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P&T Update

Formulary Addition/Deletion

- Deletion of generic Clozapine, addition of brand Clozaril®, and retainment of Fazaclo® to the formulary. – Approved

- Dabigatran (Pradaxa®) formulary addition-approved
  Dabigatran etexilate mesylate (Pradaxa®) is an oral direct thrombin inhibitor. It is FDA approved for the prevention of stroke and systemic embolism in patients with non-valvular atrial fibrillation. Formulary addition of dabigatran approved with restriction to cardiology service and admitted patients taking the medication at home.

- Heparin 10,000 units/mL vials – formulary deletion-approved
  To reduce the potential for medication errors, a motion was made to remove heparin 10,000 units/mL vials from the formulary. Deletion of heparin 10,000 units/mL vials. – Approved

- Oxycodone intensol liquid 20mg/mL – formulary deletion-approved
  Oxycodone intensol liquid 20mg/mL has been discontinued by the manufacturer. Motion made to remove medication from formulary. Formulary deletion of oxycodone intensol liquid 20mg/mL. – Approved

- Ferrous Sulfate 15mg/0.6ml drops are discontinued by the manufacturer.
  Ferrous sulfate 15mg/ml drops are available and will be used as a substitute. – Deletion of Ferrous sulfate 15mg/0.6ml drops – substitution with 15mg/ml drops. – Approved

- Dexamethasone intravitreal implant (Ozurdex®) – formulary addition-approved
  It is an ophthalmic corticosteroid preparation that is FDA – approved for the treatment of macular edema following branch retinal vein occlusion or central retinal vein occlusion and posterior segment uveitis. – Formulary addition of dexamethasone intravitreal implant.

- Denosumab (Xgeva™) – formulary addition-approved
  Denosumab is a novel RANKL inhibitor approved by the FDA for the prevention of skeletal-related events in patients with bone metastases from solid tumors. Formulary addition of denosumab approved with restriction to Oncology service.

- Prescribing of chemotherapy & biotherapy agents policy

- The subcommittee developed an intra-hospital patient transfer process to address the continuation of chemotherapy when patients are transferred from one level of care to another. – Approved

- Formulary reviews for the systemic azole antifungals. Class reviews approved with no changes.

- Guidelines for hepatitis B prophylaxis in orthotopic liver transplantation. – Approved

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P&T Update *(Continued from page 1)*

- Heparin 25,000 units/250mL 0.45% sodium chloride solution – line extension.
- Addition of pre-mixed bags of heparin 25,000 units/250mL 0.45% sodium chloride solution to the hospital formulary. – Approved
- 2011 Pharmacy policy and procedure binder – The 2011 Pharmacy policy and procedure binder was presented for annual review and approval. – Approved
- 2011 high risk/high alert medications – The 2011 high risk/high alert medications were presented for annual review and approval. – Approved
- 2011 look alike/sound alike medications – The 2011 look alike/sound alike medications were presented for annual review and approval. – Approved
- 2011 standardized drug concentrations for adults – The 2011 standardized drug concentrations for adults were presented for annual review and approval. – Approved
- 2011 standardized drug concentrations for pediatrics – The 2011 standardized drug concentrations for pediatrics were presented for annual review and approval. – Approved
- 2011 dangerous abbreviations list – The 2011 dangerous abbreviations list was presented for annual review and approval. – Approved
- 2011 hazardous medications list – The 2011 hazardous medications list was presented for annual review and approval. – Approved
- 2011 drug formulary book – The 2011 drug formulary was presented for annual review and approval. – Approved
- 2011 Medication Management Standards questions & answers booklet – The 2011 Medication Management Standards questions & answers booklet was presented for annual review and approval. – Approved
- 2011 Pharmacy Department disaster plan – The 2011 Pharmacy Department disaster plan was presented for annual review and approval. The Disaster Preparedness Department has also reviewed the plan. – Approved
- 2011 Pharmacy Department Chemo Satellite disaster plan – The 2011 Pharmacy Department Chemo Satellite disaster plan was presented for annual review and approval. The Disaster Preparedness Department has also reviewed the plan. – Approved
- Automatic therapeutic exchange policy revisions – The following additions for automatic therapeutic substitution were made:

