Off-label drugs require more study

Stanford researchers are questioning a common practice of prescribing drugs for nonapproved uses, saying that some of these drugs need more scientific scrutiny.

Many doctors prescribe drugs to treat conditions for which they’re not approved, a practice known as off-label prescribing. But some widely used off-label drugs, particularly antidepressants and antipsychotics, are in urgent need of more scientific study, researchers concluded. They identified 14 medications most in need of study for their off-label uses.

“Off-label prescribing means that we’re venturing into uncharted territory where we lack the usual level of evidence presented to the FDA that tells us these drugs are safe and effective,” said Randall Stafford, MD, PhD, an associate professor with the Stanford Prevention Research Center. “This list of priority drugs might be a start for

Did you know?

Every square inch of the human body has an average of 32 million bacteria on it.

Redwood City outpatient center opens its doors

The Stanford Medicine Outpatient Center consolidates specialized clinical services in a modern, welcoming and patient-friendly environment.

New facility designed to enhance Stanford services

Patients can now visit a wide array of Stanford outpatient clinics, from orthopaedic surgery and sports medicine to pain management and sleep medicine, through one main door. The Stanford Medicine Outpatient Center, which opened Feb. 17 in Redwood City, is the new home of specialized services that were previously located on the main campus at Stanford University Medical Center.

“The idea was to create a center where we can have all of our outpatient clinics, complete imaging and diagnostic capabilities, an outpatient surgicenter and physical therapy services,” said William Maloney, MD, chair of the Department of Orthopaedic Surgery. “It’s not crowded, it’s easy to find, it’s right off Highway 101, and it has free parking.”

The Outpatient Center, located at 450 Broadway St., offers all the conveniences of one-stop shopping with the continued excellence of care that is the hallmark of Stanford Hospital & Clinics. In addition to orthopaedic surgery and pain management clinics, the site includes outpatient services for hand and upper extremities, joint replacement, spine disorders and sports medicine.

“The creation of the campus for our patients was truly a multidisciplinary effort,” said Helen Wilmot, the hospital’s vice president for ambulatory services. “The four-year planning and construction project involved feedback from patients about what they expect from an outpatient experience, direction from doctors about the latest clinical technology and input from staff about creating an environment that enables them to do their best for our patients. The building and the environment capture the best of all three perspectives.”

Patients enter the Outpatient Center through one central lobby that links to two clinical pavilions. They can register with receptionists or find their way to a specific clinic by tapping into electronic kiosks near the main doors. Waiting rooms are welcoming, with comfortable wing chairs and beige couches dusted with yellow and chartreuse accents. There is also a café with outdoor seating that overlooks landscaped greenery.
Surgery without scars
A new generation of minimal-access operations

Nine-year-old Ryan was the first patient at Packard Children's Hospital to have his spleen removed through a single incision in his belly button.

When Thomas Krummel, MD, was in medical school 25 years ago, a senior surgeon told him, “Son, big hole, big surgeon. Give yourself some room.”

At that time, his colleagues defined themselves by making large incisions, said Krummel, now the Susan B. Ford surgeon-in-chief at Lucile Packard Children’s Hospital and Stanford Hospital & Clinics. “The problem was they ignored one important participant in surgery: the patient.”

Now, thanks to minimal-access techniques pioneered at Packard Children’s and Stanford Hospital & Clinics, surgeons at the two hospitals avoid many of the big incisions that were once an inevitable feature of surgery. Teams are building their repertoires beyond basic laparoscopy to robotic surgery and single-incision operations with small, hidden scars.

“These advances are far in the future at many other hospitals,” said Craig Albanese, MD, the division chief of pediatric general surgery at Packard Children’s.

Building skills
For example, 9-year-old Packard patient Ryan recently became the first person to have his spleen removed through a single incision in his belly button. His mother, Elaine, guessed he might receive a laparoscopic procedure but was surprised to learn that the surgeons could use his belly button. “I thought, ‘Wow, that seems even better since there are no scars at all,’” she said.

The surgical team now performs scarless appendectomies and gall bladder surgery.

Another Packard patient has only a few tiny marks in his armpit from his recent thyroid lobectomy, an operation that typically leaves a prominent scar across the front of the neck. His surgeons burrowed under his skin from armpit to neck, carefully avoiding the nerves near the thyroid gland that control the vocal cords.

