Dear Members:
What a fantastic chapter we have! You can see by this newsletter that we are creative, innovative, leaders, and all around award-winning nurses! Having the Chief Executive Officer of our national organization amongst us puts us in the national spotlight also.

Congratulations to you all for winning the 2013 Chapter Award (mega chapter no less!). This interests and is in tribute to our clinic and hospital nurses, writers, editors, presenters, preceptors, staff leaders, board members, researchers, administrators, scholars, and community-minded nurses! With this strong tradition of nursing excellence, several members stand ready to mentor others to gain similar leadership positions, and employ evidence based nursing decisions.

Do come to meetings and you will meet others in your field that share your will provide camaraderie as well as ideas and solutions for oncology care. Contact Deborah Allen (hutch.allen@duke.edu) for specific assistance and connection to a strong mentor. Or step up for election to our board, and learn the ropes for one of our board positions. Furthermore, contact Bonnie Toaso at btoaso@yahoo.com for scholarship opportunities to our Regional Conference on Sept 20 in Chapel Hill with over 6 CEs available. Our chapter wants to give back to members, and has provided this quality education meeting in a central location, and we hope you will join us. The cost of the speakers, food, facility, etc. total over $200 per attendee, but we are supplementing the budget with the chapter treasury to keep it at half that cost. **Register by Sept 4** for a special raffle entry!

Have a great last month of summer with some relaxation and fun times. Come share fellowship and practice excellence at our monthly meetings as we continue to be a stellar chapter!

Be Well,
Kathy Trotter, DNP, CNM, FNP-BC
Save the Dates for Upcoming Meetings

- **August 19**
  - Zevalin, A Radioimmunotherapy Drug for Non-Hodgkin Lymphoma; Presented by Treva Greer at Angus Barn; Sponsored by Spectrum Pharmaceuticals
- **September 20**
  - Chapter-Sponsored Regional Conference at Rizzo Conference Center; over 6 CEs offered; register by 9/4 to be eligible for a special raffle; $100 for ONS members; register at [http://tinyurl.com/Regional-TONS](http://tinyurl.com/Regional-TONS); see page 8 for more details
- **October 21**
  - The New Wave of Cervical Cancer Screening; presented by Dr. Kenneth H. Kim (MD at UNC) at the Sheraton in Chapel Hill- 1CNE (if accepted)
- **November 19 or 20**
  - Surgical Oncology- 1 CNE (if accepted)
- **December 4**

**In the Shadows: How to Help Your Seriously Ill Adult Child**

A special thanks to Patti Beach, MSN, RN, AOCN, ACHPN, who was our July meeting speaker. She flew in from Ohio to give her talk on “Care of the Seriously Ill Adult Child.” For anyone who missed her talk or who wants more information, we direct you to her book, “In the Shadows: Helping your Seriously Ill Adult Child.” It was awarded 1st place in The American Journal of Nursing’s 2013 Book of the Year Award in the Consumer Health Category. It is available through ONS and Amazon.

**TONS Member Named ONS CEO**

A big congrats to Brenda Nevidjon, RN, MSN, FAAN, who was named the new CEO of ONS, effective September 1st. Brenda has long contributed to the Triangle with key positions at Duke University Hospital and Duke University School of Nursing. We are so proud to see one of our own TONS members succeed in this way!
**Show me the money!**

Did you ever wonder how NCTONS members can have chapter meetings at nice venues and enjoy scrumptious meals when ONS only gives the chapter $10 each year for each member? Do you have an interest in expanding your own professional “brand”? If so, read on.

This is a good time for me to teach someone the fundraiser/industry coordinator role. This should be someone who like working with money!, is interested in learning the business side of NCTONS and the skills needed to negotiate contracts and work with industry representatives as part of our fund-raising activities.

I would love to hear from anyone who would be interested in exploring business practices and approaches and to discuss what this role might include. Skills include negotiation, coordination, contracting, fund-raising, and interfacing with industry representatives by building a relationship with them.

This role is a very important aspect of “selling our chapter” to the larger community and providing a sustainable treasury for the chapter.

I look forward to hearing from someone who wants to make a very important contribution to your ONS chapter.

