoietic stem cell refers to the blood cells that are able to divide and make a copy of themselves or further mature into all types of blood cells including white blood cells (such as neutrophils), red blood cells, and platelets. Hematopoietic stem cells primarily reside in the bone marrow, but a very small percentage does circulate in the peripheral blood allowing collection from either source (blood or marrow space).

To collect peripheral blood stem cells, the donor is given a short course of G-CSF which causes release of hematopoietic stem cells from the bone marrow into the peripheral blood. The stem cells can then be collected by a blood apheresis machine which is able to separate the stem cells and reinfuse the blood back to the donor. Collection of bone marrow cells requires a minor surgical procedure in which the donor hematopoietic stem cells are collected directly by a small needle inserted into the marrow space, typically performed on the back of the hip bone. A third source of hematopoietic stem cells is from the umbilical cord. These cells are collected shortly after birth by draining the placenta and umbilical cord of infant blood after the baby is separated from the cord and the product is frozen for later use.

Our preferred product for patients with SCN is bone marrow cells (i.e. hematopoietic stem cells collected directly from the bone marrow space). Use of peripheral blood stem cells is associated with a higher rate of chronic graft-versus-host-disease (GVHD), an unfortunate complication of the donor immune system reacting against the body of the recipient. Umbilical cord cells can also be used in place of bone marrow cells, but because they have a smaller amount of cells, there is an increased chance of the cells not growing in the recipient and can result in graft failure (i.e. absent donor cell growth in the recipient). However, in some situations, cord blood cells may be preferred. Such decisions are based on multiple factors including availability of a suitable marrow donor, the risk of graft rejection in the patient, and experience of using different stem cell sources in each transplant center.

The protocol for STC/BMT in general has changed in the past fifteen years. What are some of the most significant changes?

Bone marrow transplant in general has changed significantly in the past fifteen years. Outcomes of bone marrow transplant for all types of diseases have improved significantly secondary to improvements in matching donor cells with recipient cells, supportive care measures to treat and prevent infection, safer conditioning regimens prior to infusion of stem cells, and better recognition and treatment of graft-versus-host-disease. Because of improved safety, the use of bone marrow transplant in many diseases, including SCN, is becoming more common.

Specifically for SCN, there have been several changes that have resulted in better bone marrow transplant outcomes. First, we have gained a better understanding of patients with SCN who are likely to have complications including sepsis and malignancy during their lifetime. This has allowed us to identify high-risk patients early in life before further complications develop and quickly proceed to bone marrow transplantation. Second, in addition
to early recognition of high-risk patients, improved supportive care prior to transplant, including the use of G-CSF, has created a healthier population of SCN patients entering transplant, increasing the likelihood of a successful transplant. Third, we have identified unique factors of SCN that has changed our approach to transplant in this disease resulting in better outcomes. In particular, early outcomes of transplant for SCN were complicated by high rates of graft failure and organ toxicity from conditioning therapy. With the institution of less toxic conditioning regimens and additional immune suppression prior to bone marrow transplantation, we have reduced organ toxicity and decreased the rates of graft failure in this population. The decreased intensity of the conditioning regimens has also resulted in less long-term complications.

Current areas of research to better select transplant candidates and improve outcomes include better understanding of the relation of specific gene mutations and severity of SCN disease and the ability to cure disease with only partial engraftment of donor cells. This latter idea is that you may not need to replace the entire bone marrow of the recipient and only need a reduced amount of chemotherapy to obtain a small number of donor cells to produce enough neutrophils to protect the patient.

How does your protocol for SCN patients differ from leukemia patients who do not have a bone marrow failure condition? and Why?

There are many different bone marrow transplant protocols and selection of a protocol depends on the patient and underlying disease. For patients with SCN, given the history of neutropenia, SCN patients are at risk of having “occult” infection, which refers to an organism, typically a fungus, residing in the patient but not causing disease.

Once conditioning therapy for bone marrow transplant is given to the patient, the additional immune suppression may cause the growth of these “occult” infections resulting in disease. Therefore, patients with SCN are screened prior to transplant for infection, typically including a CT scan of the chest, abdomen, and pelvis.