“Every single surgery requires an active process of decision making,” added Krummel.

Small steps
The challenge for surgical innovators is to find ways to maneuver through tiny incisions without losing the safe, reliable results of conventional operations.

“We take innovation baby steps,” said Dutta. “Any surgical step that seems a little unusual, we discuss as a group ahead of time.”

The team tries new procedures in phases, first attempting successive small changes during open-incision surgeries. Finally, with patient consent, they attempt a new minimal-access technique in its entirety, knowing they can revert to an open-incision procedure if necessary, he said.

Technology and training
Innovation also depends heavily on surgical technology. The laparoscopic instruments pioneered at Packard Children’s for infants are just 3 millimeters in diameter and 20 centimeters long—thinner and shorter than a ballpoint pen. After years of...
Uncertain prognosis for health care changes

There is growing public pressure for health care reform, which was a focal point of Barack Obama’s presidential campaign. But the reality of economic recession, as well as a fractious political system in Washington, makes major change difficult to achieve, even in the best of times.

So is there a chance that Obama and congressional leaders will be able to push through health-care reform? Experts say it’s almost certain that modest efforts to fix the system, similar in scope to the recent expansion of an insurance program for children, will meet success. But any sort of real revolution in health care is probably a long shot.

Planning reform
It shouldn’t be a surprise that health care has emerged as a critical issue. The country’s health-care problems (including 45 million uninsured and spiraling health-care costs) are simply too big for leaders to ignore, and everyone seems to have an opinion on the best solution.

On the campaign trail, Obama composed a plan that would build on our current system of employer-based health insurance and existing public programs, and use tax dollars to ensure health-care access for all. But one of the biggest concerns with the proposal is its hefty price tag: The nonpartisan Urban Institute estimated that it would cost $1.6 trillion over 10 years.

“When you run the numbers and estimate what universal coverage would cost, it’s going to be too hard to push through unless there are substantial offsetting savings,” said Alan Garber, MD, PhD, a Stanford professor of medicine and of economics.

Since the election, other leaders have offered their own reform plans. Sen. Max Baucus (D-Mont.), who chairs the powerful Finance Committee, recently unveiled a plan that would create a “health insurance exchange,” in which insurers could sell plans to the uninsured, and would mandate that all Americans be covered. Sen. Bob Bennett (R-Utah) and Rep. Ron Wyden (D-Ore.) plan to reintroduce their Healthy American Act legislation, which would require all U.S. residents to enroll in employer-sponsored health coverage or purchase private insurance plans approved by states. And Sen. Edward Kennedy (D-Mass.), who has long been a leader in health-care policy, is planning to move forward soon on his own universal health care bill.

Bumpy road
No Washington insider expects the president or any legislator to see his or her plan sail through Congress. For one thing, the country’s bleak finances, including a deficit close to $1 trillion, could stall a universal coverage proposal or other price initiative. Democrats and Republicans also have major differences in their views on the goal of health-care reform, the structure of the health-care system and the role that government should play—which could make even a compromise bill difficult to come by.

Add to this the complexities of the U.S. political system. No bill can become law without the approval of the majority of members, and no bill can be voted on in the first place without the blessing of congressional committee chairs. In the Senate, the filibuster rule allows just one senator to block a vote on a piece of legislation, and it takes a super-majority of 60 votes to resume action.

“With the way Congress is structured, and with the filibuster in the Senate, it’s a major hurdle to get anything through—let alone a major health-care reform bill,” said Leon Panetta, a former congressman and Obama’s pick for director of the CIA.

Changes ahead
Obama has repeatedly said that reform remains a priority for him and that it’s not something that can be put off because of the bad economy. During a press conference this winter, he called health care “part of the economic emergency.” He also showed his commitment to the issue by creating a new White House Office of Health Reform.

Many experts accurately predicted that the first initiative to be passed by the new Congress would be an expansion of the State Children’s Health Insurance Program (SCHIP), the federal program that provides insurance to children in low-income households not eligible for Medicaid. The program had previously covered 6 million children, and Obama recently signed a bill to continue the program and provide coverage to an additional 4 million.

With SCHIP now addressed, experts like Panetta say we should expect to see the approval of other, smaller health-care measures. And while there may be disappointment if Obama and congressional leaders don’t deliver on their pledge of major health-care reform, there’s still the political reality of the little-bit-at-a-time approach.