Best Regards,
Faye McNaull
fmcnaull@nc.rr.com

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**TONS Communication**

If you or if you know someone that is not receiving any communication from the chapter please refer to the following steps:

1. First check your ONS Profile to ensure that the email address shown in your Profile is correct, and that you have not unsubscribed from receiving email messages.
2. If you have opted to unsubscribe from receiving emails, you can contact chapters@ons.org to get added back onto the mailing list.
3. If you are subscribed and are not receiving emails, the emails are likely going into your junk folder, or being blocked by your service provider’s firewall. Please check your SPAM filter and to add postmaster@lists.readyportal.net to their address book.
4. If the Triangle chapter is your designated chapter, bookmark and refer to the NCTONS website [http://trianglechapter.vc.ons.org](http://trianglechapter.vc.ons.org)

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**Chapter Kudos**

Congratulations to NCTONS Member, Jean Sellers! She has been elected as coordinator elect to the ONS Nurse Navigator SIG. Jean is the Administrative Clinical Director for UNC Cancer Network.

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**Employment Opportunity**

**Director of Clinical Research – Duke Cancer Network**


If interested in applying for this position or have questions, please contact Melanie Watson at 919-419-5010 or melanie.watson@duke.edu
Cultivating a Culture of Nursing Excellence: A Presentation of Posters

The TONS May 27th program celebrated with 13 local oncology nurses who were selected to present their work or research at national or international conferences over this past year. There were over 50 nurses in attendance and 7 vendors as 12 posters and 1 oral presentation was provided after the TONS business meeting.

The evening started with members talking with representatives from Celgene, Novartis, Spectrum, Genetech, Avella Specialty Pharmacy, Medivation, and Merck, to learn the latest in the available patient medication programs. The catered dinner from the Picnic Basket in Durham was served in the beautiful inspiring Duke School of Nursing atrium which prompted a lot of networking with each other in the room. Following the TONS business meeting, Liz Sherwood from UNC Lineberger Comprehensive Cancer Center provided a briefing on her oral presentation that she and cancer survivor Amber Vance had delivered at the OMG2014 Cancer Summit. Subsequently, members moved into the room for poster viewing to have presenters describe their projects, answer questions, and spark new ideas on their particular topics.

It is our hope this year that we foster professional growth and development for all of our local TONS members. This evening proved to be a creative means to stimulate one other by building on the successes that these nurses presented. Although this newsletter article only provides the names of the presenter, presentation title and conference, I hope to provide you several of the abstracts over the next few newsletters to spark more interest – future projects, collaborations, or submission of an abstract of your own work for conference presentation. Don’t forget to enlist in the Mentorship Program if you would like some assistance with projects, abstract writing, presentation development, or manuscript writing – contact hutch at allen079@mc.duke.edu.

List of Presenters

Oral Presentation
• Elizabeth Sherwood
  “Forging partnerships with cancer hospitals” was presented at the OMG2014 Cancer Summit for Young Adults, held in Las Vegas

Poster Presentations
• Tracy Gosselin
  “Post-treatment symptoms & quality of life in symptom-defined rectal cancer survivor subgroups” was presented at 2013 ONS Connections: Advancing Care through Science Conference held in Dallas
• Rebecca Phillips
  “Administration of Intravenous Immunoglobulin” was presented at the American Society of Blood & Marrow Transplantation 2014 Annual Meeting in Dallas
• Rebecca Porter, Deborah Russell, & Martha Lassiter
  “There’s nothing mini about a haplo: Nonmyeloablative haploidentical stem cell transplantation and the older adult” was presented at the American Society of Blood & Marrow Transplantation 2014 Annual Meeting in Dallas
• Suzanne Roth, Jennifer Frith, & Martha Lassiter
  “A quality improvement program: Structured exercise for the outpatient blood & marrow transplant patient” was presented at the American Society of Blood & Marrow Transplantation 2014 Annual Meeting in Dallas
• Deborah Russell & Martha Lassiter
  “Finding a nursing pipeline… The professional Nursing Assistant” was presented at the American Society of Blood & Marrow Transplantation 2014 Annual Meeting in Dallas
• Elizabeth Sito & Deborah Russell
  “The importance of skill simulation & its role in the clinical performance of the new graduate BMT nurse” was presented at the American Society of Blood & Marrow Transplantation 2014 Annual Meeting in Dallas
• Kathy Trotter & Susan Schneider
  “Evaluation of a breast cancer survivorship clinic that uses a group medical appointment: Patient program evaluation and financial analysis” was presented at 2013 ONS Connections: Advancing Care through Science Conference held in Dallas
• Ann Marie Lee Walton & Ashley Leak Bryant
  “Racial/ethnic disparities in acute leukemia: A retrospective chart review” was presented at the 2014 ONS 39th Annual Congress Meeting in Anaheim
• Kim Ward
  “Clinical Trials Accrual Huddles --- CATCH: A new patient screening approach for the community cancer research program” was presented at the 2014 ONS 39th Annual Congress Meeting in Anaheim
• Deborah Allen, Elizabeth Abernathy, Kerri Dalton, ZaNeta Heartwell, Laura Houchin, & Martha Lassiter
  “Redesigning oncology orientation: Development & implementation of a case study approach” was presented at the 2014 ONS 39th Annual Congress Meeting in Anaheim
• Deborah Allen
  “Identifying cognitive reserve in survivors of primary brain tumors: Using proxies of premorbid intelligence, occupation, and education”
  “A descriptive study on the relationship of cognitive function and cognitive reserve in survivors of primary brain tumors” were presented at the 2013 Society of Neuro-Oncology Annual Meeting in San Francisco
  “The relationship of the Clinical Trials Battery Composite and Executive Interview-25 in adult survivors with primary brain tumors” was presented at the 2014 International Cognition and Cancer Task Force Meeting in Seattle

