Prostate Cancer Canada Network - NEWMARKET

Volume 18, Issue 4, **December 15, 2013**

A support group that provides understanding, hope and information to prostate cancer patients and their families

Come to the Party

Everyone is welcome

This is our annual pre-Christmas get-together. This year we will be welcoming back Susan "Brown" Ryman, who will be entertaining us with her beautiful voice and leading us in a Christmas carol sing-along. We are planning a pot luck, so bring along some of your favourite finger food recipes, savoury or sweet, to share.

Let's all celebrate Christmas together and also remember those less fortunate, bring something for a food bank donation.

December 19th 2013, at the Newmarket Seniors Meeting Place, 474 Davis Drive, Newmarket (Side Entrance)
Time: 6:30 pm to 9:00 pm

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The Newmarket Prostate Cancer Support Group does not recommend products, treatment modalities, medications, or physicians. All information is, however, freely shared.

October Speaker Notes . . . Dr. Srikala Sridhar. Princess Margaret Hospital. Subject: "New Treatments, New Hope"

Our guest speaker at the November meeting was Dr. Srikala Sridhar. "Dr. Kala" is a Medical Oncologist at The Princess Margaret Hospital and an Assistant Professor of Medicine at the University of Toronto. While her presentation at the meeting was enhanced by a very detailed PowerPoint production that I can't include here, she was able to guide us through several new products, in various stages of clinical trials, that show excellent promise to improve our odds in the journey with prostate cancer. In addition to this, she gave us a very detailed description of the diagnosis, grading and treatments of Prostate Cancer. Here is what she had to say.

I know I look about 12, but I've been treating prostate cancer for many years. I think the last two to three years have been the most exciting, with the number of new, well tolerated treatments, which are oral and keep you out of hospital and continuing your daily activities. I think that's the most important aspect of these new treatments and the advances that we've made in treating this disease.

We know that prostate cancer is the most common cancer in men, with 24,000 new cases and 4,300 deaths in Canada each year. This disease starts in the prostate gland and then spreads to other places. We know that the most common site for it to go to is the bones. We're still trying to understand why that's the case but it's very common. Some prostate cancers grow very slowly and some grow quickly. The tricky thing, when it comes down to screening for prostate cancer, is we can find your prostate cancer but we don't necessarily know if its a good prostate cancer, one that's slow growing and will never cause you a problem or if its one that's more likely to spread and cause problems and pain and discomfort.

Some other cancers, for example cervical and some types of breast cancer, when you find them early and you treat them early it has a big impact on outcomes. In people with prostate cancer, we can't really say for sure in many cases, we don't know if that prostate cancer has already been there ten or fifteen years and if it's just going to stay there for another ten to fifteen years and do nothing further. So that's why there's such a controversy about the whole issue around screening. I don't know if the controversy is whether or not to screen, the problem may be one step further, what to do with the results? If you do get a result, what should you do? I know that some of you are on active surveillance and that's the concept behind active surveillance, where you find something, you don't know if it's going to be a big problem or not but you watch and see how it behaves. It's a very emotionally charged issue, where you have people on very opposite sides of that decision to wait.

What are the risk factors? We know that it's a disease that tends to affect older men over younger men. I think "tends to" because it's not all older men get it and no younger men. Some men as young as late 40s can get it. We wonder if the disease is slightly different in younger men. It may be sometimes more aggressive. This is something that we see in other cancers as well, when the cancer affects a person very young, sometimes it takes a very aggressive course. We know that patients who are African American seem to be at higher risk over Caucasians and Asians. Family history can also be an indicator of your risks. In terms of diet, I think it's like anything, we don't have any clear links, we can't say, "If you don't eat this, you won't get this" or "If you eat this, you might get this". I think it's best to eat a balanced, sensible diet and then hope that things are O.K.

