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An Invitation to The Malaysian Society of Radiographers AGM & Scientific Meeting Bridging Technology & Practices 13th- 15th April 2007 Grand Seasons Hotel – Kuala Lumpur

Given the dynamic nature of health care delivery, new technology and extended practice have been introduced into the Health Service with increased frequency by Radiographers. None of this could have happened without the close relationship between the higher education institutes and the clinical environment.

This innovative three day conference will look at the broader spectrum of advance practice radiographers are now involved in, how it has impacted on service delivery and also on individual roles.

We will hear from both the academic and clinical perspective and how they are working in partnership to create the expert practitioners of the future.

This aims to be an interesting and informative day where individuals will be able to gain ideas which may contribute to the strategic development of radiology departments' mission statement inline with advances in technology and at the same time enhance the radiographer's practices.

MSR Organising Committee

When you really want something,
Sometimes you have to swim a little deeper.....
You can't give up just because things don't come easy.....
You have to overcome the obstacles and face your fears.....
But in the end, it's all worth while!
Life is full of ups and downs,
But if you believe in yourself you will always come through with flying colours.....
Value Friendship, Value Relationship, Value Religion, Value Culture, Value
Existence..... Love & Faith.....
Never underestimate yourself,
Believe in yourself !
Have A Good Life !



From Distress to Eustress

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An expert is not only a skillful and knowledgeable person. An expert is also someone who can handle their emotions well and manage stress in life and in the department. Without a good stress management personality, skills and knowledge would not bring benefit to the patients we serve when we make the whole department a social chaos due to our emotional ups and downs.

Everyday we complain of being stressed by our families, jobs, relationships, finances, bosses, and equipments. Stress is something we cannot run away from or ignore; it is an essential part of our life. Our bodies are in a state of balance or homeostasis when our physiological and psychological states are balanced. Anything that disrupts this balance is a stressor and it gives rise to stress. Our body will respond to this stress by a set of reactions or adaptations.

Stress is not always negative, it can also be positive. Negative stress can be a threat, while positive stress leads to a state of excitement. Positive stressors are called eustress and the negative ones called distress. During an emergency, energy is mobilized and redirected from storage and from non-crucial functions to the functions needed for fight or flight. But if this goes on for far too long a time, the effects can be detrimental to that person. And this is called the chronic stress.

External factors that can cause stress, its nature and the extent of stress include discrimination, possible unemployment, isolation from others, selfish colleague, no due consideration, fussy people, demanding bosses, odd characteristics of bosses and colleagues, conservative managers, people who are not exposed to professionalism and outdated mentality, machines break down, not getting things done on time, unsafe working environment, patient's complaints and unreasonable expectations. The internal factors that cause stress include values, health, attitudes, beliefs, self control, and level of self esteem.

Individual differences will determine how people respond to stress in different way. Your life experiences also affect your response to stress. Personal hardships and losses suffered may cause us to develop unique defense mechanisms, to change our expectations and attitudes, and to make adjustments to life's ups and downs.

To manage and convert distress to eustress in your life, first, one has to recognize the source of stress in our life; next, list down which sources are within our control and which are not. Then, take actions towards reducing, modifying, eliminating, changing them or learning to cope with them. The methods to convert the negative stress to positive stress (i.e. from distress to eustress) are:

- subconscious self examination
- learning to relax
- using stress buffers and
- getting social support

Subconscious self examination

On most days we spend time talking to ourselves and worrying about things that would never happen. Much of these worries stems from irrational thoughts that cause us to exaggerate or distort the message that we receive from others. According to Albert Ellis a psychologist, our misperceptions and mistaken feelings about the intentions, words and action of others, and the things that we believe we "should" be doing, all cause us unnecessary emotional trauma. The healthier approach is to look around us, evaluate the nature of a situation, use rational self-talk and reason out to get through it. Adopt a rational line of thinking. And all this requires self-discipline

Learning to relax

We must learn when to shift from the daily "work and productivity" mode to "relax and enjoying" mode. The relaxation response is a positive mechanism against stress. The relax mode can reduce the negative effects caused by stress. We can learn to relax by practicing deep breathing, muscle relaxation, mental relaxation, and deep relaxation techniques. Deep breathing techniques control the

amount of air inhaled and exhaled. Muscle relaxation consists of brief, on-the-spot tension reducers that involve contracting and relaxing various muscle groups. Mental relaxation techniques involve blocking and thought-stopping. Deep relaxation techniques are meditation, imagery progressive muscle relaxation, and hypnosis.

Using stress buffers

The stress buffers are sometimes called the stress inoculators. These are: proper nutrition, adequate sleep, fitness, time management, and humor.

Proper nutrition: Eating the right type of food and maintaining the proper weight is part of the stress buffers to manage stress. Extra weight contributes to decreased energy levels and low self-esteem. Colas, coffee, chocolate or teas contains caffeine which causes an increase in anxiety levels in individuals. Food colorings and preservatives too will contribute to anxiety.

Adequate sleep: Sleep deprivation results in increased vulnerability to emotional upsets and susceptibility to distress.

Fitness: Maintain a fit and well functioning body by doing regular physical activities. Research has provided definitive evidence that exercise is related to decreases in tension, hostility, fatigue, depression and emotional volatility and increases in energy level, self-esteem, and self control. Exercise releases muscle tension, burns off stress-inducing adrenaline, induces pain killers and increases pleasure.

Time management: Allow yourself some time to get away from daily routine, use lunch hour for something enjoyable, delegate tasks to others, do not aim for perfection, plan ahead and do not procrastinate.

Humor: Remember the well known saying "laughter is the best medicine". Even the famous French philosopher Voltaire put humor to good use and kept the poor miserable peasants happy.

Social Support

Social support is the resources that individuals receive from other people or groups in the form of comfort, caring or help. Having a loved one or good friend to lean on during time of stress really does matter. Do not isolate yourself from people when you work, except to accomplish particular tasks. It is healthy to be around other people.

Choose to isolate yourself from particular individuals - the negative people. Avoid miserable and complaining friends. Be careful of those who absorb but do not give. Talking is an important element in getting social support too. Talking about things you have read about and your work day or even chit-chatting stimulates the mind. Simply having someone to talk things over helps people cope with stress. People who open up are less likely to visit mental health clinics. Opening up, talking about things and confiding in others really seems to help people cope.

Conclusion

Stress is an inevitable part of our everyday experiences as human beings. It can be viewed as a challenge, and methods can be found to manage or control its possible negative effects. Remember many times it is the subconscious perception towards the incidence that causes us unnecessary stress. Allowing yourself to relax; modifying your lifestyle by using the stress buffers and getting social support is essential to make the negative effects of stress become positive.

As radiographers, we should not let stress pull down our performance but instead allow it to be a stimuli to go to a higher ground. I would encourage you to apply some of these suggestions and show that you are an expert even when it comes to managing stress and convert distress to eustress.

Stress Management

A lecturer, when explaining stress management to an audience, raised a glass of water and asked, "How heavy is this glass of water?"

Answers called out ranged from 20g to 500g.

The lecturer replied, "The absolute weight doesn't matter. It depends on how long you try to hold it. "If I hold it for a minute, that's not a problem. If I hold it for an hour, I'll have an ache in my right arm. If I hold it for a day, you'll have to call an ambulance. "In each case, it's the same weight, but the longer I hold it, the heavier it becomes."

He continued, "And that's the way it is with stress management. If we carry our burdens all the time, sooner or later, as the burden becomes increasingly heavy, we won't be able to carry on." "As with the glass of water, you have to put it down for a while and rest before holding it again. When we're refreshed, we can carry on the burden.

"So, before you return home tonight, put the burden of work down. Don't carry it home. You can pick it up tomorrow. Whatever burdens you're carrying now, let them down for a moment if you can. "Relax; pick them up later after you've rested. Life is short. Enjoy it!



From Novice To Expert Through Team Work

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One of the crucial factors needed to excel from novice to expert is team work. In today's working world team work is essential in managing organizations to increase efficiency, motivation, job satisfaction and creativity. We as radiographers need team work to perform quality procedures which we cannot hope to achieve alone.