North Carolina Triangle Chapter is a recipient of the 2013 ONS Chapter Excellence Award! Only five chapters across the country are awarded this special honor. We have won this award four times in a row now, but this is our first time winning in the mega chapter category (new largest category). ONS awarded us $750 for our chapter activities during the 2013 calendar year. Congrats TONS members!
NCTONS Board Election this Fall 2014

This fall we will have elections for new NCTONS Board members. Each position serves a 2-year term. This will be for January 2015-December 2016. Please consider nominating yourself or a colleague.

The opening positions include:

- President-elect
- Program Chair
- Membership Chair
- Nominating Chair
- Secretary
- Political Liaison

For more information, please contact Caroline Smithson at cr162@duke.edu.

Political Update

It is with great joy that I share with you that HB 644, a bill geared towards the safe handling of hazardous drugs for healthcare workers was signed into law on Tue July 22! Now, health care facilities have to comply with rules from the National Institute for Occupational Safety and Health and requires the Department of Labor to develop safer regulations for health care personnel who handle antineoplastic agents. The Department of Labor must develop these regulations by Jan. 1, 2016. The commissioner of labor must form a work group comprised of hospitals and organizations representing health care personnel. Thanks to each of you for your work advocating for the passage of this bill. We should be proud!

Also, please join us at the Fall Conference (register at http://tinyurl.com/RegionalTONS), Renee Ellmers, Brenda Cleary and Gale Adcock are all preparing special messages for you as Oncology nurses as they are all nurses running for elected positions this fall.

Please let me know how I can serve you.

AnnMarie Walton
NC TONS Political Liaison
Amlee78@yahoo.com

Community Events

Thanks to all who donated items for our Stock the Shelves drive to support the Food Bank of Central and Eastern, NC. Final count forthoming!

Regional Conference on Sept 20th: Donation drive to support Cornucopia House. Most needed items are:

1. Postage stamps
2. Printer Ink (HP 901, HP 60, HP 920)
3. $25 gas cards (for their transportation assistance program for cancer patients)
4. White copy paper (8 ½ x 11)
5. White folders (with 2 pockets on the inside)

Light the Night in Raleigh on October 11th at 5:30; NCTONS Team- info forthcoming

Free to Breathe in Raleigh on November 1st; info forthcoming

Kaps for Kids 2014, COMING SOON!!

--Mary Dunn, Community Outreach Chair, uvanurse04@hotmail.com
Please go to the following link for Registration:

http://tinyurl.com/Regional-TONS

$100 ONS members, $120 non-members.
When registering you will be prompted to enter your credit card information.

Lodging:

Hampton Inn & Suites
$89 per night
www.chapelhillsuites.hamptoninn.com
Phone: 919.403.8700
Group Code: NCT
Rate is available through September 1st.

