Issue 124 • April/May 2016

Upfront U Kaiora

OFFERING INFORMATION, HOPE AND INSPIRATION TO THOSE AFFECTED BY BREAST CANCER

SO SOY?

What's the story with soy and breast cancer?

GETTING ENOUGH PROTEIN

from plants

The New Big Thing:

Herceptin and Tyverb – together!

+ TAKING CONTROL AFTER A CANCER DIAGNOSIS

Oncoplastic Breast Surgery Part two | From the Committee | BCN Healthy Recipe

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from the **editor**

Just when I thought the cancer research community had reached some sort of agreement on aspects of diet and cancer development, a new bit of research comes along, and WHAM, a lot of what we thought we knew has been blown out of the water. Or at least it may have been.

In this edition of *Upfront U Kaiora* we have quite a bit on diet, protein and animals versus plants. I have to put my hand up and say that I am a life-long meat eater. I love my veges, too, and really enjoy vegetarian food, but struggle with both the theory and the practice of eating a plant-based diet for an extended period of time. Meat seems to suit me, although I acknowledge that the research showing that a plant-based diet with little or no meat reduces the risk of cancer.

Links between diet and cancer has always been contradictory at best; for every study that says this or that is bad for you there is another that says it is not. The closest we have come to universal agreement is that the Mediterranean diet is good for you, but even that involves amounts of lean animal protein, especially fish.

There is no simple answer but I suspect that Michael Pollan* comes close with a very simple seven words – three rules:

Eat food. Mostly plants. Not too much.

Essentially, if your grandmother wouldn't recognise it as food or it has ingredients whose names you can't pronounce, don't eat it. The rest is mostly about everything in moderation. It seems to me that eating whole foods, whether plant or animal, all in moderation, would be a pretty good place to start.

* *

Sometimes you get to the point where all you can do is shake your head and wonder? After all, so much of what goes on in our lives, especially decisions made by our policy makers defies logic.

In my research for the article on plant-based protein I found that hemp (the non-narcotic, low THC kind) is high in protein, a great food for vegetarians and vegans, and can be bought as seeds or milk… just not in New Zealand, because the government thinks that people eating hemp food products with no THC will graduate to smoking pot! While our policy makers are more than happy to spray the probable carcinogen, glyphosate, around our roadside verges, playgrounds, sports fields and schools, they get all paranoid about a highly sustainable plant that can be used in the manufacture of a wide range of environmentally friendly products, including high protein food. And why is this? Because they can't quite understand the difference between high THC cannabis and low THC cannabis and think the latter is a gateway product to the former! Is it any wonder that those working so hard for policies that will reduce our risk of cancer feel like they are banging their heads against a brick wall?

* Check out www.michaelpollan.com

Sue Claridge

Breast Cancer Network NZ

BCN VITAL STATS
Breast Cancer Network (NZ) – established in 1993 is an organisation for for those affected by breast cancer, and their friends, families and carers. It aims to promote increased efforts to prevent and cure breast cancer – by advocacy, education, information and networking.

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So, Soy? By Sue Claridge

Soy and breast cancer!

It has always seemed to me to be one of the most divisive breast cancer and diet topics. Is soy good for you? Does it reduce or raise your risk?

Spurred on by Jane Plant's book Your Life in Your Hands, which advocated a switch from dairy to soy to prevent breast cancer, Professor Lynn Ferguson undertook a pilot study (supported by BCN) in 2002 to investigate the effect of soy milk compared with cow's milk on morbidity related nutritional markers (*Upfront* 49 June 2003), and found no detrimental effects from dairy or soy, and possible beneficial effects from soy.

On the other hand, at our one day expert seminar in 2012, Professor Ian Shaw presented evidence that the human placenta, although incredibly efficient at protecting the unborn baby from the excess oestrogen circulating in the mother's body, doesn't recognise the oestrogenic soy protein genistein, and lets it pass straight into the baby, whereupon the genistein could potentially wreak havoc on its development. Many studies have now shown that in utero exposure to many compounds, including oestrogen, can influence the development of breast cancer later in life. If it has that effect in utero, what effect during childhood, in puberty, at menopause upon a woman who consumes soy every day in a multitude of foods and forms?

While Professor Ferguson's study compares soy with dairy, that is really not the issue. Many women eschew dairy because of the growth factors in milk that are believed to promote tumour growth, so a comparison of dairy with soy in terms of breast cancer risk may well be a moot point.

Soy has often been promoted as healthy and as lowering the risk of breast cancer because of the documented lower rates of the disease among Asian women who consume a lot of soy. However, Asian people generally eat whole and fermented soy, such as tofu, natto and tempeh, not soy meal or the soy isolates and soy by-product found in so many processed foods in the Western diet.

It was first reported in 1991 that women who were high consumers of traditional soy products had a reduced risk of breast cancer. However, since then the research has been very contradictory. Soy has proven to be the most controversial of plant foods with opinion polarised on the benefits and harms. A search for medical and research articles using the terms 'soy', 'breast', 'cancer' and 'risk' returned some 400 results dating from 1991. A google search with the same terms returned 424,000 hits!