Therefore for an effective team to function well and to fulfill these criteria, we need the right mix of team member competencies. Each and every staff is unique with different characters and will add something special to the team. So how do we classify a good team? A good team should consist of a group of people with different characters, ideas and approach towards work but with one ultimate goal. We should not have a team with a group of people who think the same because this limits ideas on how to solve problems and other matters pertaining to work. In order to produce good team work there must be 4 different types of characters. They are:

- D———— The Directive
- I———— The Influencer
- S———— The Steadiness
- C———— The Compliance

The Directive

These people are extroverts, which mean that they are sociable, out spoken and vivacious. The directive person is work or task oriented, visionary and very adventurous. They are always a pioneer and always have something new to introduce or to initiate. These people cannot live without planning or in other words they cannot be visionless. On the other hand there are some qualities of the directive person that can be hard to handle. For example they can be very commanding, impatient and always in a hurry which makes them unable to slow down and admire art. However, without these strong qualities present in a team we cannot get a job done.

The Influencer

The influencers are also extroverts and very people oriented. These people cannot be alone. They will be bored if they don't meet people. They get excited when they see people because they just like talking to others. They are also very convincing and persuasive. They make very good teachers and promoters because of this ability. Sometimes they talk more and do less because they get a little carried away when they talk. Naturally, they like public speaking and they make very good speakers. The influencers hate system because for them, system restricts their creativity and their own way of doing things. They also work fast because they are impatient and because of that they can be a bit messy.

The Steadiness

They are very people oriented, very warm and welcoming. However they are introverts –individuals who are quiet and like their own company. They listen more than they talk and because of that they make very good counselors and they are very comforting. They tend to draw people towards them because of this attribute. They are artistic and sometimes a bit messy because for them mess is fine since it is viewed as art. They are also people who don't like system. They are always slow and steady because they get carried away by admiring things around them, everything is artistic to them. The one thing they dislike is adventure and taking risks.

The Compliance

These are people who must act in accordance with requests or commands. They cannot and will not deviate from the traditional method. They are very work oriented and can handle paper and computer work very well. They love system and everything they do must follow a certain system. They like being alone which actually means they like doing work



No matter how busy you may think you are, you must find time for reading, or surrender yourself to self-chosen ignorance.

~ Confucius ~

DIRECTIVE	INFLUENCER	STEADINESS	COMPLIANCE
Red	Green	Blue	Yellow
Rabbit	Tigger	Pooh	Eyeroe
Task oriented	People oriented	People oriented	Task oriented
Extrovert	Extrovert	Introvert	Introvert
Impatient	Impatient	Dislike system	Like system
Visionary	Persuasive	Slow & steady	Perfectionist
Adventurous	Creative	Artistic	Systematic

without meeting or communicating with people. They don't talk a lot and always keep a low profile. Basically they are introverts. They are perfectionists and cannot stand mess. They are willing to repeat their task to get things right. They like routine jobs. Everything has to be routine, anything different from usual are not well accepted by them. The one thing they dislike is surprises.

The cats' story

Let me tell you a short story about how these 4 different personalities will chase these cats away from a room

The **Directive** person will stand at the door, staring fiercely at the cats and will just say "get out". Whereas the **Influencer** will first put some food for example some milk or fish at the door, talk to the cats, coax or persuade it to go out. But the **Steadiness** won't do anything. For them having the cats there is no big deal. Its just part of the room decoration. The **Compliance** will first make a few holes, for example if there are 3 cats he or she will make 3 holes and label them A,B and C. Not only that, they will also label the cats A,B and C and make sure cat A goes into hole A, cat B goes into hole B and so on. If the cats were to go into wrong holes they will be very upset because their mission was not completed.

A Good Team

So in conclusion a good team must consist of these 4 characters to carry out a task successfully.

- This is because a Directive is needed to set a vision
- While an Influencer is needed to promote the vision
- The Steadiness acts as a balance in matters that occur
- The Compliance is needed to organize everything well, right to the smallest detail.

However, over time individuals' character tend to change due to age and experience. They may not

remain in the same D I S or C category. Some may not have 100% of one specific character, it can be a mixture. For example one can be 90% an Influencer and have 10% of the Steadiness character. I would also like to point out that these characters are what other people perceive of us but in actual fact that may not be how we perceive ourselves because our action reflects our attitude in turn our attitude reflects our personality.

Through my experience in working with people with different characters in my department I would highly recommend to all the chief radiographers, the next time you prepare the duty roster please ensure that you have these 4 categories in a team in order to have a smoother workflow and to produce excellent work output because after all good team work is what is needed not only for the individual to excel from novice to expert but it can produce outstanding results and outcomes for the whole department to improve and move forward.

Religious people suffer 60% less heart disease than those with little or no religious belief, the suicide rate among them is 100% lower, they suffer far lower levels of high blood pressure, and this ratio is 7:1 among smokers.

– David B. Larson, of the American National Health Research Center, and his team, comparisons of devout and non-religious Americans

People who describe themselves as having no religious beliefs become ill more frequently and have shorter life spans. According to the results of the research, those with no beliefs are twice more likely to suffer stomach-intestine diseases than believers, and their mortality rate from respiratory diseases is 66% times higher than that of believers.

– International Journal of Psychiatry in Medicine

Worship and belief in God have a more positive effect on human health than that observed in anything else. No belief provides as much mental peace as belief in God.

– Dr. Herbert Benson of the Harvard Medical Faculty (not being a believer himself)

IMAGE-GUIDED RADIOTHERAPY (IGRT)



Image-Guided Radiation Therapy (IGRT) or sometimes called Image-Guided Adaptive Radiation Therapy (IGART) is a method of disease management that stresses monitoring patient treatment during treatment delivery, by using advanced imaging technology.

In traditional radiation treatment, a patient's disease is diagnosed, staged and imaged at the beginning of treatment, and the information is used to plan treatment for the whole of the course.

Thanks to the advances in imaging treatment, doctors now know that the patient's anatomy and the tumor's size and shape can change during the entire treatment process. As such, plans made

early on may not be appropriate at any time during in the treatment course.

IGRT uses the advances in imaging to track these changes through all stages of treatment. By re-imaging and modifying the treatment plan, radiation oncologists are able to respond as the disease reacts to the therapy. This results in better treatment for the patient, more precise and effective radiation therapy, and fewer side effects.



When Intensity Modulated Radiation Therapy (IMRT) was first introduced, it offered the possibility of improved dose conformance to target whilst reducing irradiation to healthy tissues.

Although these remain key objectives of radiation therapy today, IMRT brought with it greater complexity than conventional treatments and required much more stringent Patient Quality Assurance procedures. This has resulted in reduced confidence in many clinics to apply IMRT techniques on a routine basis.

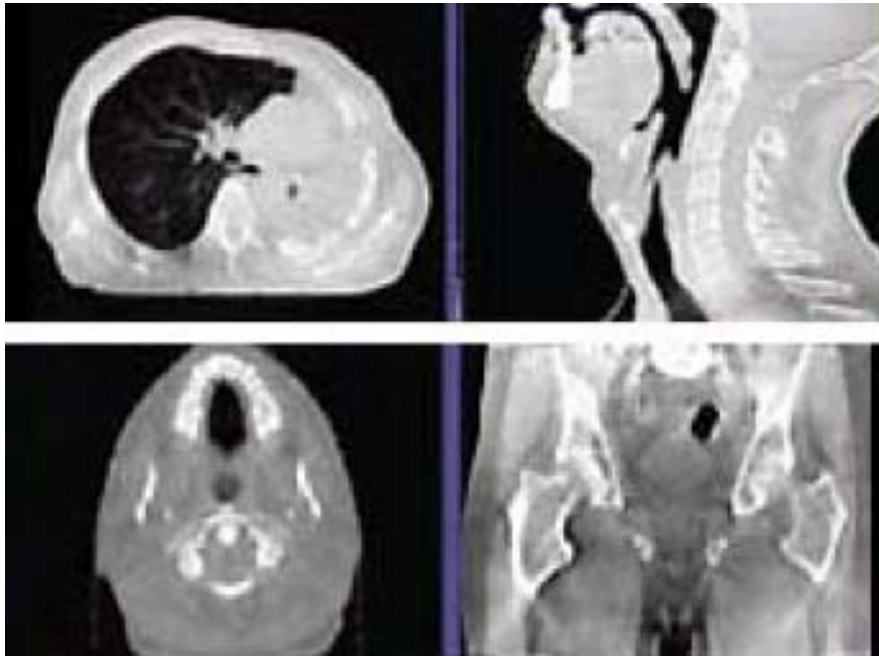
Enhanced conformance is only beneficial when the dose is accurately directed towards a target. The target may have moved between planning on a Computed Tomography (CT) scanner and treatment on a linear accelerator and can move both inter or intra-fractionally whilst the patient is undergoing treatment.