In an ongoing effort to support our community, NC TONS is asking for your donations to benefit Cornucopia House. A list of most-needed items will be available prior to the Conference!

TONS Regional Conference
North Carolina Triangle Oncology Nursing Society
Rizzo Conference Center
150 DuBose House Lane
Chapel Hill, NC 27517
7:30am - 4:30pm

Keynote Speaker
Dr. Susan Bauer-Wu, PhD, RN, FAAN
Kluge Professor in Contemplative End-of-Life Care at the University of Virginia School of Nursing.
The author of, Leaves Falling Gently: Living Fully with Serious & Life-Limiting Illness through Mindfulness, Compassion, & Connectedness. The immediate past-president, Society for Integrative Oncology.

Program Agenda:

7:30-8:00 - Registration & Check In
8:00-8:15 - Welcome
8:15-9:15 - Bright Beacon: Rekindling and Remembering the Light in Oncology Nursing
   Dr. Susan Bauer-Wu, PhD, RN, FAAN
9:15-10:05 - Updates in Triple Negative Breast Cancer
   Anna Kate Owens, RN, MSN, FNP-BC
10:05-10:30 - Break with Raffle & Exhibitor Displays
10:30-11:20 - Oral Medication Adherence Issues
   Sue Schneider, PhD, RN, AOCN, FAAN
11:20-12:20 - Journey to Nursing Leadership Panel
12:20-1:15 - Lunch including Raffle and Exhibitor Displays
1:15-2:05 - Managing Dermatologic Toxicities of Treatments
   Cyndy Simonson, NP
2:05-2:55 - Fertility Issues in Cancer Care
   Dr. Jennifer Mersereau, MD
2:55-3:10 - Break
3:10-3:20 - Election Update
   AnnMarie Walton, RN, MPH, OCN, CHES
3:20-4:15 - Single Fathers Due to Cancer
   Bruce Han
4:15-4:30 - Closing Remarks Evaluation

This activity has been submitted to the Oncology Nursing Society for approval to award contact hours. ONS is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's COA.
Over the past few years, tumor treatment fields (TTF) specifically NovoTTF-100A designed and invented by NovoCure, has gained momentum in clinical research in cancer therapy. In 2011, Food and Drug Administration (FDA) approved this alternative medical therapy for glioblastoma multiforme (GBM). NovoTTF-100A System is intended as an alternative monotherapy for adults, 22 years of age or older, with a recurrent supratentorial GBM. It is a portable device that produces alternating electrical fields, also known as tumor treatment fields.

During cellular division, microtubule spindles align on opposite poles and replicate. When high and low alternating electrical fields are applied, the spindle alignments are interrupted and mitosis is halted. Research has also showed increased cellular apoptosis among cancer cells. Most importantly, TTF mechanism of action has not shown cell death or dysfunction among normal cells.

Transducer arrays are directly placed on the scalp. The head must remain shaved at all times to increase the treatment response. Patients must use the device continuously for at least 18 hours a day. The duration of the treatment is at least 28 days. The transducer arrays are replaced based on sweating, hair growth and weather, one to two times weekly. Patients and caregivers are trained to replace the electrodes on the scalp and manage the generator.

NovoTTF-100A is comparable to chemotherapy. The FDA reports the median overall survival is 6.3 months in the NovoTTF-100A group and 6.4 months in the BSC (best standard of care) group. In comparison to the BSC group, the NovoTTF-100A group had a slightly higher rate of neurological adverse events, 36.3% and 43.1% respectively, such as convulsion, hemiparesis, and headache. Also, 16% of the patients in this group had localized mild to moderate skin irritation on the scalp underneath the transducer arrays. Patients in the BSC group experienced a significantly higher rate of adverse events systemically in comparison to the NovoTTF-100A group. These include gastrointestinal, hematological, and infectious complications related to the chemotherapy.

Multiple clinical trials are underway to determine the combination efficacy of TTF with different types of chemotherapy for recurrent GBM patients, as well as those newly diagnosed. Other clinical trials are evaluating treatment response in non-small cell lung cancer, advanced pancreatic adenocarcinoma, and recurrent anaplastic meningioma.

NovoTTF-100A is not expected to have systemic adverse effects. Those listed by FDA include local potential serious side effects such as: warmth and tingling sensation beneath the electrodes, allergic reaction to the plaster or the gel, medical device site reaction, skin breakdown and infection at the site underneath the transducer arrays, electrode overheating leading to pain and/or local burns, fatigue, muscle twitching, and falls.

