PAIN MANAGEMENT

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LIFE AFTER PAIN

Actress Kirsten Storms opens up about her battle with endometriosis and her favorite role yet — mother.

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Picture a condition that affects 100 million American adults, more than cancer, diabetes, and heart disease combined.

A balanced approach

Imagine that this condition costs the nation as much as $635 billion each year in the direct costs of medical treatment and the indirect costs of lost productivity. Now consider that this condition can be the result of illness or injury, the after effect of treatment for other medical conditions, or have no identifiable source at all. Where would you even begin to address such a large and complex problem?

This condition is chronic pain and its management can confound people with pain and their healthcare providers alike.

A unique condition

We are accustomed to reporting our symptoms, getting a diagnosis, taking the prescribed medication or treatment, and having our problem resolve. But with chronic pain, the situation is not so simple. Even when the cause of the pain is straightforward, there is no pill or treatment that can alone make our pain go away. Yet searching for that silver bullet has led many people with pain and their providers into a maze of failed interventions, growing disability, and frustration.

There is an alternative that offers hope for reduced suffering, improved function, and better quality of life. Taking a balanced approach, where you and your healthcare provider use a range of therapies to create a multidisciplinary pain management strategy can make a difference.

You might think of a person with pain like a car with four flat tires. When we find the right medicine or treatment, we can fill one of our tires. But we still have three flat tires and are unable to move forward. The solution requires more than a single approach. We need to work with our healthcare providers to find what we need to fill up our other three tires so that we can resume our life’s journey.

Individual needs

The answer is different for each of us, depending on our individual medical and personal needs. Biofeedback, physical therapy, counseling, pacing, nutritional counseling, relaxation training, and a host of other modalities are but a few of the ways we can fill up our tires.

Unlike the traditional approach where the “patient” is passive, living a full life with pain requires that we take an active role in the recovery process. But it is well worth the effort to regain control and restore your quality of life.

Penney Cowan
FOUNDER, EXECUTIVE DIRECTOR, AMERICAN CHRONIC PAIN ASSOCIATION

“There is an alternative that offers hope for reduced suffering, improved function, and better quality of life.”
There are more important things to hold than pain.

Now Adam & Rose are busy managing tee times instead of pain meds.

Adam has been an avid golf player since his twenties. His game came to a screeching halt as he began to experience severe back pain. Adam’s golf swing put excess stress on his back, causing an unknown herniated disc to bulge. Multiple doctors prescribed heavy medication and surgery that led him down a dark, debilitating path causing strain on his marriage to Rose. After getting his pain under control at Prospira PainCare, Adam got back on par.

Prospira PainCare is changing the landscape of pain medicine. We are developing the way Adam receives care and improving his life by carefully evaluating his pain, creating a multidisciplinary treatment plan and adding physical therapy to his daily routine to improve his strength. Living with pain takes its toll physically, mentally and emotionally. We are here to help you restore your life and well-being.

Our world-class physicians & pain experts are part of a nationwide network. Prospira PainCare Centers of Excellence across the nation are ready to treat acute, chronic or intractable pain caused by a myriad of health conditions and medical problems. Visit us on the web or call 877-246-2211 to find a pain expert nearest you.

(877) 246-2211
prospirapaincare.com
STIMULATING NEWS ABOUT MIGRAINES

Six years ago, Jenny Grace’s migraines became so severe she was forced to cut back on work, eliminate activities and even put her relationship on hold.

Grace is not alone. According to the National Headache Foundation, more than 37 million Americans suffer from migraines with women being affected three times more than men. Estimates put migraines at a cost of $20 billion attributed to everything from medical expenses to lost time at work.

Some migraine sufferers find pain management from medications or alternative options such as acupuncture.

Unfortunately, myriad treatments Grace sought fell flat. “I tried preventative and abortive medicines. I also tried acupuncture, biofeedback, massages, botox and I had countless emergency room trips,” Grace recalls adding that her expenses kept growing. Grace found the only way she could get her quality of life back was neurostimulation.