  1. Substitution of adult orders for ferrous sulfate oral liquid 220 mg or 325 mg to 300 mg (current liquid formulation 300 mg/5 mL).
  2. Substitution of milrinone 50 mg/200 mL D5W with 20 mg/100 mL pre-mixed bags or any preparation with final concentration of 0.2 mg/mL. The Cardiothoracic Surgery Division is amenable to this substitution.
  3. Substitution of adult orders for all multiple vitamin brands to formulary multiple vitamin.
  4. Substitution of nicardipine pre-mixed bags (20 mg/200 mL and 40 mg/200 mL) with 25 mg/250 mL, 50 mg/250 mL, or any preparation with final concentration of 0.1 mg/mL or 0.2 mg/mL, depending on product availability and anticipated standardization of concentrations for infusion medications.

- Alaris smart pump guardrails data set change requests. Presented for member review and approval.
- The following requests were discussed:
  - Decrease oxytocin soft and hard maximum infusion rates to prevent medication errors.
  - Add abciximab 7.2 mg/250 mL concentration for Interventional Neuroradiology use increase nitroglycerin soft maximum infusion rate to 200 mcg/min to minimize number of inappropriate alarms.
  - Decrease propofol soft minimum bolus dose to 5 mg to maintain consistency with standard practice and minimize number of inappropriate alarms.

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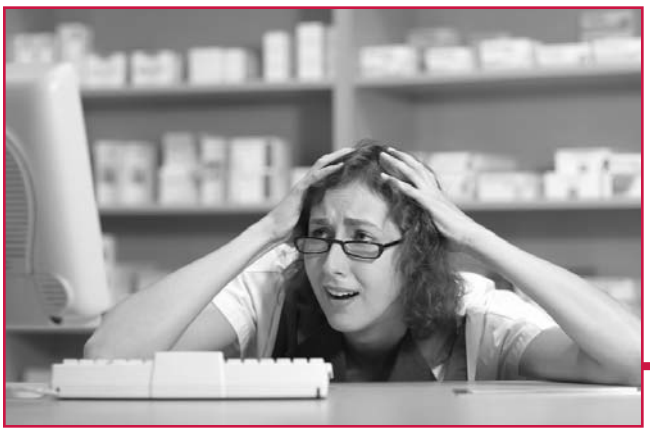
P&T Update *(Continued from page 2)*

- Change magnesium sulfate soft minimum, soft maximum, and hard maximum concentration settings to accommodate use of 2gm/50mL preparation.
- Decrease vasopressin soft minimum concentration to accommodate use of 2 units/250 mL preparation included in pediatric code cart for diabetes insipidus.
- Change bivalirudin standard concentration to maintain consistency with current practice and add wild card for preparation of other concentrations requested by physicians.
- Alaris Smart Pump library dataset revision – Nursing continuous feedback assists in Continous Quality Improvement (CQI) to the Alaris® drug pump library. Epoprostenol and nitroglycerin concentrations were programmed with the correct concentration range. Revised drug library. – Approved
- 707-400-108 Code Cart Policy revision – Amiodarone, norepinephrine, and vasopressin were added to all pediatric/neonatal code carts. – Approved
- Alaris Smart Pump drug library annual approval. The Alaris Smart Pump drug library data set was presented for annual review and approval. – Approved
- Neonate library pump setting change request Neonate Alaris Smart pump library settings were increased to 350 mmHg and 525 mmHg, respectively. These changes will prevent stasis and hard occlusions in PICC lines, while minimizing the number of unnecessary/inappropriate alarms. – Approved
- Pediatric code blue sheets – The pediatric code sheets were presented for member review and approval. The Pediatric Department and Pharmacy Department developed these sheets to provide recommended doses of code medications for pediatric patients. – Approved

Medication Errors...*A Healthcare Pandemic?*

Did you know approximately 98,000 patients die every year after hospital admission in the United States due to medication errors? Were you aware that approximately 750,000 patients are injured due to these medication errors annually? Did you also know that patients who were victims of medication errors had an extended stay at the hospital by an average of 8 to 12 days, costing anywhere between $16,000 and $24,000 extra? Not to mention, these patients were also at higher risk of contracting nosocomial infections by virtue of being in the hospital environment for an extended period of time. As a taxpayer, would it please you to know that more than $3.5 billion dollars are spent annually due to drug-related injuries in hospitals? In a study performed in 2001, it was found that approximately 1 of every 20 patients admitted to the hospitals being studied (n=1116) were victims of medication errors by the hospital staff. Shockingly, as per the statistics of the past decade, deaths and injuries caused by medication errors amount to a total aggregate that is higher than deaths caused by motor vehicle accidents, breast cancer, or AIDS. Perhaps the most heartbreaking fact about the frequency of medication errors is that most, if not all, are preventable. Then why is it that we, as healthcare professionals, have been plagued by this phenomenon for decades?[2,3,6]