The creation of new treatment imaging devices was driven by this need to visualize internal structures, including soft tissues, in three dimensions within the reference frame of the treatment system and at the time of treatment. This will allow the clinician to minimize geometric uncertainties resulting from both organ motion/deformation and slight differences in patient set-up.

Such devices for example the **Elekta Synergy®** equipped with **iViewGT™**, and **Varian's Clinac(R) iX linear accelerator®** equipped with an **On-Board Imager™** device for imaging and tumor tracking had therefore been designed to inspire clinical confidence via IGRT to practice advanced radiation therapy techniques. This combination of high resolution imaging, taken in 3D and at the time (the 4th dimension) of treatment – combined with workflow solutions developed to be applicable on a routine basis – is described as '4D Adaptive'.

Until the introduction of these new treatment imaging incorporated devices the delivery of radiation therapy had to rely on assumptions about target location based on historical data which could be a week or more old at the time of treatment.

However, for targets surrounded by critical organs, such systems rely on surrogate markers implanted within tumors to determine their location, as portal images can not be used to differentiate between soft tissues.



Elekta® XVI (X-ray Volume Imaging) technology enables visualization of soft tissue detail in any area of the body. Utilization of this functionality enables two potential effects on patient outcomes.

The latest radiation therapy techniques, such as IMRT, are based on sparing the maximum healthy tissue from inadvertent irradiation. This in turn requires that the margins placed around the tumor are minimized, thus precision and accuracy of targeting are critical to success.

Firstly the potential to minimize side effects of radiation therapy by reducing the margins previously set to account for uncertainties of target dimensions/location/movement and secondly the potential to adopt dose escalation and hypo-fractionation regimes in the confidence that a 3D plan will be delivered as an accurately targeted 3D treatment.

Elekta Synergy® is a linear accelerator that can feature integrated 3D volume imaging functionality. This allows an image of the tumor site with CT-like quality to be acquired using XVI technology and

reconstructed immediately before treatment, with the patient already set-up in the treatment position.

Elekta Synergy® thereby forms the foundation for 4D Adaptive image guided radiation therapy. VolumeView™ image quality allows differentiation of soft tissues and thereby determination of the target's size, shape and location in relation to critical structures. This data can then be compared with the original planning scan on which the treatment plan was based.

If the patient simply needs to be moved, the treatment table can be controlled remotely to do so. If the tumor is no longer where it was or has changed shape or size then the treatment plan or MLC (Multi Leaf Collimator) setting can be modified as appropriate. If the tumor is likely to move during treatment (for example a lung tumor during respiration) then appropriate margins can be set using MotionView™ (sequential) imaging.

Elekta Synergy® directly addresses clinical concerns regarding organ motion and deformation and uncertainties in repeating and maintaining the set-up of the patient - thereby inspiring clinical confidence in the practice of advanced radiation therapy techniques.

Cancer Patients In India Gain Access To Advanced Image-Guided Radiotherapy Treatments For The First Time

Cancer patients in the Indian state of Gujarat can now receive state-of-the-art image-guided radiotherapy (IGRT) treatments using equipment from Varian Medical Systems, with the opening of a new radiation oncology center at Apollo Hospital, Ahmedabad. The first IGRT treatment at the center was delivered to a prostate cancer patient in his 70s.

The new facility was established through an alliance between the Comprehensive Blood and Cancer Center (CBCC) of Bakersfield, California, USA, and Apollo Hospital Groups, one of the largest healthcare groups in South and South East Asia.

The CBCC facility at Apollo Hospital is the first treatment center in South Asia to offer IGRT using a treatment system that combines imaging and treatment technologies on a single machine. Radiation is delivered using **Varian's Clinac(R) iX linear accelerator** equipped with an **On-Board Imager™** device for imaging and tumor tracking.

According to Vivek Bansal, MD, radiation oncologist at Apollo Hospital Ahmedabad, the first patient is continuing treatment with daily radiotherapy sessions administered five days per week over a period of seven weeks. The treatment team uses the **On-Board Imager** prior to each treatment to precisely locate a set of gold markers that have been implanted into the patient's prostate gland in order to accurately account for any changes in tumor position from day to day.

"The prostate moves around constantly due to normal physiological processes," Bansal said. "With the **On-Board Imager**, we can detect very small displacements and make appropriate corrections. We use it in radiographic mode to detect the gold marker seeds and reposition the patient, and then we generate a three-dimensional cone-beam CT image to verify the accuracy of our positioning corrections."

The treatment system also incorporates Varian's respiratory gating technology for synchronizing treatment with the patient's normal breathing pattern. This will enable Bansal to treat lung and other tumors that move as the patient breathes. In addition, the center has installed Varian's technology for delivering image-guided brachytherapy — a way of treating cancer from inside by precisely placing tiny radiation sources in or near a targeted tumor.

The World Health Organization estimates that in India overall, there are over 800,000 new cases of cancer and nearly 600,000 cancer-related deaths documented each year. "The Varian technology facilitates fast, accurate treatment," Gitesh Patel said. "Despite being one of the most industrialized states in India, Gujarat is afflicted with one of the most alarming cancer incidence rates per 100,000 people. We're going to help a lot of them."



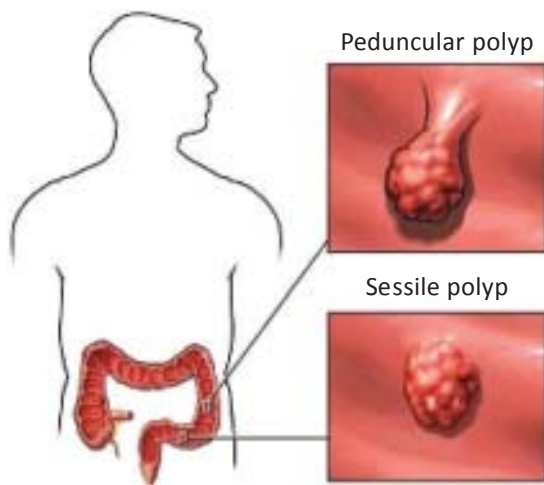
How to build confidence?

- | | |
|--|---|
| 1] Spend time with people, who like you and care about you. | 9] Always do, what you believe is right. |
| 2] Ignore and stay away from people who put you down or treat badly. | 10] Be true to yourself. |
| 3] Do things that you enjoy or that make you feel good. | 11] Respect others and treat them right. |
| 4] Reward yourself for your success. | 12] Treating others the way you want to be treated. |
| 5] Develop your talents. | 13] Showing kindness and consideration. |
| 6] Be your own best friend, treat yourself well and do things that are good for you. | 14] Liking your self enough to be yourself. |
| 7] Make good choices for yourself and don't let others make choices for you. | 15] Accepting others for who they are. |
| 8] Take responsibility for yourself, your choices and your actions. | 16] Believe in yourself. |
| | 17] Never quit. |
| | 18] Don't feel hopeless. |
| | 19] Give the world the best you have. |
| | 20] And never forget, no problem is without a solution..... |

courtesy of friends4life

What is CT Colonography?

How to Explain to Patients?



CT colonography is an advanced type of x-ray exam that uses computed tomography (CT or "CAT") scanning to obtain an interior view of the colon (the large intestine) that can ordinarily only be seen with an endoscope inserted into the rectum. This minimally invasive test provides three-dimensional images that can depict many polyps and other lesions as clearly as when they are directly seen by optical colonoscopy.

What are some common uses of the procedure?

The major reason for performing CT colonography is to screen for polyps in the large intestine. Polyps are benign growths that arise from the inner lining of the intestine. Some polyps may grow and turn into cancers. The goal of screening is to

find these growths in their early stages, so that they can be removed before cancer has had a chance to develop. Most physicians agree that everyone older than 50 years should be screened for polyps.

Screening is especially important if you are at increased risk of developing colon cancer. Especially if you have had:

- polyps in the past
- have a family history of colon cancer
- have blood in your stool.

CT colonography is **a less invasive option** for patients who do not wish to have colonoscopy, which involves inserting a flexible tube into the colon to view the bowel wall. CT colonography is an **excellent alternative** for patients who have clinical factors that increase the risk of complications from colonoscopy, such as:

- Patients on treatment with a blood thinner or a severe breathing problem
- Elderly patients, especially those who are frail or ill
- On patients when colonoscopy cannot be completed because the bowel is narrowed or obstructed for any reason, such as by a large tumor
- If conventional colonoscopy cannot reach the full length of the colon—which occurs up to 10 percent of the time—CT colonography can be performed on the same day because the colon has already been cleansed

How should I prepare for the procedure?