“It’s impossible to revamp the entire system, so incremental health-care reform shouldn’t be [considered] a bad thing,” said Linda Tarplin, a veteran Republican health-care lobbyist. “Anything you do to improve the health-care delivery system and people’s ability to get affordable, quality insurance is a plus.”
On the third floor of Pavilion A, six operating rooms surround a central “clean core” where sterile supplies are stored. Encompassing about 630 square feet—the new industry standard for accommodating new technologies—the ORs at the Outpatient Center are organized for efficiency and the latest innovations in care. Anesthesia booms can be adjusted for operating teams, and high-intensity surgical lights spotlight procedures that are visible from multiple angles on four display screens in each operating suite.

The opening of the Outpatient Center comes 50 years after the move of Stanford Hospital and the School of Medicine from San Francisco to Palo Alto. That move enabled the medical center to position itself at the forefront of medical excellence in the 20th century. The new Outpatient Center “assures that Stanford Hospital & Clinics will continue to lead in the 21st century,” said Stanford Hospital President and CEO Martha Marsh, “and that our patients will have not only the finest care but the best facilities and service designed for every aspect of their comfort and convenience.”

Here’s an overview of what the Outpatient Center offers:

**Orthopaedic surgery and sports medicine**
With the move of 25 physicians and surgeons to the Redwood City facility, the Department of Orthopaedic Surgery and Sports Medicine is the largest program at the new complex. It includes the Boswell Joint Replacement Center and the Charlotte and George P. Shultz Center for Orthopaedic Tumor Surgery, as well as specialty services in sports medicine; trauma, spine, hand and upper extremity surgery; and foot and ankle surgery. Maloney said his clinicians now will be able to offer a “multiplicity of services for musculoskeletal care,” with the department’s many clinics gathered under one roof.

Because he and his colleagues depend heavily on imaging for making accurate diagnoses, Maloney is especially pleased with the ground-floor imaging center, with its state-of-the-art MRI and CT scanners.

“Much of what we deal with as orthopaedic surgeons is pain-related,” Maloney said, and patients with chronic pain problems now can be seen just down the hall from their surgeons’ offices. “Orthopaedic patients also can get physical therapy for nonoperative conditions, and there’s physical therapy available for post-op rehabilitation,” he said.

**Dermatology**
When it was housed in the Blake Wilbur Outpatient Clinic, the dermatology clinic was designed to handle 12,000 patients annually, but physicians now see more than 20,000 people every year. “We’re offering more complex services, and our patient volume has been growing rapidly every year,” said Al Lane, MD, chair of the Department of Dermatology.

The majority of the dermatology department’s clinical practice has moved to the Outpatient Center facility. Lane predicted that physicians in the clinics will be able to provide timelier services and outstanding care for complicated dermatological conditions.

“If you have something on your skin that’s uncomfortable, you don’t want to wait to be seen,” he said. “At the Outpatient Center facility we have more space, and we hope to expand the number of same-day appointments.”

Clinicians will continue to offer special services for patients with common and complicated skin cancers. In the new facilities, for example, they will excise skin cancers with a procedure known as Mohs surgery to minimize scars and improve the opportunity to remove an entire cancer in one day. Under local anesthesia, the skin cancer is peeled away, layer by layer, and the removed skin is examined to ensure that the cancer is removed. Then the skin can be repaired by the most cosmetically effective method.

The cutaneous lymphoma and melanoma clinics will remain on the Stanford main campus in the Cancer Center. Pediatric dermatology patients will continue to be seen in the clinics at Stanford, Mountain View and Los Gatos.

**Sleep**
For the first time, the Stanford Sleep Medicine Clinic—the world’s first sleep clinic—and the Stanford Center for Human Sleep Research will be housed under one roof. At a time when more than 70 million Americans suffer from sleep disorders, clinic and center staff will provide enhanced patient care in state-of-the-art facilities and laboratories.

“The facility enables us to use the latest techniques and equipment to diagnose and treat sleep disorders in a comfortable environment for our patients,” said Clete Kushida, MD, PhD, acting medical director of the clinic and director of the sleep research center. “With new procedure rooms, we have new

---

**At a glance: Stanford Medicine Outpatient Center**

**Facilities**
- Approximately 360,000 square feet
- Ninety-six exam rooms
- Eight (six at opening) operating rooms designed for surgical procedures that do not require hospitalization
- Three MRIs, three CTs, Dexascan for bone density tests (two MRIs and one CT at opening)
- Eighteen state-of-the-art sleeping suites
- No emergency or urgent care services
The new facility enables us to use the latest techniques and equipment to diagnose and treat sleep disorders in a comfortable environment for our patients.