In addition to reporting the efficacy of TTF, quality of life was also observed and analyzed using the European Organisation for Research and Treatment of Cancer QLQ C-30 and BN–20 quality of life questionnaire. The findings in these questionnaires indicate higher quality of life. Online cancer forum blogs reveal comments by patients using this new treatment. They commonly report the generator being slightly heavy, weighing six pounds. One patient compared it to wearing a hat all day. And, since it is a fairly new treatment, stares from the public are to be expected.

Tumor Treatment Fields are contraindicated to those with implanted medical device (deep brain stimulators, spinal cord stimulators, cardiac pacemakers, defibrillators, and programmable shunts), major skull defects, metal fragments within the brain, hypersensitivity to hydrogel and transcutaneous electrodes. The NCCN recommendation was made in 2013 for a Category 2B recommendation to consider the use of ETTF for persons with local, diffuse or multiple recurrences of GBM. Insurances have increased coverage benefits. As clinicians, it is imperative we are knowledgeable of new treatments to better educate and provide resources to both our patients as well as our colleagues in health care.
Clinical trials in late stage melanoma suggest that Ipilimumab is an effective treatment against melanoma. Ongoing studies may show effectiveness in other cancers as well. Ipilimumab also has a unique set of side effects and pattern of response of which the provider must be aware. Patient education will be important to increase patient awareness of potentially serious and acute side effects as well as to aid with understanding the unique pattern of tumor response that appears to be characteristic of this immunotherapy.

Immune surveillance plays a key role in containing the growth of cancer. The body’s T-cells have been shown to attack and destroy tumor cells although some tumors are able to inhibit and/or escape detection. Many different signaling pathways control T-cell activation and inhibition, one of which involves CTLA-4. CTLA-4 (cytotoxic T lymphocyte-associated antigen 4) is a protein receptor found on the surface of T-cells that normally plays an essential role in the down regulation of the immune system. Blockade of CTLA-4 allows for continued activation of T-cell proliferation and stimulation anti-tumor activity. Ipilimumab (Yervoy®) is a human monoclonal antibody developed by Bristol-Myers-Squib that recognizes and binds to CTLA-4. Clinical trials demonstrate significant anti-tumor activity in late stage melanoma.

Ipilimumab has a half-life of 14.7 days, and does not require dose adjustments with changes in weight. Clearance is not affected by age, gender, mild hepatic impairment, or renal function. Although no formal studies have been conducted, metabolism of Ipilimumab does not appear to involve the CYP450 system so the potential for drug-to-drug interactions is low. Recommended administration and dosage is 3mg/kg given over ninety minutes every three weeks for at least four doses but no more than sixteen weeks.

To date, Ipilimumab is one of only two immunotherapeutic drugs approved by the FDA, and the first ever proven to extend survival in melanoma patients. Approval by the FDA on March 25, 2011 was based on a phase III, randomized, double blind trial of 676 patients that were previously treated stage III/IV melanoma. Results showed that the addition of Ipilimumab improved overall survival by an additional 3.6 months. Furthermore, six month progression-free survival was 30% among patients who received Ipilimumab as compared to 11% among those who did not.
Adverse reactions for Ipilimumab are the result of an up-regulated immune system and have been uniquely labeled irAEs, or immune related adverse events. Side effects of Ipilimumab have been termed “Ipi-it is” as a result of common occurrences of dermatitis, hepatitis, colitis, etc.

A pooled analysis of 1498 patients showed that 64.2% of patients experienced some kind of irAE. The most common locations for any grade of irAE was dermatologic (44.9%) and GI (32.55), followed by endocrine (4.5%), hepatic (1.6%), ocular (1.3%), neurologic (0.1%) and cardiovascular/myocarditis (0.1%).

Data released in September 2013 demonstrated that Ipilimumab extended the life of some patients with advanced melanoma for up to ten years (n=4846). This is highly significant when compared to survival in the pre-ipilimumab era of only 6-18 months.