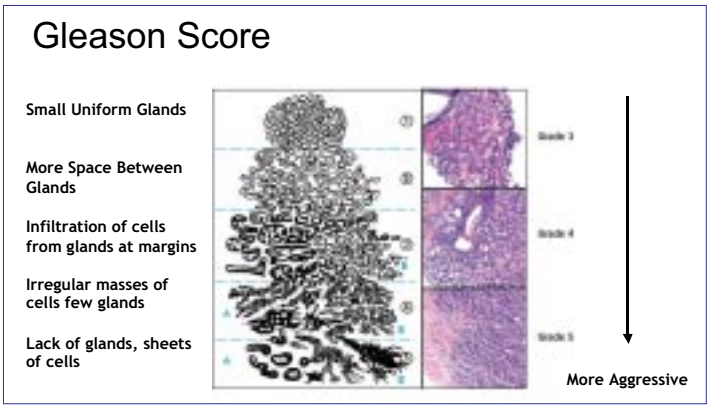
Dr. Kala, using a slide, described the prostate gland, it's location and proximity to the urethra and other internal organs and it's function.

There are a couple of different ways prostate cancer can be diagnosed. There could be symptoms, such as blood in their urine. They go to their doctor who then goes on to look further, with a PSA blood test. There are ranges for the PSA test: normal range; there's a kind of abnormal range; and then there's a

really abnormal range. What the PSA helps us to determine is, do we think that the prostate cancer is localized in the prostate gland or do we think that the little cells may have spread somewhere outside? The rough cut-off that we use for the PSA test is about 20. If the PSA is over 20 then there's a pretty good chance that the cells from the prostate cancer have already left the prostate and may have spread to other places. Even if you may not have seen them there on a scan, they're microscopic. If the PSA is greater than 20 and we think they've spread, it doesn't make a lot of sense to go in and do a big surgery and cut out the prostate. It's kind of like closing the barn door after the cows have left. The purpose of surgery to remove the prostate is to stop the cells from spreading. So, if those little cells have already left the prostate, putting the patient through a major operation, where they lose their prostate and have a number of other side effects after, does not make a lot of sense. If there's disease locally that's causing symptoms, sometimes, in that context, they may offer radiation to control the disease.

A Digital Rectal Exam (DRE) is also done by your family doctor or the urologist. They go up with their finger and examine the prostate, get a sense if there are nodules or hardness or any other worrisome areas there. Then there's a trans-rectal ultrasound, where they take a look at the prostate with the ultrasound waves. Finally the diagnosis is confirmed with a biopsy. They go in and they actually do a number of biopsies in different areas of the prostate. They look at these samples under the microscope to determine if there are any cancer cells there. Then they do scans to see if the cancer has left the prostate, sometimes they use CTscans, bone scans or MRIs. It really depends on the part of the body that you are looking at. CTscans and MRIs are good for the abdomen and pelvis, the lower area. Bone scans are good to pick up any spots that might be in the bone but you need to keep in mind that bone scans are very non-specific. I always tell my patients, just because a bone scan lights up, it doesn't necessarily mean there's a cancer there. Arthritis will also light up. Or, a bump on your elbow could also light up. Sometimes we do CTscans of the chest but the lungs are not a common site that prostate cancer goes to. The choice of the scan depends on the organ the doctor wants to look at.

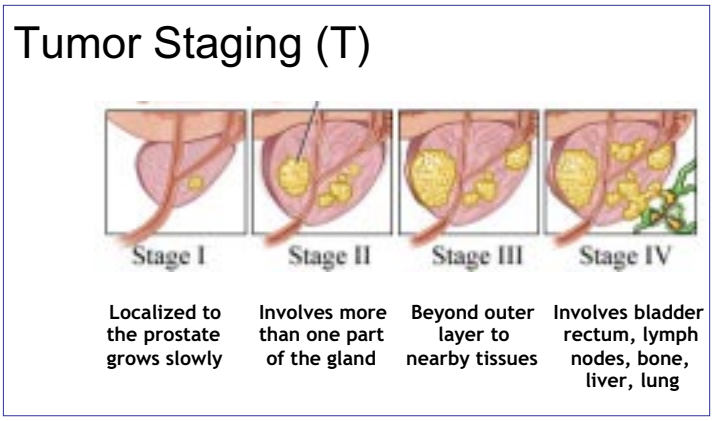
How do we talk about prostate cancer? We look at the grade of the cancer, how abnormal the cells look under the microscope. Some can look normal, some can look a tiny bit off and some can look really off. You've all heard the term Gleason score. This really speaks as to how aggressive the cancer looks under the microscope. We look at the two areas that are most commonly represented in the biopsies and add the scores together. Most people have scores of 8, 9, 10, that's the more aggressive side of things. Some people have lower scores, such as 6, 7. The Gleason score gives us a sense of, "Is this something we can actively survey, can we watch and see what it's doing?", or if it's one that has a higher potensity to spread into other places and is indicative that our suspicion needs to be higher.