The conditioning therapy is also modified for patients with SCN. Radiation is not necessary for patients with SCN only (i.e. have not developed dysplasia or leukemia). The goal is to replace the bone marrow of the host, but there is not the extra requirement to eliminate leukemia cells of the host. In some instances, this may allow less intense conditioning regimens. Second, in patients with leukemia, we are relying on the donor immune cells to actually attack and kill leukemia cells. To allow this process to happen, patients are quickly weaned off immune suppression shortly after transplant to avoid early suppression of the donor immune system. This places the patient at higher risk of graft-versus-host-disease. As this is not a requirement for patients with SCN and no leukemia, they rate of weaning of immune suppression is slower to avoid graft-versus-host-disease.

Is there a difference in recommended transplant protocol for SCN patients who are poor responders compared with SCN patients who are showing signs of converting to leukemia?

SCN Patients who develop leukemia or myelodysplastic syndrome (MDS, a condition where a population of hematopoietic stem cells cannot mature correctly. They do not proliferate uncontrollably like leukemia, but do prevent normal growth of healthy bone marrow cells resulting in low counts.) can only be cured with bone marrow transplant. However, the outcomes of bone marrow transplant for SCN patients with
leukemia or MDS are far inferior to SCN patients transplanted without these complications. Typically with the development of leukemia, patients must first receive one or more cycles of chemotherapy to place the disease in remission before bone marrow transplant. However, this is very difficult to do in patients with SCN as they do not tolerate this treatment as well. Neutrophils are important to prevent infection and toxicity from chemotherapy and thus patients with SCN have developed major issues from leukemia treatment prior to bone marrow transplant secondary to their prolonged neutropenia. Because of this issue, it may be preferred to not receive any pre-treatment of the leukemia prior to the conditioning therapy for bone marrow transplantation. This results in less likelihood of eradication of leukemia or MDS cells by the transplant and worse outcomes related to leukemia or MDS relapse. Patients may require more intense conditioning regimens secondary to presence of leukemia or MDS and more aggressive measures to treat leukemia or MDS after transplant. This would include a shorter course of immune suppression after transplant to try and increase growth of the donor immune system to attack the leukemic or dysplastic cells.

Are there any measures SCN patients who are doing well with Neupogen should take in preparation for the possibility of a Stem Cell Transplant? (HLA typing? Is it possible to search for donors in advance?)

A consultation with a bone marrow transplant physician with experience in transplant for SCN is always helpful. This can be done locally or arranged over the phone with the help of the registry. Even if transplant is not indicated, further education about the process of transplant goes a long way to help future decision making if conditions would change. HLA typing of the patient can be done and returns in about 7-14 days. A preliminary search can be conducted if a sibling is not available for testing. The preliminary search queries the unrelated donor registry for any potential match. This can be done if interested by the patient and his or her family, but does not commit you to transplant. Additional steps including obtaining a second sample to confirm the match should not be undertaken unless you are committing to transplant as this requires additional charges to your insurance company.

What is the current transplant success rate compared with fifteen years ago?

It is hard to comment on direct success rates 15 years ago as transplant was not commonly used for SCN 15 years ago. The first report published from the SCNIR in 2000 reported the outcomes of only 11 patients with SCN without malignancy that covered a time span from 1976 through 1998. The majority of patients received a matched sibling donor transplant, but only 8 patients survived with cure and there were noted toxicities from more intense conditioning regimens. With safer transplant regimens, outcomes are significantly improved today which has allowed this modality to be a more attractive option for patients with SCN. Individual outcomes are improved with the availability of a good match and procession to bone marrow transplant before complications of the disease develops.

James A. Connelly MD, received his medical training at Washington University in St. Louis. He received both his pediatric general and hematology/oncology training at the University of Michigan. Dr. Connelly is the Co-Director of the Immuno-Hematology Comprehensive Program whose goal is to treat and research patients with disorders of the immunologic and hematologic systems. He is also the Director of the Pediatric Bone Marrow Transplant Late Effects program. His expertise is in bone marrow transplantation for patients with non-malignant disorders. Dr. Connelly will be available to consult with patients at the Neutropenia Family Conference.
ANC Cycles and Neutropenia

Why is a new diagnosis of cyclic neutropenia unlikely in adults?
Cyclic neutropenia is a hereditary disorder, so it usually presents in childhood. However, milder forms of the disease, also present throughout life, may come to medical attention only in adulthood, due to an infection, periodic fevers of unknown origin, or dental disease.

Do ANC counts for idiopathic neutropenia patients’ cycle?
Cycling (that is, periodic ups and downs in the ANC) can occur in any form of neutropenia, including idiopathic or even severe congenital neutropenia on Neupogen therapy. In cyclic neutropenia, the cycling is usually much more regular (generally every 21 days) and other family members are often similarly affected.

