

Video/Audio 1

Directions: Watch the video clip twice, and put down your notes according to the information you get.

1. _____
 - CAT Scan
 - PET Scan
 - MRI
2. Contribution of Sharper Imaging
 - _____
 - _____
 - New understanding of traditional technology
3. Things that four-dimensional ultrasound enables the expecting couple to do
 - The appearance of their baby
 - _____
4. Abnormalities detected by four-dimensional ultrasound
 - _____
 - _____
 - a spina bifida
5. _____
 - Better analysis of digestive diseases
 - Ability to see inside the GI tract and into surrounding organs
 - Acquisition of all the information about the liver

Script

Male Speaker: CAT Scan, PET Scan, MRI, they are the medical nicknames of diagnostic tools we've come to know from our own health situations or the media. Advances in technology have improved standard tests dramatically, allowing doctors to see inside our bodies like never before. Here are some ways Sharper Imaging can help promote life, prevent death and view traditional technology in a whole new way.

For expecting parents, it's one of the most exciting moments, that first glimpse of your unborn child, then you see the ultrasound and wonder.

Terrie Burklew: I don't know what I was looking at, I have no idea.

Male Speaker: At last, a diagnostic breakthrough can clear up the confusion. It's a four-dimensional ultrasound that produces spectacular images of baby in the womb.

Sally Grady: You see the tip of her nose there, the lips that she has got a curl -- she has got her lips curled. It makes the baby real to them. It's just so different than seeing the original 2D images where the technologists are trying to point out different things.

Male Speaker: The new technology gave expecting parents Terrie and Matt Burklew a sneak peek at what their baby girl looks like, and more importantly, if she is healthy.

Matt Burklew: She just looks cute, I can't go beyond that.

Male Speaker: Here is a regular ultrasound image and the same one using 4D.

Sally Gardy: You can look for abnormalities such as a cleft palate, clubfoot or a spina bifida.

Male Speaker: Doctors hope one day to use this same technology for breast and thyroid biopsies. Seeing firsthand that the little girl is the picture of health means the Burklews can concentrate on more important things like figuring out who she looks like. But sometimes, just using traditional technology in a new way can help doctors get a better blueprint of our bodies. When Rebekah Carpus had trouble swallowing X-rays and a CT scan, showed something was in her esophagus.

Rebekah Carpus: They said it could be a tumor or a cyst. He had no idea.

Dr. Faisel Jafri: The problems we've had in the past of diagnosing GI cancers has been the accuracy with which we diagnose them.

Male Speaker: That's where endoscopic ultrasound can help. The test combines two standard imaging techniques to better analyze digestive diseases. Using this technology, doctors can see inside the GI tract and through the tissue into surrounding organs.

Dr. Faisel Jafri: Look at the liver, by doing an endoscopic ultrasound you can get all the information that oncologist or a surgeon needs without doing surgery.

Male Speaker: It's meant to complement traditional tests and save patients like Rebekah from unnecessary surgery.

Rebekah Corpus: They were able to tell me that day we did not find any cancerous cells.

Video/Audio 2

"Hi, I'm Beth Ruyak. Doctors have traditionally been the people we run to when we're not feeling well or we need medication. But now doctors are forced to be much more. With the rising rates of domestic violence, elder abuse and the ever-growing threat of bio-terrorism, today's doctors must be equipped to handle situations they never imagined...and were never trained for. It's not only prompting changes in the doctor's office, but also in their very education."

"Oh, my god!"

It was the day we'll never forget...September 11, 2001. While many of us watched in horror on TV, medical personnel close to the scene rushed to the aid of hundreds of victims. As hospitals and triage centers filled-up...doctors and nurses were forced to control a situation that was unimaginable. It was a day that not only changed our nation. But changed medicine as well.

"What is the absolute of normal?"

"For gestational diabetes, I think it's 120."

"It's the life cycle of the red-blood cell...about three months."

These students at the UC Davis Medical School are preparing for similar situations. Along with anatomy, students now must take classes on bio-terrorism and know how to identify cases of anthrax and even smallpox.

"I've seen one slide of smallpox and I kind of know what it's supposed to look like from reading text, but you know so hopefully, if I see it, I will catch it."

Medical school has moved past lengthy lecture halls and extensive note taking to smaller classes and hands-on training. Students are also being introduced to an array of subjects never before seen in medical school like elder abuse, domestic violence and medical error. And there is a greater focus on the doctor-patient relationship as well.

Dr. Michael Wilkes/Vice Dean of Medical Education, UC Davis School of Medicine

"What we're trying to do is create a curriculum where it doesn't matter if you're going to be a bone surgeon or a gynecologist or a primary care doctor...that we're going to give you that information and the tools. We're going to focus much more on how you use information, how do you think critically, how do you make decisions and then a lot more attention on the patient."

"I'm starting to wonder what thought process does she have"

There students are learning how to handle cases of domestic violence.