We look at the Gleason Score as: Low grade: 2-4, Medium. Grade: 5-6 and High Grade: 7-10. Studying the biopsies from different parts of the prostate, we add the cell patterns of the two most prevalent samples and give each of them a score of one to five. These added together give us the Gleason score.

The other aspect is what we call the Staging (TNM). We look at the Tumour, we look at the Nodes and we look at the Metastases, has it spread anywhere? The T describes the extent of the tumour in the gland; the N describes the lymph node involvement. We have lymph nodes all over our body. We know that in the neck you have lymph nodes that are particularly close to the surface, so when you get sick your family doctor will often feel those lymph nodes to see if they are inflamed or showing signs of an infection. Lymph nodes are tiny little things that generate the fighter cells when you get sick. Sometimes you can pick up enlarged lymph nodes in patients who have cancer for that reason. The M is for distant disease. Disease that has left the prostate, gone into the bones, gone to the back, that type of thing. Understanding this is really a key prognostic tool. If someone has cancer that's already spread to the back, you would not need to remove the prostate because it's already spread. If the cancer is shown to be more localized, you may think along the lines of surgery.

The Tumour Staging (T) is graded from 1 to 4. Stage T1: the cancer is localized to the prostate



and growing slowly. Stage T2: the cancer involves more than one part, maybe both sides of the gland. Stage T3: the cancer has extended beyond the outer layer of the prostate to nearby tissues. Stage T4: it involves the bladder, rectum, lymph nodes, bone, liver or rarely the lung.

The Lymph Node Staging (N) is identified by studying the lymph nodes during or after surgery. N0 means no spread; N1 - spread to 1 pelvic node and is less than 2 cm; N2 - more than one lymph node, 2-5 cm; N3 - any node, more than 5 cm.

Finally, Distant Staging (M). M0 indicated no metastases discovered; M1 - the cancer has spread to the bone, lung, or liver, etc and is identified in the scans.

Obviously, if the disease is localized in the prostate, people generally do a lot better than if it has spread. With some of the new treatments we have now, we see quite an impressive increase in how long people are living with this disease. It is becoming more of a chronic disease as opposed to something more acute, in direct contrast to Pancreatic cancer, which you've heard about. It's a very aggressive cancer, sometimes from the time of diagnosis to the time of death is a matter of a few months and treatments don't work and the disease just progresses. Fortunately, the majority of prostate cancers are quite sensitive to treatment and that allows people to live a fair amount of time with this disease.

What are the symptoms of Prostate Cancer? There are urinary problems: frequent urination; weak or interrupted stream; pain during urination; blood in the urine or semen; urinating frequently at night. There can be signs that the disease has progressed to other areas such as back pain, weight loss and fatigue. At the same time, some patients can be completely asymptomatic. I have patients who say that they feel fine, how can they have cancer? It doesn't make any sense, they feel perfectly O.K. You can get the full gamut of symptoms related to this disease.

How is it treated? This is entirely dependant on the stage of the cancer. You know that more than one treatment option is possible. That's often tailored and personalized to your own situation, based on your anatomy, based on the disease - where it is, how fit you are. If you've just had a heart attack they may not be keen to take you to the O.R. because the risk of surgery may be so great that it's not worth taking. There are other options. There's always a personalized approach to figuring out the treatment for you. For early stage cancers - active surveillance, which used to called Watchful Waiting. They changed the wording a little bit because people didn't like that feeling of waiting. Active Surveillance makes people feel like something is actively being done. All in all, it basically means we are keeping an eye on things, nothing aggressive is being done at the moment, it doesn't mean it may not be in the future. Then there's Surgery, Radiation, Hormonal Therapy and Chemotherapy. The latter two are something I will talk more about.