How is cyclic neutropenia diagnosed?
The most important test is to follow the pattern of CBC results over about 6 weeks (two cycles), with blood counts three times a week to measure the changes in the ANC, determine how low the ANC falls at its lowest point (“nadir”), and determine whether there is a characteristic rise in the monocyte count at the ANC nadir. Sequencing of the ELANE (formerly ELA2) gene may also be helpful, as a mutation is present in virtually all cyclic neutropenia patients.

How is cyclic neutropenia treated?
If the ANC nadir falls below 200 cells/mm3, or if the person has infections, dental complications, or other serious symptoms of the disease, then treatment with filgrastim (Neupogen) is generally very effective, often at quite low doses. There is virtually no risk of leukemia in cyclic neutropenia patients treated with Neupogen. Good oral hygiene and prompt evaluation and treatment of febrile illness (especially if accompanied by abdominal pain) are also important.

Peter E. Newburger, MD, is the vice chair for research in the Department of Pediatrics and director of the Division of Pediatric Hematology and Oncology at the University of Massachusetts Medical School. He also serves as professor of Cancer Biology at UMass Medical School and Graduate School of Biomedical Sciences. Dr. Newburger serves and the medical advisor to the NNN. Dr. Newburger also serves on the scientific advisory board and executive committee of the Severe Chronic Neutropenia International Registry.

THANK YOU ELLA JEWELL FOUNDATION! This hard working, high energy group has launched an ambitious program to raise funds for neutropenia research and the NNN. Families from all over the country whose lives have been impacted by neutropenia will participate in Bowling 4 Neutrophils. Between December 11th and 15th hundreds of people will gather for a day of fun and bowling as they raise funds for neutropenia research and patient support. “We are excited about Bowling 4 Neutrophils. It has the potential to grow into an event that can greatly benefit neutropenia research and strengthen patient support,” said Kristin McGuinness, president of the Ella Jewell Foundation.

Lee Reeves, said the NNN is pleased to be partnering with the Ella Jewell Foundation to promote Bowling 4 Neutrophils. “We appreciate the tireless work of the Ella Jewell Foundation to advance the cause of neutropenia research. We are grateful they plan to donate 25% of event revenue to the NNN. It will go a long way to advance our cause of patient education and support.”
Conference Details July 11-13

The 2014 Neutropenia Family Conference will be held at the beautiful Marriott Eagle Crest www.annarbormarriott.com. The National Neutropenia Network has reserved a block of rooms at a discounted price of $110 plus tax, per room. We recommend reserving as early as possible.

Conference fees are inclusive. They include all presentations, handouts, children programs, and meals: Friday reception, breakfast, lunch and dinner on Saturday and Sunday breakfast.

Early Bird: Before April 1, 2014
$175 each for 12 years and up/ $100 each 4 to 11 years

Regular Registration: April 1 and later
$195 each for 12 years and up/$120 each 4 to 11 years

Conference highlights:

• Top Docs talk Neutropenia: Mary Ann Bonilla MD, Laurence Boxer MD, and David Dale MD will give presentations about SCN, the different types, its treatment, the latest research, the SCNIR and more.

• Physician Consultations: One on one meetings with hematologists knowledgeable about SCN. We try to accommodate all who apply but cannot guarantee it.

• Parenting session with Jennifer Butcher: Director, Pediatric Psychology Fellowship Program at the University of Michigan Health System. Dr. Butcher will talk about the special challenges of parenting children with a chronic disease and their siblings.

• Living with Neutropenia for Patients Only: This was one of the most popular sessions last year. It gives adults with SCN a chance to talk to peers openly and confidentially. Shay Jones MA LPC will lead this session.

• Women’s Health and Neutropenia: See pages 4–6 for more information.

• Kids Camp: A chance for children to meet others with neutropenia in a fun setting where they can laugh and learn together. Programs designed for youngsters from three to thirteen.

This is just a sampling. The weekend will be packed with informative sessions and sharing time. Check out our website in early 2014 for more info.

Patient Mini Grants: As in past years, we will award grants to patients and families who cannot attend the Neutropenia Family Conference without financial assistance. Preference is given to those who have not attended a Conference. We do not yet know how much funding will be available. We depend entirely on donations from friends and family who understand what it means to live with neutropenia. Donors may contribute to the NNN through neutropenianet.org or the National Neutropenia Network PO BOX 1693, Brighton, MI 48116.

Gifts to the NNN are Tax Deductible. Check our website in early spring for more information on Patient Mini Grants.