After a trial to determine if she was a good candidate, Grace had her permanent surgery in August of 2012, which she was able to get approved from her insurance. “I got married December 7th,” she says as proof of how she can now enjoy life again. “My quality of life is amazing.”

Neurostimulation is a well-established technique for a variety of chronic pain and has been used successfully for almost 30 years. The trial procedure is done for about a week as an outpatient with no incisions. “If a patient has dramatic benefit (qualified as 80 percent or greater relief of headache pain), we then move forward to the permanent Transforma procedure,” explains Jack Chapman, M.D. and Physician of Advanced Migraine Relief. That involves placing leads underneath the skin adjacent to nerves responsible for headache pain. A small pacemaker-like battery is used to deliver electrical energy through the leads, controlled by the patient. The electrical current produces what many describe as a pleasant sensation over an area of the body that is normally painful.

“The patient is able to resume normal activities very quickly, typically within three to four days and eliminate or significantly reduce medication use,” Chapman adds. The success rate of neurostimulation for headaches is between 85 percent to 90 percent according to published studies.

FAYE BROOKMAN
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The treatment of pain has really shifted toward a heavy emphasis on medications, including potent opioid-based pain killers. Because of increasing problems with addiction, side effects, and questions about their long-term benefit, practices are now asked to better regulate their use through methods like urine drug screening.

It hasn’t developed. To quote the famous pain scientist Dr. Patrick Wall, “If we are so good, how come our patients are so bad?” Chronic pain has doubled in the U.S., in the past two decades. Pain management in the U.S. is still heavily dominated by prescription medications and injections.

Research clearly shows that comprehensive interdisciplinary pain treatment programs provide the best outcomes, yet the insurance industry fails to provide a system where providing the best and most appropriate care actually gets delivered and reimbursed. Instead, patients get too many pills and procedures because that is what pays the bills.

Pain is complex, and multidisciplinary care is needed. This type of care is equated with expensive and lengthy programs only accessible to a few. Pain physicians should develop smaller, easily accessible, affordable, local multidisciplinary teams (physical therapist, psychologist, dietician, etc.) and mandate patients attend such sessions to receive more comprehensive care.

Being a good listener is critical to good communication. Patients want doctors who will understand them at a deeper level. But, what we think we want may not always be what our doctor feels is best for us, and this is where I see frustrations arise that need to be worked through.

Pain practitioners understand the mind/body connection and the impact that psychological distress can have on health. The rest of the medical world would do well to learn from us that the physical body does not get well if the emotional and spiritual parts are suffering. Healthy lifestyle habits are critical.

Neuroscience. Patients in pain are interested in knowing more about their pain. Research has proven that teaching people in pain about why they hurt from a neuroscience perspective (therapeutic neuroscience education) allows patients to experience less pain, fear and anxiety; move better; and exercise more willingly.
A BROTHERS’ BOND, UNBROKEN

Former American Idol contestant Ace Young discusses the patient/caregiver dynamic, after watching his brother Ryan Young suffer from neuropathy pain following an almost-fatal car accident, and subsequent accidents and injuries.

Media Planet

What is it like to care for and/or watch a family member whose chronic pain condition is so difficult to relate to?

A. Young Having a brother with chronic pain is difficult. As family members you always want to help each other, but chronic pain is something that only doctors can really do anything for. When you meet my brother you may not know the amount of pain he is constantly dealing with because he hides it well. But on a really bad day he has migraines that enable him from getting out of bed.

MP How important is having a support network to you?

R. Young In times of need having a support system made all the difference in the outcome of my care and daily living. Back in 1996 I was in a near-fatal car accident. I sustained many injuries including breaking my back in seven places, dislocating the lower two vertebrae, and suffering severe cuts to my spine and hip, all which required hours of surgery and rehabilitation. Doctors said I may never be able to walk again. I had to rely on my support system quite a bit during that first year of recovery and throughout the years since when it comes to dealing with chronic pain. I have learned that having help is not a sign of weakness or apathy but rather a way to eliminate stress. This allows my body to heal and when I am up to it be more productive to do my main job.