One of the basic tenets of solving a problem is identifying it first. Often times, healthcare professionals, including pharmacists, nurses, and physicians, among others, may simply not understand

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Medication Errors *(Continued from page 3)*

the causes of common medication errors, or the drastic consequences of errors when they do occur. Some often overlook minute details that may actually ensure the safety of patients. Simple regulatory tasks such as ensuring the accuracy of the patient's name, the medication, and the dose are checkpoints that allow healthcare providers to catch a mistake before it is committed, which in turn ensures the safety of our patients. In fact, between 1993 and 1998, the most commonly reported medication error was administration of an improper dose to the patient. But do medication errors occur only at the point of administering the medicine?[4]

To the surprise of many healthcare professionals, medication errors can and do occur at every step of the

medication prescribing and dispensing process. An example of this phenomenon is illegible handwriting on medication orders (including inappropriate abbreviations such as "cc" instead of "mL"), which may lead to misinterpretation, confusion, and miscommunication between physicians and pharmacists. Some of the other factors that may contribute to medication errors include failure to detect duplicate therapy (eg. Lovenox® and heparin for a patient simultaneously), failure to recognize a drug interaction, failure to detect patient allergies and failure to prescribe the correct dose to a patient (genetic polymorphism may lead to faster or slower metabolism of certain drugs). Furthermore, while dispensing, pharmacists or technicians can become confused due to look alike-sound alike medications (eg. celecoxib and Cerebryx®, hydroxyzine and hydralazine etc).[1,5]

Since medication errors contribute to such a prevalent problem and are so easily preventable, how do we begin to eradicate this issue? The solution is rather simple, and one must remember that before anything else, the best prevention of medication errors is following procedure with due diligence. Fortunately, with the advent of technology into healthcare, computers are programmed to pick up on drug-allergy interactions, drug-drug interactions, drug-food interactions etc., and as pharmacists, we should use these alerts to our advantage, rather than routinely ignoring them. According to ASHP guidelines, having a well-trained staff with appropriate work conditions and hours also contributes to preventing medication errors, since fatigue may cause technicians and pharmacists to cross procedural checkpoints without proper inspection. As healthcare professionals, we have the honor of saving lives and serving our patients – shouldn't we guard this honor by preventing errors that shouldn't occur in the first place?[1,5]

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Benlysta® (belimumab): *New Hope for Lupus Patients*

For the first time in 50 years, a new medication is available to treat Systemic Lupus Erythematosus. This breakthrough medication is greatly welcomed by the medical community for its potential to make a lasting difference in the lives of patients. Discovered by Human Genome Science and co-marketed by GlaxoSmithKline, Benlysta® (belimumab) is providing hope to patients who suffer from Lupus.[1, 2] Systemic Lupus Erythematosus (SLE) is an autoimmune disease which affects as many as 1.5 million Americans, and hence, places a great burden on healthcare.[3] Benlysta® (belimumab) is the first Lupus medication that has been approved since the approval of Plaquenil® (hydroxychloroquine) in 1955.[1,4]

Belimumab is approved to treat patients with active, autoantibody-positive lupus (i.e. SLE). It is the first in its therapeutic category designed to specifically target B-lymphocyte stimulator (BLyS) protein. This targeted therapy reduces the number of abnormal B cells thought to produce the auto-antibodies that cause Lupus-like widespread inflammation and tissue damage.[1,4,5]

Safety and efficacy were demonstrated in two large-scale clinical trials, which compared this new medication to placebo. The primary outcome was improvement in at least four points of their SELENA SLEDAI score without significant clinical worsening in the physician's global assessment. Response rates were 43.2% for the 10mg/kg dose group, 40.6% for the 1mg/kg dose group, and 33.8% for the placebo group.[5] The most serious side effects found in these clinical trials included nausea, diarrhea, and fever.[1] In addition, physicians should consider pre-treatment with an antihistamine because patients commonly experienced infusion reactions.[1] While these studies demonstrated great promise, populations who had developed two of the most serious manifestations of SLE, renal or central nervous system complications, were excluded from these studies. As a result, the degree to which belimumab could make a difference in these patients' conditions is still unknown.[4] Additionally, belimumab may not be effective in the African American population; however, since this population was not significantly represented enough to draw concrete conclusions, further trials are being conducted to finalize the results.[1,3]