Clete Kushida, MD, PhD
Director, Sleep Research Center

Pasricha and a handful of physicians already have moved to the Outpatient Center facility, but the majority of the staff of the Digestive Health Center won’t arrive until the spring or summer of 2010.

At that point, Pasricha plans to unveil a “truly multidisciplinary clinic where we hope to have our gastroenterologists, hepatologists, surgeons and radiologists seeing complex patients together.” These include patients with inflammatory bowel disease, abdominal pain and motility problems, gastrointestinal cancers and pancreatic, biliary and liver problems, as well as those requiring difficult endoscopic procedures.

Among the innovations being considered is a one-stop shop for virtual colonoscopy and real colonoscopy, which will offer convenience and value to patients. The Digestive Health Center also will be positioned at the forefront of minimally invasive and endoscopic therapies.

Stanford Medicine News

“Thenewfacilityenablesustousethelatesttechniquesandequipment todiagnoseandtreatsleepdisordersina comfortableenvironmentforour patients.”

Clete Kushida, MD, PhD
Director, Sleep Research Center

The Stanford Medicine Outpatient Center features a modern, bright café; private and comfortable exam rooms; and a central lobby that makes it easy for visitors to find the clinic they need.

ways to capture information, such as using fiber optic scopes to view the upper airway.”

Take-home devices also will allow the staff to diagnose sleep apnea in patients’ homes, and an expanded faculty will be available to treat patients with insomnia.

The new sleep medicine center now features bedrooms for 14 overnight patients and an additional four rooms for research studies. Each bedroom has the latest in sleep monitoring equipment, and the rooms have been specially designed to minimize sound to make overnight stays more comfortable.

Digestive health

As the initial occupants settle in, the director of at least one program is looking to the future of the Outpatient Center. “At first, we’ll have a relatively small clinic, where gastroenterologists will see patients, and we’ll have an endoscopy suite for routine outpatient procedures, such as colonoscopies,” said Pankaj Jay Pasricha, MD, professor of gastroenterology and hepatology, and director of Stanford’s new Digestive Health Center.

Pasricha and a handful of physicians already have moved to the Outpatient Center facility, but the majority of the staff of the Digestive Health Center won’t arrive until the spring or summer of 2010.

At that point, Pasricha plans to unveil a “truly multidisciplinary clinic where we hope to have our gastroenterologists, hepatologists, surgeons and radiologists seeing complex patients together.” These include patients with inflammatory bowel disease, abdominal pain and motility problems, gastrointestinal cancers and pancreatic, biliary and liver problems, as well as those requiring difficult endoscopic procedures.

Among the innovations being considered is a one-stop shop for virtual colonoscopy and real colonoscopy, which will offer convenience and value to patients. The Digestive Health Center also will be positioned at the forefront of minimally invasive and endoscopic therapies.

Clinics
- Dermatology
- Digestive Health Center
- Imaging and Physical Therapy
- Orthopaedic Surgery and Sports Medicine
- Pain Management
- Sleep Medicine

Amenities
- Nearly 1,175 free parking spaces
- Valet parking service
- On-site café
- Guest services
- Garden area
- Wireless computer access

By the numbers
- 120,000 clinic visits projected per year
- 9,000 surgeries projected per year
- 100+ faculty
- 450 employees (250 at opening)
Healthy Eating in a Fast-Food World
Presented by Packard Children’s Hospital
Speaker: Lawrence Hammer, MD
Professor, Pediatrics
Gretchen Flanagan, LPCH Registered Dietitian
Date: Tuesday, Feb. 24, at 7 pm
Location: Packard Children’s Hospital Auditorium, 725 Welch Road, Palo Alto
To register, call 650-724-3783.

Contemporary Surgical Treatment of Facial Nerve Paralysis
Presented by Stanford Health Library
Speaker: Sam Most, MD
Associate Professor, Otolaryngology—Head and Neck Surgery
Date: Thursday, Feb. 26, at 7 pm
Location: Cypress Room, Tresidder Student Union, Stanford University
To register, call 650-498-7826.