Reversing the opioid epidemic

Pain is a serious medical condition that we, as physicians, are duty-bound to treat. Today, we have very good medications to treat pain, but, like many other medications, today’s opioid pain medications have side effects — addiction and the risk of overdose. Therefore doctors who prescribe opioid medications need to be trained both in pain management and addiction medicine.

Many state and local governments are responding to the epidemic of opioid addiction and overdose deaths by restricting access to pain medication. But that might also have a side effect: needless suffering. Patients who need pain medication must have access to it. State and local lawmakers do not want to be responsible for cancer patients and other people suffering from pain being unable to get the medication they need.

Increased physician training

The answer is not in severely restricting access. Training prescribing clinicians in both pain management and addiction medicine can help patients in pain while recognizing drug-seeking behavior among opioid addicts. In fact, prescribing rates are beginning to drop as physicians have become more cognizant of opioid addiction. This, too, is having a side effect. People addicted to opioid pain medication are turning to street drugs, mostly heroin.

We need to get serious about treating opioid addiction. Currently, there are three FDA-approved medications — Methadone, Buprenorphine and Naltrexone — which, along with behavior therapies, work well to treat opioid addiction. But state governments and insurance companies are arbitrarily limiting access to these medications. The American Society of Addiction Medicine (ASAM) sponsored a recently released study on these medications, which showed their effectiveness.

Physicians need training and access to every tool to reverse the epidemic of opioid addiction and overdose. And specialists in treating the disease of addiction need every evidence-based tool — including addiction medications — to treat opioid addiction.

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Managing Pain

Double check, don’t double up on acetaminophen

It’s Pain Awareness Month, and the Acetaminophen Awareness Coalition’s Know Your Dose campaign is reminding consumers who use prescription or over-the-counter medicines for managing pain to read and follow their medicine labels to avoid doubling up on acetaminophen.

Acetaminophen is one of the most common drug ingredients used in medicines to relieve pain. It is also commonly found in fever reducers, sleep aids and cough, cold and allergy medicines. When used as directed, acetaminophen is safe and effective, but taking more than directed is an overdose and can lead to liver damage. To avoid taking too much, always check the labels of your medicines and never take two medicines that contain acetaminophen at the same time.

Remember to: Double check, don’t double up!

The Acetaminophen Awareness Coalition editorial@mediaplanet.com
Building a life despite the pain

Mediaplanet explores the female specific condition of endometriosis through the eyes of Kirsten Storms.

General Hospital stars Kirsten Storms and Brandon Barash are expecting their first child together — It’s a girl! Now, Kirsten has decided to share her story of hope and the miracle of getting pregnant with the painful condition known as endometriosis.

Mediaplanet How has chronic pain affected your career or changed your schedule?
Kirsten Storms When I developed endometriosis in 2010 I had a tough time adjusting to the pain and did not know what I was actually facing. I ended up leaving General Hospital, the daytime television show I was on, in 2011. I was off of the show for over a year as I was uncertain as to the life changes I would need to go through for treatments. Living with constant pain takes a huge toll on every aspect of your daily living. I had to learn how to organize my life and discover new tools to cope with chronic pain.

MP What advice would you give to other women who have been diagnosed with endometriosis?
KS Have hope that it can be treated effectively. I hope my story inspires others who want children while facing endometriosis. After going through many treatments and being told I would probably need a hysterectomy, I actually was able to conceive a baby. My husband Brandon and I are expecting a baby this January. We are so excited and look at this as a miracle after being told how low the chances of conceiving a child for women with endometriosis.