Even in the face of this drawback, the Arthritis Advisory Committee, after careful review, recommended approval of belimumab by the Food and Drug Administration (FDA) for the treatment of SLE.[2] This action illustrates the potential of belimumab to make a difference in the lives of SLE patients who are not properly responding to currently available medications and establishes belimumab as a viable option for physicians.

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Medical Mission Trip to Pamplona Alta, Peru

"My friend dies everyday in front of me and then becomes alive again after a little while." How would you react if you heard that as a chief complaint? Of course, Dr. Landy did a double take when he heard that from a woman, who had accompanied the elderly patient. He began to question her further regarding the patient's symptoms and eventually diagnosed him with epilepsy. This case was but a small part of the variety of interesting cases that came to the attention of the medical mission team that I had accompanied to Peru this past March. The team, consisting of nearly fifty healthcare professionals and other nonmedical personnel, was truly passionate about serving the local community and made use of its skills and talents to contribute to the well-being of each individual.

After my last medical mission to Tanzania, I was approached by many people who expressed their interest in such trips. So this time, I was more than excited to be accompanied by Berly Jaison, an excellent EMT and a soon-to-be a first year medical student. After four months of planning and fundraising, we were able to pack our suitcases with nearly $1,000 worth of medications, toys, and other small gifts, along with our personal belongings. Finally, on March 17th, we arrived in Peru, looking forward to encountering a new culture while being anxious about whether we will be able to adequately serve our patients with the resources available.

As we pushed our luggage through customs and walked through the hallway to arrivals, we saw a short-statured man with a round face, holding a sign with my name. Jorge, our taxi driver, took all our luggage cart and stuffed it into a tiny hatchback. We began our journey through the congested morning traffic of Lima, the capital of Peru. Lima isn't much different from any major city in the United States; we were surrounded by malls, restaurants, and roads populated with Nissans, Hondas and even Mercedes. However, as we drove further away from the city, the ambiance of the rich upper class slipped into a shockingly endless view of shacks sprawled across acres and acres of land. I wondered whether all the supplies we brought with us would even be enough to last the week.

As we entered our guesthouse, we were greeted by a lady with a thin frame and a big smile who seemed to be the main caretaker. Shortly after, we joined our mission team on a bus loaded with medications and supplies for our first day of service. We set up all our stations at a local school: Admissions, Triage, Internal Medicine, ENT, Pediatrics, OBGYN, Infectious Disease, Psychology, Dental Service, and Pharmacy. There were expert doctors and helpful interpreters at each station, which made the workflow as smooth as possible. As we began to set up, patients began to trickle in and before we realized, we were overwhelmed with the crowd of patients waiting at each station. Before we knew it, the day was over, leaving us exhausted and hungry but thrilled to be serving those in need.

Our day usually started with a distant friendly "Good morning!", along with ringing of a bell piercing through our deep sleep. As the ringing bell and shouts became louder, my roommate and I were forced to open our tired eyes and slowly wake up. After a chapel service and breakfast, we left for the mission site around 8 AM. The moment we arrived, we found ourselves plunged into a busy day. All of the people at triage worked as efficiently as possible and each doctor worked diligently to diagnose and determine the best treatment for each patient. At the pharmacy department, we tried our best to provide all our patients with the necessary medications using the supplies available. A portion of the supplies that was shipped by the organization was "held up" at customs. Fortunately, with the remainder of the supplies available, we were able to make appropriate substitutions. For the pediatric population, it was necessary to compound many of the drug preparations. Not a single member of our team took a

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break aside from a quick lunch. At the end of each day, we would make a quick stop at a local grocery store to pick up essentials such as bottled water, fruits, and phone cards and then retreat back to the guesthouse. However, the day never seemed too long as the smiles exchanged throughout the day dissolved away any frustration or fatigue.