Active Surveillance is where we monitor early stage slow growing disease. It is appropriate when treatment is worse than the symptoms from the disease or if a person is older or unwell from other causes. Other treatments will be considered when the tumour grows or spreads. Local treatments: Surgery - as mentioned before, this can cure the cancer before it spreads by removing the prostate and the local lymph nodes. Possible side effects can be incontinence and/or impotence. Radiation: can also cure cancer before it spreads using high energy x-rays to destroy the cancer. The beams can be focussed on the prostate gland in such a way that the actual damage to the tissues along the way is not too much because it's all concentrated on the prostate. In that way you can really target the cancer. Brachytherapy inserts radioactive "seeds" right into the prostate, where the cancer is. The side effects can be bowel and urinary symptoms. The problem is that, despite local therapy, about 20 to 30% of people will see their prostate cancer come back. That sometimes is quickly, sometimes many years later. That's why the urologist or radiation oncologist will be following the PSA over time.

How do we treat disease when it comes back? What do we know about what's feeding the prostate cancer, what's helping it to grow? We know that the brain signals the testes and the testes grows the testosterone. Testosterone is what feeds the cancer and that causes the cells to grow. There's also a little bit of testosterone produced by the adrenal gland. The primary thinking is that we need to block the testosterone production so you can starve the

cancer. If we block the brain from signalling the testes, they don't produce testosterone and the cancer doesn't grow. Some of you are on hormone treatments, like Lupron or Zoladex, and that does the same job. So often what we do is start the patient on those drugs and they'll be on those drugs for a period of time, as long as the PSA is controlled. When the PSA starts to go up, we'll often introduce a drug called Casodex, which is an oral pill, and that actually blocks the testosterone from getting into the cancer cell. So that's another way we try to starve the cancer. Sometimes, if the PSA goes up despite that, we then use drugs such as prednisone that block the adrenal production. So we're doing everything we can to get the cancer cells to be starved so that it's not able to grow.

One of the things that can happen despite the Hormonal therapy, is that the disease will learn to grow. That's the thing about cancers, they are smart and they adapt and they try to grow. It really only takes one or two cells to figure it out. Then they'll start to grow and make more and more cells. When cancer grows despite the hormonal treatment, it used to be call Hormone Refractory Prostate Cancer or HRPC but over the last few years the name has been changed to Castration Resistant Prostate Cancer (CRPC). The reason for that is we understand that despite the cancer seeming to not care about the hormones, it really might. So targeting the whole hormonal path with a different drug, new drugs or better drugs, may actually work, that's been a huge step forward. That understanding that people can still use these hormone based treatments, which are well tolerated compared to chemotherapy, is very exciting. In many cases, CRPC is used to indicate that the patient is having disease progression, that could be the PSA going up, that could be clinically feeling worse or it could be seen on the scans. There are really two theories on why that has happened. One theory is called Acquired Theory, which is because the treatments we have offered supported survival of the fittest: the cells that become independent of the need of hormonal therapy. That's one theory. The other theory is that, when a cancer is born, they are not all the same to begin with. Some of them are sensitive to the hormone treatment but some of them may not be. So you might be suppressing some of them and some of them can still grow. That's part of the concept of why I am asked, "Why do we have to keep taking these injections, my cancer seems to be growing anyway?" We believe that there may be a couple of different populations of cells, some of which may be suppressed by the injections and we can keep them suppressed while we work on the other ones. That's often why patients will continue on the injection treatment for a long period of time.

So, when we look at the disease which has progressed after hormonal therapy, there's a whole spectrum. There are people who just have their PSA going up and nothing else; or we can have people who can have asymptomatic disease, which means they have disease which has spread but they don't feel it, just because you have a spot on the bone, doesn't mean you're going to feel it. Finally you have patients who have pain, their energy is down, their appetite is down and they are symptomatic. So, often with this disease, and this is really quite unlike many other cancers where the disease is spread and it shortens life expectancy, there are approximate time frames of 24 to 36 months for just the increased PSA, 12 to 24 months for asymptomatic and 6 to 18 months for symptomatic. Then, of course, it's tailored to each person. A person who is very healthy and has no issues will push this time frame further. This is where, especially in the last category of 6 to 18 months, the new treatments are really working. They are pushing those numbers more. We are seeing people in advanced stages living two, three or sometimes four years on these treatments. So I think that's where we're seeing some of the real progress.