MP Congratulations on your pregnancy, which can be difficult for many women with endometriosis to achieve. Did you have any treatments to assist with getting pregnant?
KS I had no help in conceiving through fertility treatment. The doctors said it was improbability that I would conceive. I was coming to terms with not going to be able to give birth to my own child. The pregnancy came to us as an amazing surprise. I do know that many women who face endometriosis end up taking pain medications, hormone therapy and undergo surgical procedures such as a laparoscopy in order to try for a child. In my case, after having three laparoscopy surgeries where they removed the endometriosis that was developing as a last resort option I went to mediated menopause treatments. The way that they diagnosed my endometriosis was with exploratory surgery, as many times it will not show up in a test or ultrasound. The hormones from pregnancy have helped with my endometriosis symptoms, after birth I know that the pain may return.

MP What is the most effective piece of information or advice you have received since your diagnosis?
KS The best advice I was given came from reaching out to others with endometriosis. I quickly learned that I needed a provider that I feel very comfortable with to help me manage and treat the endometriosis. It is okay to ask questions and you may also want to get a second opinion before starting any treatment to be sure you know all of your options and the possible outcomes.

MP What inspires you to persevere despite your pain?
KS The amazing support from Brandon has been most beneficial. Having him by my side has given me strength to face the symptoms and move forward with building a life despite the pain. I also had great support from the staff at ABC’s General Hospital and from so many fans that have been there to cheer me on and help give me great support. One of the reasons I chose to speak out was so that I could let others know that pushing through the hard times can give you strength and courage that you may not know you have when facing a chronic illness that affects you, your partner and your potential family.

MP Did you know what endometriosis was prior to your diagnosis? How did your understanding of it affect your reaction?
KS I was not familiar with endometriosis until I was diagnosed and suddenly faced so many new challenges and symptoms that come with it. I believe better awareness campaigns and putting a huge spotlight on it in the public would help other women facing this life altering condition. The more the person knows about what they are facing the easier it is to adjust to this condition. Receiving proper and timely treatments can raise chances of conceiving and is crucial for a successful outcome.

editorial@mediaplanet.com
Ten years after human genome sequencing emerged, its evolution continues to improve cancer therapies today. Even more advancements await us in the years to come.

A decade of progress

April marked the 10 year anniversary of the sequencing of the first full human genome, generating high expectations that new therapies would emerge. While some have, one of the most exciting developments has come from more effective and rapid sequencing. What took 13 years and over three billion dollars to accomplish can now be done in a few weeks at a cost of a few thousand dollars.

The most visible impact of genome sequencing is a new generation of tests similar to BRCA that assess the risk of getting cancer, and provide other information that can help guide treatment. Over the next 10 years we expect to attain a deeper understanding of how individuals will respond to cancer treatment as more and better predictive tests become available.

Revolutionizing cancer therapy

Another impact is less well known — the ability to generate a full genomic profile of an individual patient’s cancer. In its most common form, this lets scientists see more broadly than the two to three markers that are associated with a given cancer type. At best, it can help scientists “view” what is driving the cancer, by determining the differences in biochemical processes within a patient’s cancer cells versus their normal cells. The impact of such knowledge on cancer therapy is revolutionary — allowing us to understand the unique biology of a particular patient’s cancer and identify therapies most appropriate to solving those specific problems. This procedure requires data that goes well beyond full genome sequencing, and is only being done at a few institutions, including ours. While it is way too early to declare victory, we’re encouraged by what we’ve seen so far.

Raphael Lehrer, Ph.D., Chief Scientist and Founder, GeneKey
editorial@mediaplanet.com

Knowing that your cancer is unique won’t help your treatment.
Knowing how can.

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Pharmacogenomics
No two patients are alike

Pharmacogenomics is the study of how the genetic make-up of an individual or tumor affects the efficacy, metabolism and toxicity of drugs.

It is one of the fastest growing segments of the genetic testing market that is expected to reach $4 billion by 2015. This is particularly true in the area of oncology where pharmacogenomics has shown significant promise in the individualization of patient medication therapy, thus optimizing the treatment of cancer. Effective pharmacogenomic testing can help ensure that the right drug is selected for the right patient and it can guide dosing and/or avoid possible life-threatening side effects by identifying patients at increased risk of drug toxicity.