Though our team was in Pamplona Alta, Peru to provide medical service, the locals seemed to be treating our own personal ailments with their unending supply of understanding, compassion, and love. During a short trip into their community, we were horrified at the state of their living conditions, which included not having any access to clean water or electricity. But at the same time, we were amazed by their strength, resilience, and joyful attitude masking their pyramid of troubles. Though they were facing problems much greater than ours, they didn't seem to complain nearly as much as we do back home about things much more trivial. On this trip, I met one of the most inspiring people on the planet; a young boy with Down syndrome. His generous smile and warm hug reminded me that each one of us leads a pretty amazing life and I invite every single one of you to adopt his attitude of love, compassion, and acceptance towards everyone you come across. I thank

every single one of you who contributed support for this trip, especially my family, friends, colleagues at UMDNJ, and complete strangers who decided to help out generously. I am touched by your generosity and whole wholeheartedly thank you for all your support, and I hope you will continue to support such missions in the near future.

Author: Merlin Punnoose, PharmD

e-pharmacy: Advance or Decline?

Historically, the doctor-patient relationship has cultivated both trust and respect towards the medical profession as well as the ability to administer and monitor healthcare on a one-to-one, personal basis. With the advent of e-pharmacies and "cyberdoctors", questions have arisen regarding the possible benefits conferred to patients as well as ethical and legal concerns involved in prescribing and dispensing medications[1], not to mention the potential threat to the aforesaid doctor-patient paradigm.

There are three different categories of online pharmacies that exist. The first is an independent internet pharmacy unattached to any physical pharmacy where patients can frequent i.e. pharmacy benefits manager (PBM's, that is, a branch of certain health plans). The second catagory is the "clicks-and-mortar" pharmacy, which is typically the online tentacle of a major pharmacy chain. Finally, the third is a representation of several independent pharmacies that have joined in an effort to provide online services[2].

Online pharmacies provide their customers certain benefits that traditional "brick-and-mortar" pharmacies perhaps lack. First is the element of anonymity. There are patients who prefer to remain unidentified when

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e-pharmacy *(Continued from page 7)*

asking potentially embarrassing questions concerning a certain medication or a personal disorder or dysfunction. Also, these sites are accessible to patients with limited mobility. They offer 24 hour service to place orders as well as mail delivery to remote areas. There are some websites that even allow the customer to compare prices and check product availability.[3] Also, "online pharmacies may leverage economies of scale by using a more efficient centralized order-processing system to reduce transactional costs and the costs of obtaining pharmaceuticals."[4] This translates into a reduced cost to the online customer.

The major controversy regarding internet pharmacies revolves around the dispensing of prescription-only medications without a prescription i.e. ciprofloxacin and sildenafil. According to a cross-sectional study performed in 1999 concerning Internet pharmacies, researchers concluded that 19.6% (9/46) of Internet pharmacies did not require a prescription or physician consultation to dispense the medication.[5] From a legal perspective, dispensing medications without a valid prescription is a strict violation of the Federal Food, Drug, and Cosmetic Act (FDCA) and therefore could warrant civil or criminal action against the pharmacist. In terms of patient safety, the purchase of these online medications may expose patients to numerous drug-drug interactions and potentially dangerous adverse effects, a phenomenon often observed as a result of poly-pharmacy.

Patients worldwide will continue to have the option of visiting their physician, walking into their neighborhood pharmacy or ordering their medications online. Advances in cyber efficiency may not always complement medical progress. Yes, there are a number of pragmatic advantages which e-pharmacies have to offer, when and if the prescribing physician and dispensing pharmacist is licensed. Yet breaching the traditional doctor-patient relationship may have future repercussions in healthcare as a whole.

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Clinical Issues Associated with Antipsychotic Therapy in Schizophrenic Patients

Schizophrenia, a chronic mental illness characterized by disturbances in thinking, perception, and emotions, affects about 1% of the adult population. However, treating this mental disorder accounts for about 2.5% of total annual healthcare expenditures in the United States.[1,2] Due to the many undesirable side effects of antipsychotic medications, patient adherence is very low. About 50% of patients with schizophrenia do not take their medication as prescribed. Additionally, about 30-50% of patients change the rate of medication or dose without consulting a clinician.[3] Due to this low adherence rate, the clinician needs to carefully consider which side effects will most likely lead to patient dissatisfaction before selecting the appropriate antipsychotic for a specific patient.