Let's talk about Chemotherapy. Chemotherapy is a bad word. When people hear that word they are very stressed and say, "I know people who had chemotherapy" and they feel that chemotherapy killed them. In actual fact, we know that chemotherapy works well in this disease. Chemotherapy is a whole number of different drugs that have the capability to kill cancer cells. There are certain drugs that kill prostate cancer cells, certain drugs that kill lung cancer cells; some of them are the same, many will kill multiple kinds of cancer cells but they are really drugs that will go in and kill cancer cells and in doing so we see an improvement in symptoms. It seems maybe counterintuitive that if you give chemo people will feel better but they do. Because, if they have pain from their cancer and you reduce the amount of cancer in their body, their pain can get better, their energy can get better, their appetite can get better and that's the biggest reason by far to use chemotherapy to make people feel better. It can reduce the PSA and it can improve survival by a few months. The reason I put that out there is that the reason to give people chemo is not to make people live three or four years longer but whatever time they are going to live for, maybe a few months longer, their quality of life will be better.

Chemotherapy for prostate cancer is not a tough, tough drug, as for some other cancers, it's a simple drug given every three weeks, people actually tolerate it fairly well. There are, of course, like any treatment, people at all ends of the spectrum. Some people come in and wonder if they are really getting anything because they don't feel anything, they have no side effects whatever and they feel great. Then other people just struggle their way through. Overall, most patients tolerate the treatment really well. It is a good treatment when it's required. We're not doing it just to make people live longer but to make them feel better.

Along the way, what we've also recognized is that, in men like in women who go into menopause, when the testosterone is taken away, it can impact on the bones. Bone health is another important thing that we're always trying to keep aware of and take note of because we know there are a number of risk factors for osteoporosis. Not only is it age but we know that with prostate cancer you can get spots in your bones and it can affect your bone strength. Also, many of the treatments we use, like hormone treatments, by blocking the hormone you're not going to get the same strength in your bones. There are bone builders and bone destroyers. We know that when prostate cancer spreads to the bone, it sort of activates the bone destroyers, to make room for itself. In doing so, the bone can become more fragile and more likely to fracture. The drug we use, Zolendronic acid or Zometa, is a bisphosphonate. Basically it is an I.V. form of an osteoporosis drug. We know sometimes people get bone pain, fractures, cancer affecting the spinal cord and this drug can help to reduce the incidence of those problems. That's why this drug is given intravenously. It can be given every month or every three months. There is one side effect for anybody who is on the drug to be aware of, it can affect your jaw and the healing of your teeth. So, if you're going to get a tooth extraction while you are on this treatment, you should let your dentist know and also your oncologist or urologist, as well. What we'll often do is hold the drug for a period of time, until the tooth is healed up. Otherwise, the healing in the jaw, for some reason, seems to be affected. There's also another drug called Denosumab or Xgeva. It's an injection that's given just under the skin that basically does the same thing. The goal is to stop the destruction in the bone. Again, this drug can also cause the problems with the teeth. Just make sure your doctors and dentist know you are taking it.

Let's take a look at emerging treatments for recurrent prostate cancer. We start with hormonal therapy, go to drugs like Prednisone or Ketoconazole that block the adrenal production, Chemotherapy with Taxotere or Mitoxantrone, these are the options that we cycle through as the disease progresses. We always represent as a large unmet need as we don't have a cure. At some point the disease catches up and overtakes. So, I think, if we're going to find better treatments, we need clinical trials. As a field, we are most grateful to the patients who have participated in the clinical trials that have allowed us to have these advances. Without them, we would not move much ahead. Clinical trials are really those which test new treatments to see if they are safe and to see if they work. They often ask very specific questions, e.g. Does this drug help people live longer? Does this drug help people live better? It's very structured and very controlled, in the sense that to write a protocol takes quite a bit of time and we try to make sure all the Ts are crossed and the Is are dotted. The other thing is that it's voluntary. It's always up to the patient, it's an option if you want to do it. You will be asked to sign a consent form, which will be very detailed on the information about the treatment and the possible side effects. With these clinical trials, you will never get less than the best of care. You will always be taking a drug, not a placebo. You will never get less than what you would get if you weren't taking a clinical trial. The other thing is, going into a trial, we don't know for sure if the treatment works or not. That's the reason why we're doing the trial, because, if you knew something was going to work, you wouldn't need to do a trial.