The Food and Drug Administration (FDA) lists more than 100 medications that have pharmacogenomic information included in their drug labels, with over a third being oncology drugs. However, laboratories are not required to obtain FDA approval for most genetic tests and these drug labels do not always provide specific recommendations about what actions should be taken based on the genetic information. In addition, the peer-reviewed literature does not always provide consistent evidence around the clinical utility of some pharmacogenomic tests. For example, in a 2010 study, all payors that had a medical policy on the use of KRAS testing for patients with metastatic colon cancer who were on Vectibix or Erbitux covered the test because there is clear evidence that patients with a KRAS mutation do not benefit from these drugs. On the other hand, the vast majority of payors do not reimburse for pharmacogenomic testing associated with warfarin or anti-depressant drugs. While there is a likely association with how genetics influence the metabolism of these drugs, the literature does not provide clear guidance as to what the healthcare provider should do with that information.

Payors are struggling with how to deal with these tests that can offer significant clinical benefit and have the potential to increase the value of a healthcare intervention. They are increasingly evaluating the clinical and financial utility of pharmacogenomic testing and developing coverage policy and management strategies to support this goal. When available, pharmacogenomic tests are being incorporated into evidence-based clinical pathways to help determine whether or not a drug to be used in treating a particular patient for a specific cancer is likely to benefit the patient.

In summary, the body of evidence that demonstrates the clinical utility of some of these tests is still limited. This highlights the need for more research, study and analysis, and sheds light on the variable insurance coverage of some of this testing and treatment. Personalized medicine is becoming a reality. Those who share the vision can best see it realized by developing the body of evidence that support meaningful specific drug and test clinical benefits for relevant populations.

STEPHEN L. ECK, MD, PH.D.
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“Pharmacogenomics is the study of how the genetic make-up of an individual or tumor affects the efficacy, metabolism and toxicity of drugs.”

DID YOU KNOW?
Predict, preempt, cure
Drug development is undergoing a major transformation driven by a more refined understanding of disease processes and how the biology of a disease varies from patient to patient. Drug discovery began as an empiric enterprise driven by serendipitous association of a medicine with a health benefit. Such observation brought us aspirin for fever, quinine for malaria and penicillin for certain infections. The utility of the medicine was not grounded in an understanding of how it worked nor was there any accounting for the person to person variations in human disease.

Today, we recognize many illnesses are fundamentally distinct at the biological level. Distinctive biologic properties of an illness now form the basis of drug discovery. Lung cancer, a disease known for centuries and treated with non-specific approaches, is now recognized as a collection of distinct cancers for which very specific therapies are indicated based on genetic alterations of the cancer.

Today in developing a new medicine the starting point is the unique characteristics of the disease which are often genetic factors varying from patient to patient. This approach affords considerable advantage to drug development. It accelerates the time to approval and creates new medicines that have larger benefits and provides patients with greater certainty that the medicine is best suited to their circumstance. Our investment in the discovery of genes associated with disease is paying off in the form of new personalized medicines.

MICHAEL D. GRAF, MS, MBA, CGC, BOARD CERTIFIED GENETIC COUNSELOR, CARECORE NATIONAL LABORATORY UTILIZATION MANAGEMENT PROGRAM
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A Picture Is Worth A Thousand Cures

Not all breast cancers behave alike. In recent years, visualizing the expression of the biomarker HER2 in tissues has been essential in determining treatment. Image analysis of HER2 is now essential to stratify patients to provide personalized care.

As pathologists and researchers imagine a world without cancer, they know that tissue data from image analysis is essential. And they turn to Definiens as they look for new biomarkers and cures. Find out more at www.definiens.com
MAKING CANCER TREATMENT PERSONAL

At age 32, Adriana Jenkins was engaged and starting a dream job when she was diagnosed with a rare and aggressive form of breast cancer. With less than a 50 percent chance of survival beyond five years, Jenkins explored all options that might give her better odds. She joined a clinical trial of Herceptin, a so-called personalized medication, that extended her life almost 10 years. Herceptin, eventually approved by the Food and Drug Administration, is used to treat many women with the same type of genetic marker, HER2, present in Jenkins' cancer.