1. It is very important to clean out your bowel the night before your CT colonography examination so that the radiologist can clearly see any polyps that might be present.
2. You will be asked to take either a set of pills or a cathartic liquid. Some common preparations are the Fleet Prep Kit 1 (phospho-soda and Bisacodyl) and NuLytely® or Go-Lytely® (Polyethylene glycol electrolyte solutions). Be sure to check with your primary care physician if you have heart, liver or kidney disease to be certain that the bowel prep will be safe.
3. You should also limit your intake the day before to just clear liquids such as broth, tea or juice. You may resume your usual diet immediately after the exam.
4. Women should be certain to inform either the primary care physician or radiological technologist if there is any possibility of pregnancy.

What does the equipment look like?

The CT scanner is a large doughnut-shaped machine with a rounded opening in the center. You will lie on a table that will slide in and out of that central opening.

How does the procedure work?

Computed tomography (CT) uses a rotating gantry that houses x-ray emitters and detectors to obtain images from hundreds of angles that are then reconstructed by a computer into the two-dimensional pictures you see. Modern scanners use a method called spiral CT, in which the gantry rotates at the same time that the patient is moving through the scanner, so that the x-ray beam follows a spiral path.

Modern CT scanners are so fast that they can scan through large sections of the body in just a few seconds.

For CT colonography, the computer generates a detailed three-dimensional model of the abdomen and pelvis, which the radiologist can use to view the bowel in a way that simulates traveling down the colon from the endoscopist's point-of-view. This is why it is often termed **virtual colonoscopy**.

How is the procedure performed?

1. Following bowel cleansing the evening before, you will lie down on your stomach or on your side on the scanner table.
2. A very small, flexible tube will be passed two inches into your rectum to allow air to be gently pumped into the colon using a hand-held squeeze bulb. Sometimes an electronic pump is used to deliver carbon dioxide gas into the colon. In either case, you will be able to control the amount of air or gas passing into the colon. The purpose of the gas is to distend the colon a little to eliminate any folds or wrinkles that might obscure any polyps that are there.
3. As the table moves through the scanner, you will be asked to hold your breath for about 15 seconds. A second pass is made through the scanner after you have turned onto your back, to make sure that all sections of the colon are air-filled.
4. In some centers the sequence of positions may be the opposite: facing upward first and then facing down.
5. Once the scan is done, the tube is removed and you are free to leave.



What will I experience during the procedure?

The vast majority of patients who have CT colonography report a feeling of fullness during the exam, as if they need to pass gas, when the colon is inflated. Significant pain is uncommon, however, occurring in fewer than 5% of patients. A muscle-relaxing drug may be injected intravenously to lessen discomfort, but this is seldom necessary. After the tube is inserted, your privacy will be respected. The scanning procedure itself causes no pain or other symptoms. You will be alone in the examining room during CT, but a technologist in the adjacent control room is able to see and hear you, and can speak to you at any time. The entire examination can be completed within 15 minutes.

Who interprets the results and how do I get them?

The radiologist will check the scan findings briefly after the exam is completed to be sure that it is of sufficient diagnostic quality. He or she will carefully review the study after you have left, once the computer has finished processing all of the images. A detailed report will be sent shortly thereafter to your primary care physician, who in turn will inform you of the findings.

What are the benefits vs. risks?

Benefits

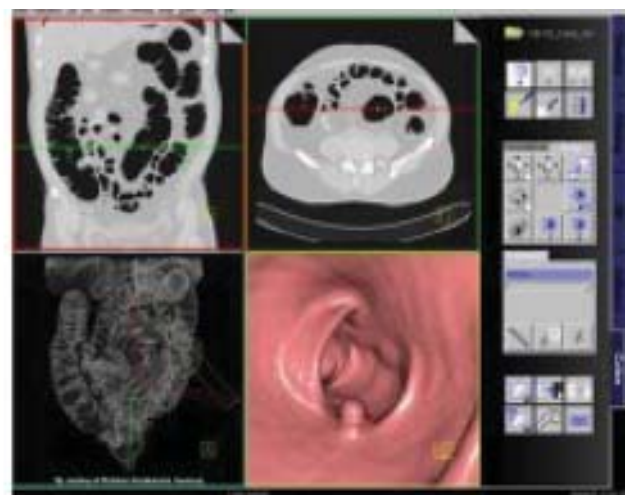
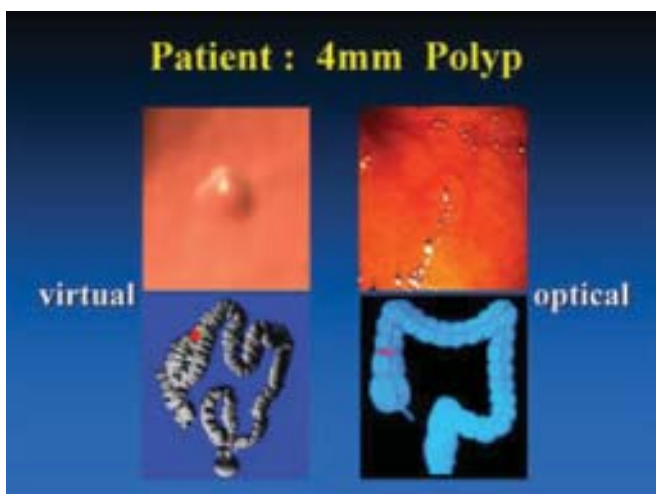
1. CT colonography is a minimally invasive procedure.
2. It markedly lowers the risk of perforating the colon that may occur with conventional colonoscopy.
3. Most of those examined do not have polyps, and can be spared having to undergo a full colonoscopy.
4. CT colonography provides clearer and more detailed images than does a conventional barium enema x-ray examination.
5. In 5 percent of patients, CT colonography shows abnormalities outside the colon, which would be otherwise missed, because colonoscopy only looks at the interior surfaces. Occasionally these are important discoveries.
6. CT colonography is tolerated well. Sedation and pain-relievers are not needed, so there is no recovery period. You will be free to resume your usual activities immediately after the exam.
7. CT colonography is less costly than colonoscopy.

Risks

1. There is a very small risk that inflating the colon with air could injure or perforate the bowel. This has been estimated to happen in less than one in 2,000 patients.
2. CT colonography does require exposure to x-rays, but the radiation dose is very low, typically 15% less than is needed for a barium enema x-ray examination of the colon.
3. Special care is taken during x-ray examinations to ensure maximum radiation safety. Women should always inform their doctor or radiological technologist if there is any possibility that they are pregnant.

What are the limitations of CT Colonography?

1. CT colonography provides a black-and-white picture of the bowel wall. The lack of true-color images makes it more difficult to assess lesions.
2. CT colonography is strictly a diagnostic procedure. If any significant polyps are found, they will have to be removed by conventional colonoscopy.
3. Many insurance companies do not cover CT colonography as a screening test for colonic polyps, but they may cover the cost if you have symptoms related to the colon.



THE 90/10 PRINCIPLE

For those who are familiar with the 7 Habits of Highly Effective People by Stephen Covey, this article is related to one of the principles i.e. *"Begin with the end in mind"*.

10% of life is made up of what happens to you. 90% of life is decided by how you react. We really have no control over 10% of what happens to us. We cannot stop the car from breaking down. The plane will be late arriving, which throws our whole schedule off. A driver may cut us off in traffic. We have no control over this 10%. The other 90% is different. You determine the other 90%. By your reaction, you cannot control a red light but you can control your reaction. Don't let people fool you; YOU can control how you react.

Let's use an example. You are eating breakfast with your family. Your daughter knocks over a cup of coffee onto your business shirt. You have no control over what just what happened. Whatever happens next will be determined by how you react to the situation.

Scenario #1 – You curse. You harshly scold your daughter for knocking the cup over. She breaks down in tears. After scolding her, you turn to your spouse and criticize her for placing the cup too close to the edge of the table. A short verbal battle follows. You storm upstairs and change your shirt. Back downstairs, you find your daughter has been too busy crying to finish breakfast and get ready for school. She misses the bus. Your spouse must leave immediately for work. You rush to the car and drive your daughter to school. Because you are late, you drive 40 miles an hour in a 30 mph speed limit. After a 15-minute delay and throwing \$60 (traffic fine) away, you arrive at school. Your daughter runs into the building without saying goodbye. After arriving at the office 20 minutes late, you find you forgot your briefcase. Your day has started terrible. As it continues, it seems to get worse and worse. You look forward to coming home, When you arrive home, you find small wedge in your relationship with your spouse and daughter. Why? It is because of how you reacted in the morning. Why did you have a bad day?