Neck Pain: Current Concepts in Diagnosis and Surgery
Presented by Stanford Health Library
Speaker: Ivan Cheng, MD
Assistant Professor, Orthopaedic Surgery
Date: Thursday, March 5, at 7 pm
Location: Cypress Room, Tresidder Student Union, Stanford University
To register, call 650-498-7826.

Medicare, Medigaps, HMOs and New Prescription Benefits for Seniors
Presented by Stanford Health Library
Speaker: Don Rush, HICAP Counselor
Assistant Professor, Pediatrics
Date: Thursday, March 12, at 7 pm
Location: Stanford Health Library, 2-B Stanford Shopping Center
Attendance limited to 25. To register, call 650-498-7826.

Female Sexual Function Across the Lifespan
Presented by Women’s Health @ Stanford
Speaker: Leah Millheiser, MD
Director, Female Sexual Medicine Program
Date: Thursday, March 19, at 6:30 pm
Location: Arrillaga Alumni Center, 326 Galvez St., Stanford University
To register, call 650-725-0455.

What All Parents Should Know About Eating Disorders
Presented by Packard Children’s Hospital
Speaker: Rebecka Peebles, MD
Instructor, Adolescent Medicine
Date: Tuesday, March 24, at 7 pm
Location: Packard Children’s Hospital Auditorium, 725 Welch Road, Palo Alto
To register, call 650-724-3783.

Shoulder and Elbow Trauma: Current Trends for Treatment
Presented by Stanford Health Library
Speaker: Emilie Cheung, MD
Asst. Professor, Orthopaedic Surgery
Date: Wednesday, March 25, at 7 pm
Location: Redwood City Public Library, 1044 Middlefield Road
To register, call 650-498-7826.

Long-Term Care for You or Your Loved One
Presented by Stanford Health Library
Speaker: Don Rush, HICAP Counselor
Date: Thursday, March 26, at 7 pm
Location: Stanford Health Library, 2-B Stanford Shopping Center
To register, call 650-498-7826.

Sex Differences in Physiology and Disease
Presented by Women’s Health @ Stanford
Speaker: Marcia Stefanick, PhD
Professor (Research), Medicine Chair, Women’s Health Initiative Executive Committee
Date: Wednesday, April 22, at 6:30 pm
Location: Arrillaga Alumni Center, 326 Galvez St., Stanford University
To register, call 650-725-0455.

Fathers of Daughters:
The Joys and Challenges of Raising Teen Girls
Presented by Packard Children’s Hospital
Speaker: Julie Metzger, RN
Date: Thursday, April 30, at 7 pm
Location: Center for Nursing Excellence, 1400 Page Mill Road, Palo Alto
Attendance fee. To register, call 650-724-3783.

Skin Aging, Skin Cancer and Photoprotection
Presented by Women’s Health @ Stanford
Speaker: Susan Swetter, MD
Associate Professor, Dermatology
Date: Wednesday, May 13, at 6:30 pm
Location: Arrillaga Alumni Center, 326 Galvez St., Stanford University
To register, call 650-725-0455.

Mothers of Sons: The Joys and Challenges of Guiding Your Son Through Adolescence
Presented by Packard Children’s Hospital
Speaker: Robert Lehman, MD
Adolescent Medicine Specialist
Date: Wednesday, May 20, at 7 pm
Location: Packard Children’s Hospital Auditorium, 725 Welch Road, Palo Alto
Attendance fee. To register, call 650-724-3783.

News for Parents About Childhood Allergies
Presented by Packard Children’s Hospital
Speaker: Kari Nadeau, MD
Assistant Professor, Pediatrics
Date: Tuesday, May 26, at 7 pm
Location: Packard Children’s Hospital Auditorium, 725 Welch Road, Palo Alto
To register, call 650-724-3783.

Teen volunteers needed for bulimia study
Psychiatrists in the School of Medicine are seeking volunteers for the largest-ever randomized controlled trial of bulimia treatments for adolescents. “We desperately need more information,” said James Lock, MD, PhD, director of psychiatric services at the Comprehensive Eating Disorders Program at Packard Children’s and the study’s senior investigator. “There are a lot of kids with these problems, and we don’t know how to help them.”
He said previous bulimia treatment programs focused on adult patients, which is why the National Institute of Mental Health has awarded his team a five-year, $2 million grant to compare bulimia treatments for young people. Stanford is collaborating in the trial with the University of Chicago.
Study subjects will be randomly assigned to receive 20 outpatient consultations using cognitive behavioral therapy, family therapy or individual psychotherapy. Participants must be age 12 to 18 with bulimia nervosa or significant bulimic behaviors. Participants and their families must be willing to be assigned to any of the three treatments and agree to participate in six months of regular treatments and one year of follow-up. Interested individuals should contact research assistant Brittany Alvy at 650-723-9182.