Making an impact

“Personalized, or I like to call it precision medicine is making sure the right patient gets the right drug at the right time,” explains David Schenkein, M.D. who was vice president, Clinical Hematology/Oncology at Genentech, the maker of Herceptin, and is now chief executive officer of Agios, a biopharmaceutical company.

Although Jenkins, who had the word “hope” tattooed inside her arm to remind her how much she wanted to embrace life, lost her battle in February 2011, her efforts raised awareness for personalized medicine. She penned a passionate plea for the pharmaceutical and medical industry to embrace personalized medicine that appeared in Forbes magazine the week she died.

“Adriana made an impact. She was a champion for personalized medicine and a reminder we can do better and make great advances in cancer treatment,” explains Schenkein who acknowledges that five years ago the big companies didn’t “get it,” when it came to personalized medicine, but have now responded to patient demands—even if for small markets.

Keeping a vision alive

Friends of Jenkins banded together to form the Adriana Jenkins Foundation for Personalized Medicine to support Jenkins’ vision. Collaborations have been forged with industry groups such as The Personalized Medicine Coalition and Stand Up to Cancer.

“Our hope is to keep Adriana’s vision for the promise and potential of personalized medicine alive and to raise funds for the continued development of new personalized medicine therapies,” says co-founder Kelly Lindenboom. “If you or a loved one is faced with a new cancer diagnoses, ask your healthcare provider if treatment with personalized medicine therapy might be an appropriate option to consider.”

Her vision for the promise and potential of personalized medicine lives on.

Q&A

1. How has personalized medicine evolved in the last 12 months?
   It’s become evident that true personalized medicine is going to come from the combination and correlation of genomic information, tissue imaging data and clinical outcomes. The physician of the future will rely on systems that mine and correlate large data sets from each case, so he can tailor a course of treatment for each patient.

2. What does personalized medicine mean for the future of our health care?
   Cancer treatment has been a bit of trial and error in the past—which sometimes takes time a patient doesn’t have. With personalized medicine, patients will be more likely to get an efficacious drug the first time. For example, a patient with a particular tissue biomarker and genetic mutation might be screened against a database to look for similar patients and what therapies worked for them, so the physician can make a more accurate treatment decision.

3. What sets personalized medicine apart from other therapies?
   Personalized medicine will be data-driven and based on correlations to provide individualized treatments. Big Data in personalized medicine changes the traditional paradigm—we may not know exactly why a treatment works, but we will know that patients of a certain biomarker and genomic profile will respond.

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As many as 1 in 4 men with a negative prostate biopsy have cancer.

For more information, and to inquire about having the ConfirmMDx for Prostate Cancer test performed, please talk to your doctor.

Why do I need ConfirmMDx for Prostate Cancer?

Unfortunately, today’s “gold standard” for diagnosis, the prostate biopsy procedure, only provides a limited evaluation by sampling less than 1% of your entire prostate. Prostate cancer may be present in one or more small tumors, and there is a risk the biopsy needle could have missed it. Your urologist may have concerns about your risk for undetected prostate cancer and recommend ConfirmMDx to determine your need for a repeat biopsy.

ConfirmMDx provides actionable information that helps your urologist:

- Rule out prostate cancer free men from undergoing unnecessary repeat biopsies
- Determine if you are at high risk for prostate cancer and may need a repeat biopsy and potential treatment

How ConfirmMDx Works?

ConfirmMDx detects an epigenetic field effect or “halo” associated with the cancerization process at the DNA level. This epigenetic “halo” around a cancer lesion can be present despite having a normal appearance under the microscope.
Like a finely tailored suit fitted to individual specifications, personalized medicine is designed to match a patient’s body and lifestyle. It is becoming available with more sophisticated and targeted diagnostics and treatments. Consumers just have to seek it out.