- A) Did the coffee cause it?
- B) Did your daughter cause it?
- C) Did the policeman cause it?
- D) Did you cause it?

The answer is D!

You had no control over what happened with the coffee. How you reacted in those 5 seconds is what caused your bad day. Here is what could have and should have happened:

Scenario #2 – Coffee splashes over you. Your daughter is about to cry. You gently say, "Its ok honey, you just need to be more careful next time". Grabbing a towel you rush upstairs. After grabbing a new shirt and your briefcase, you come back down in time to look through the window and see your child getting on the bus. She turns and waves. You and your spouse kiss before you go to work. You arrive 5 minutes early and cheerfully greet the staff. Your boss comments on how good the day you are having.

Notice the difference? Two different scenarios both started the same but both ended different.

Why? It is because of how you REACTED. You really do not have any control over 10% of what happens. The other 90% were determined by your reaction. Here are some says to apply the 90/10 principle.

If someone says something negative about you, don't be a sponge. Let the attack roll off like water off a duck's back. You don't have to let the negative comment affect you! React properly and it will not ruin your day. A wrong reaction could result in losing a friend, being fired, getting stressed out etc. How do you reach if someone cuts you off in traffic?

Do you lose your temper? Do you pound on the steering wheel? (A friend of mine had the steering wheel fall off!)

Do you curse? Does your blood pressure skyrocket? Do you try and bump them? WHO CARES if you arrive ten seconds later at work? Why let the cars ruin your drive? Remember the 90/10 principle, and do not worry about it.

You are told you lost your job. Why lose sleep and get irritated? It will work out. Use your worrying energy and time into finding another job. The plane is late; it is going to mangle your schedule for the day. Why take out your frustration on the flight attendant? She has no control over what is going on. Use your time to study, get to know the other passenger. Why get stressed out? It will just make things worse. Now you know the 90-10 principle. Apply it and you will be amazed at the results. You will lose nothing if you try it. The 90-10 principle is incredible. Very few know and apply this principle.

Millions of people are suffering from undeserved stress, trials, problems and heartache. They never seem to be a success in life. Bad days follow bad days. Terrible things seem to be constantly happening. There is constant stress, lack of joy, and broken relationships. Worry consumes time. Anger breaks friendships and life seems dreary and is not enjoyed to the fullest. Friends are lost. Life is a bore and often seems cruel. Does this describe you? If so, do not be discouraged. You can be different! Understand and apply the 90/10 principle.

It will change your life!



DID YOU KNOW?

In diagnostic imaging, x-ray of the Optic Foramina, x-ray of the Orbits, x-ray of the IAM (Intra-auditory Meatus) and x-ray of the Pituitary Fossa were popular and statistically shown that these x-ray examinations were requested frequently before the year of 1995. There are even special views on the IAM which is called Per-orbital view?

For the radiographers who have been working during that year (or even before), these views might ring a bell and may struck their memories. Nowadays, these x-ray examinations are no longer requested by the clinicians and also are not suggested by the radiologists or the radiographers. Why?

MRI of the Orbits, IAC and Pituitary Fossa give more diagnostic value in imaging and CT Scan of the Orbits can give more information than an x-ray of the Optic Foramina which is a "tough" projection because of it's difficulty in angulation's and positioning of the patient.

The emergence of x-ray technology and innovations during the 1990s has brought a lot of changes in the modality chosen for imaging. Even a simple neck x-ray for goiter and NPC (Nasopharyngeal Carcinoma) are being replaced by CT Scan of the Neck. Nowadays for trauma imaging (polytrauma cases) in some hospitals or institutions, even a CT Cervical are done straight away without an x-ray of the Cervical because the MPR images of the Cervical can be reconstructed much faster and more details were seen in sagittal and coronal images. Furthermore, if

a CT Scan of the Brain have been done and a skull fracture has been seen, a Skull x-ray is sometimes considered redundant. Even in the new and faster CT Scanner imaging of the whole body are possible for polytrauma cases. That means you don't have to do x-ray of the femur or the humerus for them in those cases.

Another technology that might bring an impact in imaging modalities is Ultrasound. Musculoskeletal of Ultrasound for instance in Shoulder and MRI of the Shoulder is taking over the use of Shoulder x-rays. Ultrasound of the neonate is more preferred than Skull x-ray in certain cases because of the lack of radiation in Ultrasound modality.

If CTA (CT Angiography) and MRA (MR Angiography) are considered, many angiographic procedures for diagnostics purposes are significantly reduced in number. Angiography are only performed (mostly, and depends on hospital or institutions) for interventional procedures for example embolisations, PTBD (Percutaneous Trans-hepatic Biliary Drainage), Nephrostomy and others. Statistically, angiography of the Renal, Abdominal and Lower Limb have been replaced by CTA and MRA.

There are even more imaging modalities being replaced and are not mention in this article and that have been forgotten. So, are you all ready for the shift of the future in imaging modalities? Start thinking about it otherwise you might find some of the x-ray are no longer available. Just something to consider and think about!!

FINANCIAL PLANNING

There are many reasons why seniors need to keep a track of their finances even in old age. This article is structured towards fulfilling the needs of women who are in the twilight of their life, but will also benefit the younger women.

For financial security: In spite of such widespread literacy, women usually face this problem. It is necessary that women start giving serious thought to this aspect, instead of depending on either their husband or children. Women need to consider the financial challenges they may have to face, more so if they are not financially self-reliant. They should try to understand the basics of managing finances.

To prepare for retirement: Women statistically outlive men. But it has been found that they continue to invest less and are often not adequately prepared for retirement. Also they earn less, as they are expected to stay home and raise children. This results in significantly reduced pension and other benefits down the road.

Financial awareness: Many women are afraid to admit they don't have a thorough understanding of personal finance. Their knowledge base often doesn't extend beyond the basics of money management (paying the bills, balancing the check book, etc.). They don't focus on the long-term goals that need to be addressed such as investing for retirement or estate planning.

Cautious as investors: While are naturally cautious in their investment choices, they save less and are less apt to take advantage of company-sponsored retirement plans. A longer life span means women will be required to save more for post-retirement.

Financial Goals

Financial planning is a skill you should learn and practice. After all, it's something you'll be doing for the rest of your life. If you take the time to do it right the first time, you'll be light years ahead of your peers.

You can start with some of your dreams and compare them with the following list of goals:

- Eliminating personal debt.
- Building up savings.
- Starting an emergency fund.
- Paying for children's college.
- Saving for a new home or a new car.
- Investing for retirement.
- Saving for a vacation home.

- Travelling.
 - Raising children.
 - Getting married.
 - Paying for long-term care.
 - Passing wealth to heirs.
 - Owning a small business.
 - Giving to charity.
- Goal-Setting Process

To meet your financial goals, you have to take some necessary steps. There is a simple goal-setting process that you can follow:

Identify Your Goals: Make a list of all the goals you've identified and prioritize them. What are the things most important to you? What sequence in time are they likely to occur? Are there any competing goals?

List a date for achieving your goal: A goal is only attainable if you set a date for it. Otherwise it's not really a goal, is it? Make sure the date is realistic and corresponds to your goal. "In five years, I want to have a down payment for a new home" is more realistic than "Next week I will become a millionaire". Unrealistic goals lead to unhealthy expectations.

Write it down: It's hard to remember your goal if you don't have it written down. Put your goal on a sticky-note or piece of paper and place it somewhere where you'll see it everyday — like a refrigerator door. Be specific. Being reminded of your goal will help you stay focused.

Monitor your progress: You'll never know if you are attaining your goal if you don't keep track. Monitor your progress once or twice a year to see if you are on course. You may have to make periodic adjustments in order to successfully reach your goal. Don't get upset if you have to alter your plan because of small bumps in the road.

Your 3 step financial roadmap!

To be a successful investor, you need to know where you want to go, and you need a roadmap that shows you how to get there. In other words, a financial plan. If you give some thought to it, you will have better control over your assets and will be better equipped to manage money successfully.

A Plan typically covers a broad spectrum relating to your current financial position and your future well

being. It should include an analysis of your situation and must address strategies for achieving your objectives.

Financial planning usually involves the following steps:

Step 1

Define specific financial objectives you wish to achieve over the long term :

These could one or more of the following:

- Building wealth
- Reducing and controlling taxes
- Increasing current income
- Funding a college education
- Preparing for retirement

Step 2

Determine your current financial situation by answering these questions:

What is my net worth after all my liabilities are subtracted from my assets?