Patient related risk factors include non-modifiable risk factors, such as age, and those that could potentially be modified, such as medication tolerability. Reducing the dose and frequency of antipsychotic therapy are possible options to increase tolerability. Studies have shown that patients who adhere to antipsychotic therapy tend to receive somewhat lower doses within the therapeutic range than do those who are non-adherent.[4]

Antipsychotic agents may produce side effects that can range in intensity from mild to severe. The management of these side effects should be a crucial part of the treatment plan, as the frequency and severity of side effects can play a substantial role in the effectiveness and tolerability of the medication.[5] Although there are many new antipsychotic agents on the market, they are not devoid of side effects. However, the side effects of the second generation antipsychotics are more manageable.

The side effects of antipsychotics include weight gain, diabetes mellitus, sexual dysfunction, cognitive dysfunction, extrapyramidal symptoms (EPS), and cardiac effects. Since EPS, weight gain, and sexual dysfunction appear to have the most negative impact on adherence, antipsychotics that are least likely to cause these adverse effects should be the preferred choice for initial treatment.[6] First generation antipsychotics have a greater likelihood of causing EPS (75-90%) and prolactin elevation, while second generation antipsychotics are more likely to cause weight gain and other adverse events.[6] Also, second generation antipsychotics are associated with improved neurocognitive functioning.

Both classes are effective for psychotic symptoms, but prescriptions for second generation antipsychotics have been growing due to better tolerability. Although many factors influence the risk of relapse, the most common reasons are loss of antipsychotic efficacy and non-adherence to the antipsychotic regimen. Therefore, the clinician must carefully consider all feasible options and choose the agent that will cause the least patient dissatisfaction and highest compliance rate.

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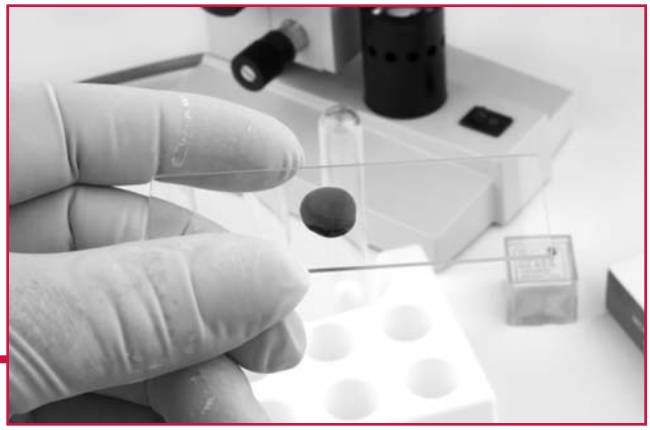
A Hope for Hepatitis C Virus (HCV): *New FDA Approval for Boceprevir and Telaprevir in Chronic HCV*

Boceprevir (Victrelis™, Merck & Co.) and telaprevir (Incivek™, Vertex Phamaceuticals) are two newly FDA approved protease inhibitors indicated, in combination



with peginterferon alfa and ribavirin, for the treatment of chronic hepatitis C genotype 1, in treatment-naïve or treatment-experienced patients.

For almost a decade, the standard of care for HCV genotype 1 has been peginterferon alfa and ribavirin (PR) therapy for 48 weeks, which has led to a sustained virological response (SVR, undetectable HCV RNA at end of therapy and 6 months thereafter) of up to 52%.[1,2] This new era of antiviral therapy can be beneficial for eligible patients as treatment duration may be shortened based on response and virological response rates may be substantially higher than with conventional PR therapy. With more than 170 million individuals worldwide chronically infected with HCV, commonly progressing to liver failure, cancer, and death, new research has paved the way for a more effective standard of care.[1]

Boceprevir and telaprevir are both orally active HCV protease inhibitors, which work by inhibiting viral replication. Boceprevir 800 mg and telaprevir 750 mg are taken three times a day with food. Both have significant drug interactions because they are substrates and inhibitors of CYP3A4/5. Use of these agents in special populations, such as pediatric patients, patients co-infected with human immunodeficiency virus, and those undergoing solid organ transplantation, has not been studied. Both drugs are metabolized primarily by the liver, but only telaprevir is not recommended in patients with moderate to severe hepatic impairment.[3,4]