Ipilimumab has a set of response criteria and side effects different that from traditional chemotherapy. Side effects are common and can be acute thus requiring an astute practitioner and informed patient. Patient education is important for early detection of adverse events, as well as to set accurate expectations regarding tumor response to therapy. Tumors treated with ipilimumab do not always shrink right away. Instead, the tumor area may actually grow larger and new lesions may appear. Interestingly, biopsies of tumors treated with Ipilimumab show an influx of inflammatory cells, as a result of T cell activation, that attributes to the increased size of the lesions. Patients need to be aware that it will take 3 to 12 months, after treatment initiation before regression of the tumor may be seen.

Patients need to be aware of the high cost of Ipilimumab treatments, with each injection costing about $30,000. This translates into about $120,000 for the recommended 12-week course of therapy. Company assistance programs may reduce the overall cost to $80,000.

Management of Ipilimumab toxicities requires a multi-disciplinary approach and should include the consultation of specialists who are also familiar with the treatment of immune related adverse events. Continued dissemination of knowledge about this exciting new treatment option will play an important role in its continued success in treating patients with melanoma.
Multiple myeloma (MM) remains an incurable hematologic malignancy that accounts for 1% of all cancers diagnosed each year. MM is most prevalent in African Americans, the incidence is slightly higher in males, and the median age at diagnosis is 65. Manifestations of MM are primarily bone disease, but commonly include anemia, renal failure, frequent infections, and hypercalcemia. Prognosis relies on disease aggressiveness, response to therapy, patient age, performance status, and comorbidities. Survival is generally better in younger patients.

Newly diagnosed patients are treated with varying regimens based on their eligibility for stem cell transplant. These are usually multi-drug combination regimens. Despite multiple treatment options, the majority of patients will relapse.

Pomalidomide is a novel drug therapy, an immune-modulatory drug, approved for the treatment of relapsed or refractory MM. It is used in combination with low-dose dexamethasone for patients after lenalidomide and bortezomib treatment has failed. The regimen is usually well tolerated and is continued until evidence of progression, or unacceptable toxicity occurs.

Immunomodulatory drugs inhibit angiogenesis, induce apoptosis, and down-regulate TNF and T-cell activity. In addition, Pomalidomide inhibits stromal support in the marrow microenvironment, which in turn can limit MM cell growth.

Metabolism occurs in the liver so checking for drug interactions is imperative. Substrates include CYP450, CYP1A2 and CYP3A4. Excretion primarily occurs in kidney (73%), and secondarily in the feces (15%). Pomalidomide is metabolized extensively prior to excretion, decreasing the risk of renal impairment when compared to lenalidomide.

Optimal dosing of pomalidomide is 4mg given 21 days of a 28-day cycle, and a weekly dose of 40mg of dexamethasone. Per FDA-approved guidelines, patients are eligible for treatment with pomalidomide after having progressed following at least two prior therapies. To initiate treatment, blood counts should show an ANC > 1000 and platelets >75,000, if fewer than 50% of bone marrow nucleated cells are plasma cells.

Multicenter trials support use of pomalidomide in those who are refractory to lenalidomide and bortezomib. The median number of prior therapies was 5 (range of 1-13). The primary dose-limiting factor was neutropenia (50% occurrence). Investigators have discovered that a 21-day schedule requires less growth factor support and still provides long-term management of disease. After a 10-month median follow-up, 52% of patients showed less progression.

Cases of grade 3 and 4 neutropenia occurred within the first few cycles of treatment. Less than 10% of patients experienced febrile neutropenia. Neutropenia is usually short-lived, compared with other cytotoxic chemotherapy treatments. Infection occurs in ~27% of patients using pomalidomide.

Venous thromboembolism (VTE), deep venous thrombosis, and pulmonary embolism, are serious but uncommon side effects. Only 2% of patients reported a VTE, but the population was receiving thrombo-prophylaxis, which was mandatory in trials for pomalidomide. Risk factors include a history of VTE, erythropoietin use, obesity, central venous catheter, pacemaker, infection, surgery, trauma, or blood clotting disorders.

Recommendations are CBC at baseline, every 1-2 weeks for the first 8 weeks of therapy, followed by monthly monitoring if counts are stable. Growth factor support may be used. Routine vaccinations are indicated for patients because of the increased risk of infection. Prophylactic antibiotics are also recommended for patients for the first 3 cycles of treatment. Treatment interruption and empirical antibiotic treatment should be initiated for early treatment of infections.