How much of that amount is readily available in case of an emergency?

How much discretionary income do I have after fixed expenses are paid?

How much can I comfortably afford to save and/or invest?

Step 3

Map out an investment strategy for reaching your stated objectives and WRITE it down. This strategy could include figuring out how much money you need to ac

Achieve your objectives and putting time frames to it.

Financial Planning takes determined effort and dogged pursuit. But it's time and effort well spent.

Never Give Up!!!

One day I decided to quit... I quit my job, my relationship, my spirituality.....I wanted to quit my life.

I went to the woods to have one last talk with God. "God", I said. "Can you give me one good reason not to quit?" His answer surprised me...

"Look around", He said. "Do you see the fern and the bamboo?" "Yes", I replied. "When I planted the fern and the bamboo seeds, I took very good care of them. I gave them light. I gave them water.

The fern quickly grew from the earth. Its brilliant green covered the floor. Yet nothing came from the bamboo seed. But I did not quit on the bamboo. In the second year the Fern grew more vibrant and plentiful. And again, nothing came from the bamboo seed. But I did not quit on the bamboo. He said. "In year three there was still nothing from the bamboo seed. But I would not quit.

In year four, again, there was nothing from the bamboo see. I would not quit."

He said. "Then in the fifth year a tiny sprout emerged from the earth.

Compared to the fern it was seemingly small and insignificant... But just 6 months later the bamboo

rose to over 100 feet tall. It had spent the five years growing roots. Those roots made it strong and gave it what it needed to survive.

I would not give any of my creations a challenge it could not handle." He said to me. "Did you know, my child, that all this time you have been struggling, you have actually been growing roots"

"I would not quit on the bamboo. I will never quit on you."

"Don't compare yourself to others." He said. "The bamboo had a different purpose than the fern. Yet they both make the forest beautiful."

"Your time will come", God said to me. "You will rise high" "How high should I rise" I asked.

"How high will the bamboo rise" He asked in return."As high as it can" I questioned.

"Yes." He said, "Give me glory by rising as high as you can."

I hope these words can help you see that God will never give up on you.

NEVER NEVER NEVER GIVE UP!

How to Stop Procrastinating and Get More Done in Less Time!

– Brian Tracy (*"Eat That Frog"...*)



Think of a job you need to do, but have just been too busy to get to. You know the one – it is sitting over you like a big, black, heavy cloud. It could be anything, but whatever it is, the longer you put it off, the worse you feel, and the bigger and uglier it gets.

Maybe it's a phone call. As time goes by you just don't manage to get to it, and every day you PROMISE you'll do it today. First, of course you have some things you need to do, and then you'll do the call... then there will be a couple of other things you really need to do before you call, and Oops! Look at the time – it might be a bit late to call now – you'd better do it tomorrow!

Does this sound familiar? How do you feel about yourself when this happens? How different would you feel if you just made the call? It would have taken less than 5 minutes, and you could have got on with your day happy, uncluttered and FREE! You might even have made someone's day brighter because of the call!

That job you don't want to do, or the one you are kidding yourself that you DO really want to do, but just can't find the time, is a FROG!

What do you do with your frogs? Well, you EAT them! Here is what Brian Tracy tells us about frogs in his excellent book *"Eat That Frog"...*

"It has been said for many years that if the first thing you do each day is to eat a live frog, you can go through the rest of the day with the satisfaction of knowing that it is probably the worst thing that can happen to you all day long."

Your frog will be something that if you did it now, would have a big positive impact on your life and results at the moment, and it's the thing you are most likely to procrastinate on.

"It has also been said, that if you have to eat two frogs, eat the ugliest one first."



So make sure you do the ~~hardest~~ ^{hardest} and most important task first. Treat it like a personal challenge to start and finish the job.

"Here is one final observation: If you have to eat a live frog, it doesn't pay to look at it for very long."

Do you know that it can actually become fun and it's very satisfying searching for, and destroying your frogs?

How do we organise all our frogs? Start the night before. Don't go to bed with all the frogs jumping around in your head (they can disturb your sleep!). Get them out of your head and onto your whiteboard.

Every night before you go to bed, write on your whiteboard 6 things that you must do tomorrow. You will sleep well because you no longer need to remember or think about these things.

In the morning look at the list, and give each task a number from 1 to 6. Number 1 is your biggest, ugliest frog and 6 might be just a tadpole (we don't eat tadpoles until we have finished all our frogs, of course).

Now, here's where discipline comes in – you start No 1 and you do it until it is completed. You MUST NOT go on to job No 2 until No 1 is finished. Then you can't go onto No 3 until you have finished No 2, and so on.

As you complete each task, wipe it off the board, and you'll feel huge satisfaction once they are all gone and your board is clean.

Since I have started doing this, life has changed for me. I am more productive, more relaxed, less stressed and happier. It is a wonderful feeling – try it!



HAVE A SHAY DAY!

Contributed by Chan Lai Khuan

At a fundraising dinner for a school that serves learning disabled children, the father of one of the students delivered a speech that would never be forgotten by all who attended. After extolling the school and its dedicated staff, he offered a question:

"When not interfered with by outside influences, everything nature does is done with perfection. Yet my son, Shay, cannot learn things as other children do. He cannot understand things as other children do. Where is the natural order of things in my son?" The audience was stilled by the query.

The father continued. "I believe, that when a child like Shay, physically and mentally handicapped comes into the world, an opportunity to realize true human nature presents itself, and it comes, in the way other people treat that child." Then he told the following story:

Shay and his father had walked past a park where some boys Shay knew were playing baseball. Shay asked, "Do you think they'll let me play?" Shay's father knew that most of the boys would not want someone like Shay on their team, but the father also understood that if his son were allowed to play, it would give him a much-needed sense of belonging and some confidence to be accepted by others in spite of his handicaps.

Shay's father approached one of the boys on the field and asked if Shay could play, not expecting much. The boy looked around for guidance and said, "We're losing by six runs and the game is in the eighth inning. I guess he can be on our team and we'll try to put him in to bat in the ninth inning."

Shay struggled over to the team's bench put on a team shirt with a broad smile and his Father had a small tear in his eye and warmth in his

heart. The boys saw the father's joy at his son being accepted. In the bottom of the eighth inning, Shay's team scored a few runs but was still behind by three. In the top of the ninth inning, Shay put on a glove and played in the right field. Even though no hits came his way, he was obviously ecstatic just to be in the game and on the field, grinning from ear to ear as his father waved to him from the stands. In the bottom of the ninth inning, Shay's team scored again. Now, with two outs and the bases loaded, the potential winning run was on base and Shay was scheduled to be next at bat. At this juncture, do they let Shay bat and give away their chance to win the game?

Surprisingly, Shay was given the bat. Everyone knew that a hit was all but impossible 'cause Shay didn't even know how to hold the bat properly, much less connect with the ball. However, as Shay stepped up to the plate, the pitcher, recognizing the other team putting winning aside for this moment in Shay's life, moved in a few steps to lob the ball in softly so Shay could at least be able to make contact. The first pitch came and Shay swung clumsily and missed. The pitcher again took a few steps forward to toss the ball softly towards Shay. As the pitch came in, Shay swung at the ball and hit a slow ground ball right back to the pitcher.

The game would now be over, but the pitcher picked up the soft grounder and could have easily thrown the ball to the first baseman. Shay would have been out and that would have been the end of the game.

Instead, the pitcher threw the ball right over the head of the first baseman, out of reach of all teammates. Everyone from the stands and both teams started yelling, "Shay, run to first! Run to first!" Never in his life had Shay ever ran that far but made it to first base. He scampered down the baseline, wide-eyed and startled.

Everyone yelled, "Run to second, run to second!" Catching his breath, Shay awkwardly ran towards second, gleaming and struggling to make it to second base. By the time Shay rounded towards second base, the right fielder had the ball, the smallest guy on their team, who had a chance to be the hero for his team for the first time. He could have thrown the ball to the second-baseman for the tag, but he understood the pitcher's intentions and he too intentionally threw the ball high and far over the third-baseman's head. Shay ran toward third base deliriously as the runners ahead of him circled the bases toward home.

All were screaming, "Shay, Shay, Shay, all the Way Shay". Shay reached third base, the opposing shortstop ran to help him and turned him in the direction of third base, and shouted, "Run to third! Shay, run to third" As Shay rounded third, the boys from both teams and those watching were on their feet were screaming, "Shay, run home! Shay ran to home, stepped on the plate, and was cheered as the hero who hit the "grand slam" and won the game for his team.