“Most people don’t know they can be pre-tested for reactions to many medications today,” said Eric Topol, M.D., Cardiologist, Chief Academic Officer of Scripps Health and Professor of Genomics at The Scripps Research Institute. There are also mobile device apps to check vital signs like heart rhythm and blood glucose levels enabling a 24/7 view and insight into patterns, he pointed out.

In addition to a person’s genetics, their environment, nutrition, and age can also influence drug metabolism and, as Topol explained, a doctor should understand the genetic differences that lead to metabolic variations in designing individualized treatment for a patient. For example, a wide variety of drugs used clinically can be affected by variations in CYP2D6. The CYP2D6 DNA makeup of a patient can affect the drug’s efficacy and toxicity and indicate how or whether the patient may respond to the treatment. An example of such a drug isCodeine.

播音者 Is this treatment or diagnostic test right for me? Does it match up with my individual biology? For the treatment of cancer, the option is available to have a tumor sequenced providing clues to its cause that would be helpful in determining the optimal course. But the patient or family member has to ask for that, he added. “The whole notion of empirical medicine is over,” Topol explained.

The human genome is a world rich with extraordinary information that we didn’t have before, declared Topol, who thinks that despite the advances “we should be much further along.”

Rather than accept a one-size-fits-all approach, Topol promotes a future healthcare system where doctor and patient share more information and decision-making and the individual’s genetics drive care. He advises patients to query: “Is this treatment or diagnostic test right for me? Does it match up with my individual biology?”

The whole modus operandi, explained Topol, is to get as much pertinent data as possible and make treatment highly individualized.

Are they critical to the development of personalized medicine strategies?

PHYSICIAN: Yes, it is very important for a doctor to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand for a patient to understand...

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Personalized medicine is an evolving field that enables physicians to use molecular diagnostic tests to determine which medical treatments will work best for patients.

A revolution in therapies

By combining the data from those tests with a patient’s history and circumstances, health care providers can develop targeted prevention and treatment plans. Therapies can be concentrated on those who will benefit, sparing side effects and expense for those who will not.

The roots of personalized medicine go back to Hippocrates, the father of Western medicine, who exclaimed 2,500 years ago, “It is far more important to what person the disease has than what disease the person has.”

But what is potentially revolutionary is our newly discovered ability to understand the patient at the molecular, often genetic, level, thereby bringing us closer to offering patients greater precision in diagnosis and treatment.

A life saved

Consider Stephanie Haney, a town manager in Pennsylvania and mother of two girls. About five years ago, Stephanie discovered that she had lung cancer, and embarked on a series of trial and error treatments, including chemotherapy and multiple drug regimens. Nothing worked.

In 2010 she learned of a new clinical trial, conducted by a major pharmaceutical company, of a drug called crizotinib. The drug only works for patients who possess a gene rearrangement called ALK, about five percent of nonsmall cell lung cancer patients. Stephanie enrolled in the trial after her doctors determined that she was ALK positive. Today she is alive and well — and an advocate of more research to develop drugs like the one that has saved her life.

This is one example of personalized medicine. There are about a dozen drugs on the market like crizotinib as well as over one hundred others whose labels include genetic information to guide their use. They represent, in the words of Janet Woodcock, director of the Food and Drug Administration’s Center for Drug Evaluation and Research, “the beginning of a revolution in therapeutics.”

But drugs like crizotinib don’t fall out of the sky. They depend on a fragile and increasingly challenged system of funding for research and not-yet-developed public policies that govern regulation, reimbursement and adoption.

A great responsibility

Having glimpsed the future of medicine, it is our responsibility to ensure we do everything within our power to accelerate its development.

The Personalized Medicine Coalition, representing innovators, scientists, patients, providers and payers, promotes the understanding and adoption of personalized medicine concepts, services and products to benefit patients and the health system.

Edward Abrahams, PH.D.
President, Personalized Medicine Coalition

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EMERGING TOOLS
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A LEGACY LIVES ON
Adriana Jenkins devoted her life to advancing the future of cancer care.

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