There are a few different phases of clinical trials. These are important because phase 1 trials are those where the drugs are just coming out of the lab. We don't know if we can even give them to people, if they're too toxic, we don't know what dose to use. We know very little about the drug at this point. Often these trials get about 10 to 15 patients: the first three will get a low level, the next three will get the next level. It's really a dose finding thing. Often the people enrolled in these trials are those who don't have many options left. In Phase two, we know that we can give these drugs to patients, we know what dose to give, now let's see if it does anything? In this phase it involves about 30 to 40 patients and everybody on the trial will get the drug. Finally, the phase 3 trials are the ones that we're really excited about. The only way to know if we can really use this drug is put it up against what we do routinely. These are often large, randomized studies with 100+ patients. Half the patients will get one treatment, half the patients will get the other treatment. Often, it's randomly assigned, you can't say, "I want this treatment." Or "I

want that treatment." It comes out of a hat. You are followed on the trial, they are dedicated trials so you get some perks from being on a trial because you have people who are following you along, specifically. If it's working, you stay on it. If it's not working you come off it. It's like any other treatment. You won't be kept on it just because it's a trial, because we really want to know if it's working. Those are the phase 3 trials. Sometimes we're testing a drug that's already been tried on advanced disease to see if it will work on early disease.

Here are some of the new treatments that are coming down or have already arrived. Hormonal based treatments such as Abiraterone Acetate (Zytiga) that's a drug that blocks the adrenal production of testosterone. So we sort of blocked all the avenues of testosterone. This is a better blocker of the adrenal production. The other drug, called Enzalutamide (Xtandi), is like a super Casodex. This drug blocks the binding to the receptor, this is testosterone going into the mouth of the cancer cell but it also blocks the signalling within the cancer cell that tells the cancer cell to grow. That's rather exciting as well. Then we have a new chemotherapy that seems to overcome some of the resistance. There are some cancers, believe it or not, that can actually pump the chemo out, they have little cell pumps that allow them to pump the chemo out. This drug seems to be less sensitive to the pump. Maybe it stays in the cells better and it's able to kill the cancer better.

How does your body make testosterone? You make testosterone by converting cholesterol - not the cholesterol that you eat - but the cholesterol that's converted into testosterone, through a number of different steps. Abiraterone blocks that production. That can be from the adrenal gland but it can also be from the within the tumour. Tumours are smart. They learn to self-supply their own testosterone. We may be blocking all the external production but if they form a little factory and can make their own testosterone, they're going to be able to grow in there. So, if we can block their own production, we may be getting some benefit. This drug was exciting in phase 1, exciting in phase 2 and then in a phase 3 study, with over 1,000 participants, more than half of them taking Aberaterone and the other half taking Prednisone, which was the drug we had been using at this stage of the cancer. Abiraterone was shown to improve life expectancy longer than the Prednisone. This drug is now approved and funded for patients who have had prior chemotherapy. It is also now being tested in pre-chemotherapy patients with improved results. We're looking for funding in the future for this level of treatment. Enzalutamide is another well-tolerated oral drug, which completed phase 3 trials in October and again showed good results. Finally, Cabazitaxel is a new chemotherapy. It's very similar to Docetaxil but it seems to work with people where the Docetaxil doesn't work. It's another option on the table.

So now, we see this number of new treatments that are coming into play in this disease. I think that idea is that, if we keep adding new treatments here and there, putting new steps along the way, we can allow people to live longer and longer. I think it's been a very exciting time in this field, new treatments, new approaches and, above all, new hope.

Can You Help . . .

Calvin Stillman from Peterborough. ON. contacted us. He is scheduled to have surgery for an inflatable penile prosthesis in the new year. If any of our members have had this procedure done, He would like to talk to them about their experience. His e-mail address is 2451cs@gmail.com

NOTICE

Derek Lawrence has a vacuum pump made by Mentor for erectile dysfunction that he would like to offer to any member of the support group that may be interested. The retail cost of the unit was $450.00. Derek was a regional distributor for Mentor; but, they are no longer offering these units for sale in Canada. The unit in question has never been used for its intended function. This was Derek's demo unit and he would like to see the unit go to someone that may benefit from its use. The unit would be supplied with all the necessary accessories that come with a new unit including instructions, etc. Derek would also be willing to provide instructions on the operation and use of the device. The unit is available on a first come first served basis. Derek has asked that the member make a donation to the group in exchange for the unit. The amount of donation would be your choice. However, it must be noted that parts and service are no longer available and the recipient would not be able to contact Mentor about the unit. Please contact Derek directly at
Ph: 905-853-2665 or by e-mail at dermarg@gmail.com