Participants must be age 12 to 18 with bulimia nervosa or significant bulimic behaviors.
Advocacy for children’s health

Many health problems facing today’s kids can’t be healed in an exam room, says Lisa Chamberlain, MD, MPH, an assistant professor of pediatrics. That’s why she is leading a national effort to teach pediatricians-in-training to advocate locally and nationally for children’s health. An advocacy course she teaches at Stanford University School of Medicine has been adopted at medical schools across the country, and she’s coordinating a statewide effort to ensure that all pediatric residents in California receive instruction in legislative advocacy.

Why do pediatricians need to advocate for children’s health care?

Pediatricians are in a unique position to bear witness to the failures of our health care system. All children need access to high-quality health care so that they can thrive, grow and reach their full potential. I believe it’s a fundamental human right. But today 9 million children in the United States don’t have health insurance. As physicians, we need to advocate for change. That means all pediatricians need the ability to work in communities, interact with the media and engage in child health policy, whether at a local school board meeting or in Washington, D.C.

What’s the biggest challenge facing kids’ health care today?

We need to ensure universal coverage for children. I’m grateful that the Obama administration has approved the State Children’s Health Insurance Program (SCHIP), which will extend health care coverage to more children whose families could not otherwise afford it. And while our current financial situation presents a challenge, I am hopeful that the new administration will move forward and guarantee health care for all children in the United States.

What is the most important piece of advice you give when teaching young doctors to advocate for patients?

Follow your passion. Effective advocacy comes when speaking from both head and heart.

What’s the biggest advocacy success you’ve seen from the residents you mentor?

The residents have led a huge variety of successful projects. In one local example, parents in East San Jose wanted to renovate a school playing field so their kids could play soccer. We helped the parents present their idea to the school board and obtain grant funding for the renovation. A second project is taking us to Africa, where we’re helping doctors and nurses at a new hospital in Malawi obtain training and equipment for pediatric care. On the political front, we organized a national day of rallies in 2007 asking Congress to extend SCHIP. The rally organizers founded an advocacy organization for pediatricians-in-training, REACH, which continues to work toward better health care for kids.

What’s the most important lesson you’ve learned from your advocacy?

Caring for individual patients as a physician and for entire populations of children through advocacy is a fantastic privilege. Practicing on both levels gives me great energy and fights burnout. After all, as Martin Luther King Jr. said, “Our lives begin to end the day we become silent about things that matter.”

From Surgery on page 2

Did you know?
Six-year-olds laugh an average of 300 times a day. Adults laugh only 15 to 100 times a day.

Tackling the problem of off-label use with limited evidence.

To determine which drugs were most in need of additional research, Stafford and his colleagues called on a panel of nine experts from the FDA, the health insurance industry, the pharmaceutical industry and academia. The panel used three factors to prioritize which drugs should appear on the list: frequency of use, safety and cost.

At the top of the list was quetiapine (brand name Seroquel), an antipsychotic approved by the FDA in 1997 for treating schizophrenia. Rounding out the top five were warfarin, escitalopram, risperidone and montelukast.