"I've noticed that you've had a couple you've been in here to see us before in the past"

An actor, posing as a patient, is brought into the room with fake bruises and a broken

arm. A student is selected to interview the patient one-on-one and is put to the test.

"The situation is very real. Not only is she acting in a very real way, but you're needing to think ahead in much the same way you would in an emergency room or a clinic."

Melissa Moffit is a third-year medical student hoping to be a gynecologist. Melissa is able to take what she learns in the classroom and apply in the hospital.

"I think more and more they're trying to make medicine be more inclusive of the patient's mental health, you know obviously physical health, but also mental health, social health, financial health as a whole...to see your patient as a whole. I think that is a new approach, but it's been something that medicine has been trying to get at for a while now."

It's here at the birthing center where Melissa is part of a team of students who can help care for expectant mothers.

"It engages me as a student. It makes learning more active on my part and much easier."

In order to be a good doctor in today's world, students must go beyond memorizing facts. They must also be able to understand people, technology and society as a whole.

"I guess I'm a little worried that you know we have to be able to recognize everything, and it seems almost impossible."

"There's just too much to know. I mean the smartest and brightest person can't possibly know all this information. So where we've begun to look is how can we train our students to be better problem solvers. How to use that information where to find that information and getting familiar with the concepts of those formulas and chemical reactions and neural pathways, but not memorizing them."

"However, they do tell us in the beginning of medical school that about half of what we learn is going to end up changing throughout our careers. And they just don't know which half it's going to be. I imagine much, much of the things I am studying and memorizing now will perhaps not be so useful 20 years from now in new technology."

One thing that will always be useful to doctors is an understanding of the human condition...especially in a constantly changing world.

"And now that more patients and doctors are using computers and telecommunications, new technology classes are continually being added as well."

Video/Audio 3

"California is breaking ground in the nursing field by becoming the first state in the nation to establish minimum nurse-patient ratios. This is a move that's expected to make the Golden State a role model for the rest of the country that because as you'll see here the role a hospital nurse plays is critical."

In medicine there's life. In medicine there's death. And in medicine there's a place right in between.

"Sorry, hon I know. I'm almost done."

It's a place where the very sick hover between each heartbeat. But it's also a place where angels go...where people who look like you and me give everything they know and everything they feel to make critically ill patients well again.

"Hi, Mary. It's Debbie from Tower 7 MSICU. We have eight patients."

This is tower seven- the medical and surgical intensive care unit at the uc davis medical center. It's been home to nurse debbie cryder for more than a decade.

"It's very busy...a lot of adrenaline. We are usually a pretty fast-paced unit."

"Okay, try and take it easy."

Debbie's patients run the gamut surgery patients who've lost parts of their heads and necks to cancer... Suicide attempts... Tuberculosis... Drug overdoses... Horrible accidents... It's nursing in the highest gear.

"I'm going to take a little blood and check your blood sugar here."

"A lot of our patients are so ill...so de-compensated....that a lot of times an acute event something...will cause them to have a heart attack - an MI."

"We do all of our emergency checks to make sure everything is in order here"

But here's where debbie works her magic. She performs the finest of balancing acts on one side, immediately grabbing from her enormous storehouse of medical knowledge and instantly making life or death decisions.

"Okay, you're doing a great job. Keep up the good work."

On the other side, she gently summons the nurturer within. Her tender touch, her soothing wordshe carries the heart in health care.

"There will always be the one or two families a year that will snag your heart and you will be thinking about them all the time."

"Wipe your face. There you go."

In life's turnabout.debbie's at home with her husband and three daughters. Here she stares health, smiles and the sillies squarely in the eye. Never for a minute does she

take her smallest charges for granted.

"Hello!"

"Hello! How are you?"

It's not needles and medicine her children need. It's more like fruit with cereal and a helmet for the bike ride.

"Okay, everybody needs a helmet on."

It's all those little things that add up to the best care at home and at the hospital.

"I took care of a woman. Her car did not stop at a four-way stop. Her 3-year-old baby was in the back seat and anyway, the baby was brought in on life support. We allowed the woman to let her baby go with her there as she was on the ventilator. And we allowed that because she needed to have that closure as well. But that broke my heart to see that. It was very hard for all of us. So you have different situations like this that will stay with you forever."

"I'm just going to change your trach ties"

Through it all, debbie sees her place right between life and death.

"I feel very blessed to be in this position...that I'm feeling like I can give excellent care to my patients...making a difference in their lives. I never feel like my job is just coming to work and putting in my hours and such. And you come to work and make things, very stressful things for families and patients, as good as it possibly can be. And that is a gift. That is something we can offer the world that makes a big difference in peoples lives. And that makes me feel good. I feel very fulfilled. I love what I do."

"While the nursing shortage is happening nationwide, California has been hit especially hard. An estimated 30,000 new nurses are needed over the next five years to keep pace with population growth. If you're interested in a career like Debbie Cryder's, you can get more information from the Web site of the National Student Nurses Association or check out your local community college or university.