That day, said the father softly with tears now rolling down his face, the boys from both teams helped bring a piece of true love and humanity into this world.

Shay didn't make it to another summer and died that winter, having never forgotten being the hero and making his Father so happy and coming home and seeing his Mother tearfully embrace her little hero of the day!

AND, NOW A LITTLE FOOTNOTE TO THIS STORY:

We all send thousands of jokes through the e-mail without a second thought, but when it comes to sending messages about life choices, people think twice about sharing. The crude, vulgar, and often obscene pass freely through cyberspace, but public discussion about decency is too often suppressed in our schools and workplaces.

If you're thinking about forwarding this message, chances are that you're probably sorting out the people on your address list that aren't the "appropriate" ones to receive this type of message. Well, the person who sent you this believes that we all can make a difference. We all have thousands of opportunities every single day to help realize the "natural order of things." So many seemingly trivial interactions between two people present us with a choice: Do we pass along a little spark of love and humanity or do we pass up that opportunity to brighten the day of those with us the least able, and leave the world a little bit colder in the process?

A wise man once said every society is judged by how it treats it's least fortunate amongst them. May your day, be a Shay Day, sunny today tomorrow & always!



1st Announcement



16th
ACRT
ASIAN CONFERENCE OF RADIOLOGICAL TECHNOLOGISTS
&
9th
NCIART
NATIONAL CONFERENCE OF INDIAN ASSOCIATION OF RADIOLOGICAL TECHNOLOGISTS

November 15th-18th 2007

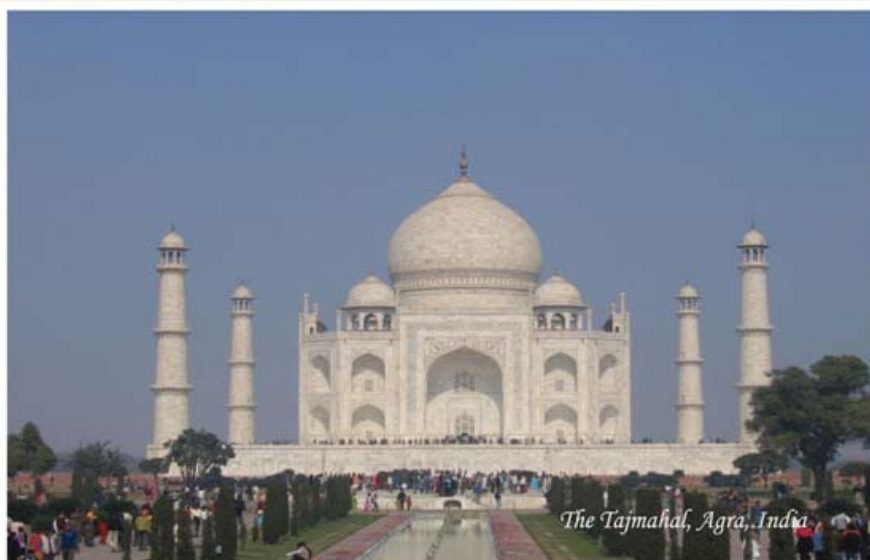
Emerging Technologies - Newer Solutions



Department of Radio-diagnosis & Imaging
Postgraduate Institute of Medical Education & Research, Chandigarh, India

IMPORTANT DATES

Second and Final Announcement including detailed scientific program	: 1st April , 2007
Submission of Abstract	: 16th July, 2007
Acceptance of Abstract	: 1st Sept., 2007
Advance Registration	: 16th August, 2007
Accommodation	: 31st August, 2007
Cancellation of Registration	: 16th Sept, 2007 (with 50% refund)



Upon request, the conference secretariat will send a personal invitation to participate. It should be understood that such an invitation is only meant to help visitors to raise travel funds or obtain visa and is neither a commitment on the part of organizers to provide any financial support nor an assurance of inclusion of the participant's name anywhere in the program.

CONFERENCE SECRETARIAT

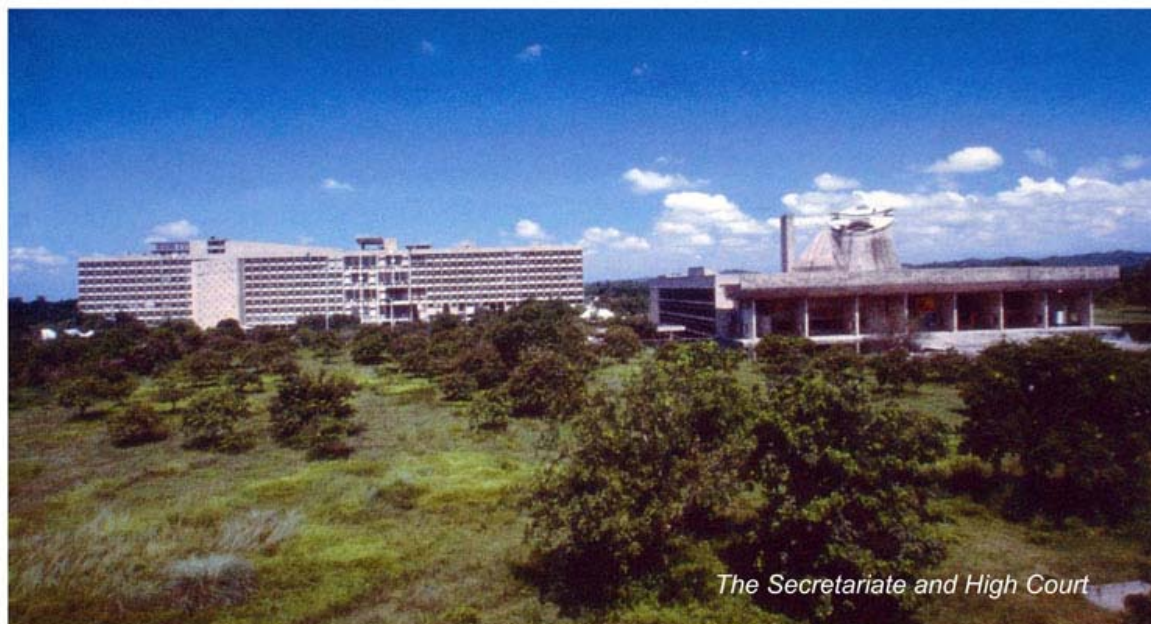
MR. S.C. Bansal
(Chairperson)

16th ACRT and 9th NCIART
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E mail: iartindia@yahoo.com
Website:www.iart.org.in

Registration Details

Registration Fee

Status	Before August 31 st 2007	Before Sep. 30 th 2007	Spot
IART Members	Rs. 750/-	Rs. 850/-	Rs. 1000/-
Non Members	Rs. 850/-	Rs. 1000/-	Rs. 1200/-
Accompanying person	Rs. 500/-	Rs. 600/-	Rs. 750/-
Students	Rs. 500/-	Rs. 600/-	Rs. 750/-
Foreign Delegates	US \$ 60	US \$ 75	US \$ 100
Trade Delegates	Rs.1500/-	Rs. 2000/-	Rs. 2500/-



The Secretariate and High Court

Abstract Deadline: **July 16th, 2007** for oral and poster presentations. Participants who wish to present a paper are required to submit an original abstract according to the guidelines on the abstract form. Online submission of abstracts will be available on the website from **15th April, 2007** onwards. Abstracts accompanied with registration form and fees will be considered for presentation. Facility for overhead and dual slide projections, video and multimedia presentation will be available.

The official language of the conference is English.

22nd Singapore-Malaysia Radiographers' Conference

Reflect, Research, React

18 - 19 August 2007

Grand Plaza Park Hotel City Hall

Calling all professionals from the field of Diagnostic Radiography and Radiation Therapy!

This is the first announcement of the 22nd Singapore-Malaysia Radiographers' Conference (22nd SMRC). Last year's 21st MSRC which was held in Kota Kinabalu, Sabah, was a great success. It is Singapore's turn to host this successful annual conference this year. Details for registration will be available soon. We are now calling for papers for the 22nd SMRC

ISRRT Board Meeting, Singapore.

Jan 6-9 2007

The Board of Management of the International Society of Radiographers and Radiological Technologists (ISRRT), has chosen Singapore as the venue for their Strategic Review and Board Meeting for 2007.

The 12 members of the Board come from 11 countries and include Dr Tyrone Goh, who is the immediate Past President of the Society and the current Honorary Treasurer.