In a phase III study, SPRINT-2 evaluated the efficacy and safety of boceprevir in combination with PR in treatment-naïve patients with chronic HCV genotype 1. The study compared three arms; two consisted of a lead-in period of PR for 4 weeks, one arm using boceprevir plus PR for an additional 44 weeks, the other using response-guided therapy for a minimum of 24 more weeks and up to an additional 44 weeks; the control arm used PR for 48 weeks. The overall SVR rates were superior in the boceprevir arms compared with the control arm (66% and 63% vs. 37%, respectively, $p < 0.001$).2 Anemia and dysgeusia were the most frequent adverse events (>35%).[2,3]

Telaprevir was evaluated in the ADVANCE trial by randomizing treatment-naïve patients into three arms: telaprevir plus PR for 8 or 12 weeks, followed by PR only for 16 and 12 weeks, respectively, and a control arm of PR for 24 weeks. Patients with detectable HCV RNA at weeks 4 and 12 continued PR therapy up to week 48. About 58% of patients in the telaprevir arms needed only 24 weeks of therapy. SVR measured at 24 weeks showed telaprevir therapy to be superior to control, with the 12-week, 8-week and control arms achieving SVR rates of 75%, 69%, and 44%, respectively ($p < 0.001$ for treatment arms vs. control).[1] The most common adverse events were anemia and rash (>35%).[1,4]

Newly available pivotal trials of boceprevir and telaprevir also raise hope that a substantial proportion of relapsers, partial-responders, and null-responders to PR therapy can achieve viral clearance when re-treated with triple combination therapy.[1]

Despite the strong promise of these two drugs, there

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A Hope for Hepatitis C Virus

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still remain setbacks. Drug resistant HCV strains exist, although triple combination therapy reduces their emergence. Also, patients who do not respond to interferon seem to be at higher risk for drug-resistant mutations, as is seen in the SPRINT-2 trial with up to 47% of non-responders experiencing mutations versus 4% in responders.[1] Future trials are warranted to improve the selection of HCV genotype 1-infected patients who are candidates for boceprevir or telaprevir therapy according to host and viral factors. At this moment though, patients with chronic HCV can rest assured that there is a brighter tomorrow.

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References:

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2. Poordad, F. McCone, J. Bacon, B, et al. Boceprevir for Untreated Chronic HCV Genotype 1 Infection. N Engl J Med 2011;364:1195-206.
3. Boceprevir [Package Insert] Whitehouse Station, NJ: Merck & Co.; May 2011.
4. Telaprevir [Package Insert] Cambridge, MA: Vertex Pharmaceuticals Inc; May 2011.

Employee of the 2nd Quarter

Christina Ninan, RPh

Every quarter the Pharmacy Department awards a staff member with the Employee of the Quarter Award, for their exceptional performance which goes beyond expectation. This honor goes to a staff member for illustrating ethical values, good leadership, great attitude, and exceptional performance. This Second Quarter of 2011, the award goes to Christina Ninan. Her remarkable performance sets a great example for everyone to follow. Christina is quiet, collected, and soft spoken. Despite her gentle demeanor, she is an amazing pharmacist who is highly revered for her thoroughness and extreme detail in assuring patient satisfaction. Her profound knowledge and expertise translates into great patient care.

She is highly determined in promoting patient safety, working diligently to guarantee that each patient receives the best medication based therapy possible. Christina's diligence and determination is reflected by her great work ethic which in turn makes a significant contribution to the Pharmacy Department. Christina emulates not only the philosophy within the Pharmacy Department but of the Pharmacy profession as well. For these reasons we are proud to recognize her for her hard work and dedication.

Christina works the third shift, and among her colleagues she is highly acclaimed for being a reliable team player and a great mentor to all who seek her assistance and guidance. When challenges come her way, Christina takes on the leadership role, where any struggle becomes an opportunity to learn something new. Such determination is an inspiration; on any given night she goes the extra mile to get the job done. Christina's exceptional work ethic and knowledge are extremely important to the department, making her presence an important resource to University Hospital. It is such a pleasure working alongside Christina; it is her sweet personality that steals our hearts away. Christina Ninan, so compassionate, amiable and humble; her determination, diligence, and exceptional performance is what makes such a huge impact at University Hospital. Christina, we are extremely grateful for your hard work and dedication to improving the lives of so many who have come your way. Join us all in congratulating Christina Ninan as she receives Pharmacy Department's most distinguished honor.

Contributed by,
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