On-label and off-label uses for key medications

<table>
<thead>
<tr>
<th>Rank</th>
<th>Drug (brand name)</th>
<th>Most common on-label use</th>
<th>Most common off-label use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Olanzapine (Seroquel)</td>
<td>Schizophrenia</td>
<td>Bipolar, maintenance</td>
</tr>
<tr>
<td>2</td>
<td>Warfarin (Coumadin)</td>
<td>Atrial fibrillation</td>
<td>Hypertensive heart disease</td>
</tr>
<tr>
<td>3</td>
<td>Escitalopram (Lexapros)</td>
<td>Depression</td>
<td>Bipolar</td>
</tr>
<tr>
<td>4</td>
<td>Risperidone (Risperdal)</td>
<td>Schizophrenia</td>
<td>Bipolar, maintenance</td>
</tr>
<tr>
<td>5</td>
<td>Montelukast (Singular)</td>
<td>Asthma</td>
<td>Chronic lung disease</td>
</tr>
<tr>
<td>6</td>
<td>Bupropion (Wellbutrin)</td>
<td>Depression</td>
<td>Bipolar</td>
</tr>
<tr>
<td>7</td>
<td>Sertraline (Zoloft)</td>
<td>Depression</td>
<td>Bipolar</td>
</tr>
<tr>
<td>8</td>
<td>Venlafaxine (Effexor)</td>
<td>Depression</td>
<td>Bipolar</td>
</tr>
<tr>
<td>9</td>
<td>Celecoxib (Celebrex)</td>
<td>Joint/spinain/strain</td>
<td>Fibromatosis</td>
</tr>
<tr>
<td>10</td>
<td>Lisinopril (Prinivil, Zestril)</td>
<td>Hypertension</td>
<td>Coronary artery disease</td>
</tr>
<tr>
<td>11</td>
<td>Duloxetine (Cymbalta)</td>
<td>Depression</td>
<td>Anxiety</td>
</tr>
<tr>
<td>12</td>
<td>Trazodone (Desyrel)</td>
<td>Depression</td>
<td>Sleep disturbance</td>
</tr>
<tr>
<td>13</td>
<td>Olanzapine (Zyprexa)</td>
<td>Schizophrenia</td>
<td>Depression</td>
</tr>
<tr>
<td>14</td>
<td>Epoetin alfa (Procrit, Epogen)</td>
<td>Chronic renal failure</td>
<td>Anemia of chronic disease</td>
</tr>
</tbody>
</table>
Navigating through cancer

“Mayday! Mayday! Mayday!”—the dreaded call sounded so unreal, but the rising water level was no dream. In 2006, I was the only woman on a crew delivering a sailboat from Hawaii to San Francisco when we were sunk by an 80-ton descendant of Moby Dick. We had 30 minutes before the 40-foot yacht hit the bottom of the ocean.

We radioed for help, to no avail. We grabbed our emergency kit, food and water, and transferred onto the life raft. Stranded in the middle of the Pacific Ocean, drifting helplessly through shark-infested waters, at the mercy of currents, we floated for a day before the Coast Guard managed to locate us with a plane.

I thought that I’d had enough of a survival experience to last me 10 years.

A few months later, I was diagnosed with sarcoma, a rare form of cancer. It was found in the cervix, a very unusual location for this type of cancer, and to this day it remains “unclassified.” There was no defined protocol of care and no data to make treatment decisions. Because of the location of the cancer and its unknown character, I named it “Alien.”

The wreck prepared me mentally and emotionally for my cancer fight. I learned how to live through uncertainty, deal with fear and tame an inhospitable environment. It didn’t prepare me for the worst part of the diagnosis: I would never be able to fulfill my dream of becoming a mother because the treatment included a hysterectomy and removal of the ovaries. This issue was more fundamental to me than any degree, job or house.

I chose to come to Stanford for treatment, and my oncologist, Amreen Husain, MD, referred me to a fertility specialist who had experience with cancer patients. Lynn Westphal, MD, put me on a fast track, and I went through two in vitro fertilization cycles between surgeries to freeze ovarian tissue as well as embryos with an anonymous donor. These efforts gave me enough hope to go through treatment. With the help of Stanford and Transvideo, I made a video to help raise awareness of these options for other cancer patients: youtube.com/beatsarcoma.

Sarcoma affects primarily children and young adults. It is so poorly understood that most sarcoma patients feel like they are “one of a kind.” I am very confident that with enough funds, research can bring more options to these patients. That’s why, as I was undergoing treatment, I founded BeatSarcoma to help create awareness and build that knowledge. No one else should be stranded alone.

My experiences have given me an unconditional love for life, a resolve to survive any obstacle and a desire to help others. I am combining these traits in a race to raise funds for BeatSarcoma: I competed double-handed in the Pacific Cup 2008, a race from San Francisco to Hawaii, traversing the same route where I was stranded two years ago. BeatSarcoma had a very successful year and made a $20,000 gift to the Stanford Cancer Center to help strengthen its sarcoma research program.

My battle is not over, but I want Alien’s main legacy to be that scar at the bottom of my abdomen: It runs from side to side and looks like a big smile.

Learn more about Criou’s experiences and fundraising efforts at Beatsarcoma.org.