The ISRRT represents over 80 National Medical Imaging Technologist Societies and is the international body representing more than 300,000 technologists worldwide. These technologists include radiographers, radiation therapists, sonographers and nuclear medical technologists.

ISRRT is officially recognised by, and works closely with, the World Health Organisation and other international, health related agencies including the International Atomic Energy Agency and the International Radiology Quality Network.

The Singapore Society of Radiographers is an important part of ISRRT – 2 Past Presidents of ISRRT have come from Singapore- and the local Society has hosted a World Congress and Asian/Australasian Regional conferences.

Radiographers play a very important, but often overlooked role in the delivery of healthcare. In Singapore and the Asian Region they have contributed significantly in the battle against SARS and Asian Bird Flu as well as having a major role in natural disasters such as the recent tsunami and earthquakes. Internationally, they have been in the frontline in providing emergency medical imaging services following terrorist attacks.

Singapore trained radiographers are highly regarded internationally and in high demand by health authorities worldwide.

Board of Management
ISRRT

SIEMENS

Platinum sponsor of the Singapore Society of Radiographers

(Article courtesy of Singapore Society of Radiographers)

22ND SMRC ABSTRACT SUBMISSION FORM

REFLECT, RESEARCH, REACT

This abstract is being submitted as a	Theme Paper Student Paper Email	Proffered Paper Poster Post/Mail
Mode of abstract submission		
Main Author		
FULL NAME	INSTITUTION / JOB TITLE	QUALIFICATION
Co-Authors (<i>please use separate sheet if necessary</i>)		
FULL NAME	INSTITUTION / JOB TITLE	QUALIFICATION
FULL NAME	INSTITUTION / JOB TITLE	QUALIFICATION
TITLE		
ABSTRACT (Max. 250 words)		
Permission to Record & Publish: <small>I have complied with the guidelines regarding the Conference Publication policy. I give the Organisers permission to record and publish my presentation at the above-mentioned conference and related publications.</small>		
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin-left: auto;">For official use only Registration No: _____ Date Received: _____ Abstract No: _____ Subject Classification: _____</div>		
Signature of Main Author		

Abstract Submission Guidelines:

1. Abstract must be submitted in English, typewritten with font size 12 point in Times New Roman (preferred)
 2. Abstract must be submitted with the official conference registration form
 3. TITLE must be brief, concise and in CAPITALS
 4. MAIN AUTHOR - Type in your name, institution and job title, and your final qualification (DIP, BSc, MSc, PhD) as you want it to appear in the programme
 5. CO-AUTHORS - Type names and degrees as per instructions above
 6. Please indicate category of submission in the relevant box(es). Guidelines for each category is as follows:
 - a. *Theme Paper*
 - Paper must be closely related to the conference theme in your field of expertise - Theme Paper submission is open to all professionals
 - b. *Proffered Paper*
 - Paper can be on any topic which is related to Radiography or Radiation Therapy including Information Technology and Radiology Management
 - Proffered Paper submission is open to all professionals
 - c. *Student Paper*
 - Student Paper is the final year project completed as part of the Radiography or Radiation Therapy training at a diploma or undergraduate level
 - Participants in the Student Conference must be final year students or recent graduates (within 18 months of graduation) from their institutions of Radiography or Radiation Therapy training
 - The Student Conference is not an inter-institutional competition among Radiography and Radiation Therapy training centres
 - The Best Student Paper Prize will be awarded to the best presented paper at the Student Conference
 - The Judges' decision is final and no correspondences will be entertained
 - d. *Poster*
 - Please **do not** submit your poster together with the abstract - Poster submission is open to all professionals
 - Accepted submissions will be advised on the poster requirements at a later date
 7. Abstract text **must not** exceed 250 words
 8. Abstracts should include at least these 4 main headings: Purpose, Methods, Results and Conclusion
 9. In submitting the abstract, the author(s) give permission to the Organisers to record and publish the presentation at the above-mentioned conference and related publications
 10. Presenting authors must attend the conference as register as full paying delegates
 11. Authors of accepted abstracts will be contacted by the Academic Committee within a month from the abstract submission deadline
 12. Please **do not** submit full papers and posters together with the abstracts. The Academic Committee will not be responsible for any loss of original materials submitted. Instructions on presentation and poster requirements will be advised upon acceptance of abstracts
 13. Acceptance of papers shall be purely based on merit. The decision of the Academic Committee is final.
 14. Please send all abstracts by email to 22smrc@gmail.com with the following details:
 - *Presenter's Name, Designation, Institution*
 - *Presenter's email address and contact details*
 - *Title of Paper / Poster*
 - *Category of submission: Theme paper / Proffered paper / Student paper / Poster*
 - *Abstract (Max. 250 words)*
 15. If abstract submission is by post, please send 3 copies of abstract and the softcopy on a CD-ROM to:
*Academic Chairman
22nd SMRC
Singapore Society of Radiographers
Ang Mo Kio Central Post Office
PO Box 765, Singapore 915609*
 16. The deadline for abstract submission for all categories is **31 May 2007**
 17. Results of the acceptance will be sent by email to all authors by **30 June 2007**
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Proposed Itinerary for Nanyang Polytechnic Students' Study Visit to Roentgen Museum, Lennep, Germany & London South Bank University, London, United Kingdom On 15-24 September 2007

Day	Date	Itinerary	Remarks
1	Saturday, 15 September	Flight Singapore-Cologne via Amsterdam (Meals on Board)	KLM
2	Sunday, 16 September	Cologne/Lennep (Lunch/Dinner)	AM: Cologne sightseeing; PM: Roentgen Museum, Lennep/overnight in Bundesautobahn Motel Remscheid or similar
3	Monday, 17 September	Lennep/Brussels/Paris(Breakfast/Lunch/Dinner)	Brussels city tour; transfer to Paris overnight in Mecure Pantin Hotel or similar
4	Tuesday, 18 September	Paris (Breakfast/Lunch/Dinner)	Versailles Palace tour; overnight in Mecure Pantin Hotel or similar
5	Wednesday, 19 September	Paris (Breakfast/Lunch/Dinner)	AM: Eiffel Tower visit; PM: free at leisure
6	Thursday, 20 September	Paris/London (Breakfast/Lunch/Dinner)	overnight in Mecure Pantin Hotel or similar
7	Friday 21 September	London South Bank University and Teaching Hospitals (Breakfast/Lunch/Dinner)	Calais-Dover ferry; transfer to London Overnight at Ibis London Earl's Court or similar
8	Saturday 22 September	London (Breakfast/Lunch/Dinner)	AM: London South Bank University visit; PM: Guys & St. Thomas Hospitals' visit ; Overnight at Ibis London Earl's Court or similar
9	Sunday, 23 September	London/Singapore	Full day sightseeing tour of London; Overnight at Ibis London Earl's Court or similar
10	Monday, 24 September	Singapore	Free at leisure till departure back to Singapore Arrival back in Singapore

Note: A number of participants will require a travel variation to extend their stay in London.

Estimated total cost: \$3,088 (inclusive of airfare, accommodation, coach & ferry transfers, meals and admission to tour attractions, and taxes)

Chin Jin Hon
Manager/Radiography
School of Health Sciences, Nanyang Polytechnic 1 Feb 2007

Registration Form for European Study Visit 2007

To: Mr JH Chin, Manager/Radiography
School of Health Sciences

I understand that the School of Health Sciences is organizing a study visit to the Roentgen Museum in Germany, and to the London South Bank University and its associated teaching London hospitals, in September 2007, and I wish to apply to participate in the visit.

Name: _____ Signature: _____

NRIC/FIN No: _____ Dip/Advanced Dip: _____

H/P : _____

E-mail Address: _____

I will/will not require an extension of my stay (travel variation charge to be levied by Chan Brothers Travel Pte Ltd): _____ Date: _____

Dates: 15 – 24 September 2007 (tentative)

Outlined Itinerary Route: Amsterdam/Cologne/Lennep (overnight)/ Brussels/Paris (3 nights in Paris)/London/London South Bank University (3 nights in London)

Study Visit Venues: Roentgen Museum (Lennep, Germany) afternoon visit;
Full-day visit to London South Bank University/Guys & St. Thomas
Hospitals

Estimated cost: S\$3088.00 (twin-sharing) inclusive of airfare, coach transfers, Calais-Dover ferry service, accommodation, admission fees to places of attractions and meals

International Passport must have at least 6 months' validity beyond September 2007. A visa is not required for Singaporeans/PRs.

Kindly complete and return the form to Mr JH Chin @ J.413 by 31st March 2007.

JH Chin, M/RG
1 February 2007