THE RECENT RESEARCH ON SOY AND BREAST CANCER RISK

There are a number of recent research papers available online (See reference list on the BCN website) which include studies in both mice and rats, and people of Asian and non-Asian ethnicity, and women of all ages. The results can best be described as inconclusive.

One review sums up the degree of uncertainty about any protective effect from soy among non-Asian women:

"Epidemiologic data generally show that high soy food intake among Asian women is associated with protection against breast cancer. However, soy foods have little effect on intermediary markers of breast cancer risk. In 1995, a hypothesis emerged, based on rodent research, that exposure to isoflavones early in life reduces breast cancer risk. A similar benefit has been proposed for early pregnancy. Animal studies published in more recent years support this hypothesis. In addition, all 4 Asian retrospective epidemiologic studies support this hypothesis, although in the largest study, protective effects were evident only in premenopausal women. Two of these studies were con-

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THE BREAST CANCER NETWORK THANK THEIR SPONSORS:
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ducted in Shanghai and 2 in the United States, although the US studies involved women of Asian ethnicity. Two Canadian epidemiologic studies also found that early isoflavone intake was protective against breast cancer, but because intake was so low in these studies the reduced risks are not likely to have a causal basis."

The interesting aspect of most of this research is that any protective effect seems to be limited to Asian women with a life-long diet that includes traditional Asian soy foods, rather than the forms of soy predominant in the West.

Research has consistently not found a protective effect among Western populations. In addition, I could not find a study that specifically looked breast cancer risk and soy intake from highly processed foods in the form of soy meal/flour and soy protein, as widely consumed in a diet high in processed foods. Such a study would encounter many confounding factors, and because soy in processed foods is so ubiquitous it may be very difficult to accurately determine dietary intake.

A confounding factor in the Asian versus Western women discussion is that Asian women traditionally have diets low in animal protein with high intake of vegetables, consume less alcohol and are more physically active, all of which is known to lower risk of breast cancer. It may be that consumption of soy in this context exerts a synergistic beneficial effect, which in a population that has higher meat and alcohol consumption, lower vegetable consumption and a more sedentary way of life, is lost entirely.

GM SOY

Women concerned about their breast cancer risk should also be aware that that the use of GM soy may significantly raise their exposure to glyphosate. Monsanto genetically modified soy to be resistant to glyphosate, so that this chemical (also manufactured by Monsanto) could be used to control weeds among soy bean crops without killing the crop. Norwegian researchers reported in 2014 that "GM-soy contained high residues of glyphosate and AMPA† (mean 3.3 and 5.7 mg/kg, respectively)."

WHAT SHOULD YOU DO?

Exercise caution! Soy contains oestrogenic isoflavones that may have oestrogenic activity in the body; whether or not this raises or lowers the risk of breast cancer in pre- or post-menopausal Western women is really not known. Dr Bruce Trock and colleagues, in their 2006 paper say:

What is Soy?

The soy plant is a legume that produces pods in which the beans are the developing seeds of the plant. Soy, when compared to other plants, is relatively high in protein. A traditional staple food in Asia, there are two main dietary forms of soy: traditional forms, which are generally whole and fermented soy beans; and modern Western forms in which the solids left over from soy oil manufacture (extracted from the solids using solvents) are used in a variety of ways. In Western countries soy is seldom consumed in its whole or fermented form, and is usually consumed in highly processed forms such as defatted soy flour, and soy protein concentrate, which is even further processed to make textured soy protein and soy protein isolate. In addition, in the US genetically modified soy has reached 90% penetration in the market. The soy by-product that is left over from oil manufacture is found almost ubiquitously in processed foods under a variety of names, and is used as a filler, and as a meat substitute/extender in meat and poultry products. It is also widely used in animal feed, including in food for domestic pets and livestock and poultry.

Traditional Asian Forms

- Soy sauce
- Edamame (unprocessed immature green bean, often served in the pod)
- Soy "milk" (full-fat from ground beans)
- Tofu (from the curds whole full-fat soy "milk" made by cooking the beans and straining the liquid)
- Tempeh (fermented and cultured from the whole bean).
- Miso (beans fermented with salt and the fungus Aspergillus oryzae)
- Natto (fermented and cultured with Bacillus subtilis)

Modern Processed Forms

- Soy Milk
- De-fatted soy flour, meal and grits
- Textured soy protein (TVP)
- Soy protein isolate (e.g. used in protein powders)
- Soy lecithin (often used in small amounts as an emulsifier, e.g. in chocolate to prevent cocoa butter and cocoa solids from separating).

"Soy intake may be associated with a small reduction in breast cancer risk. However, this result should be interpreted with caution due to potential exposure misclassification, confounding, and lack of a dose response. Given these caveats and results of some experimental studies that suggest adverse effects from soy constituents, recommendations for high-dose isoflavone supplementation to prevent breast cancer or prevent its recurrence are premature."

The US non-profit Breastcancer.org says:

"Until the issue becomes clearer, many doctors recommend that women who take hormonal therapy or who have estrogen-receptor-positive breast cancer avoid soy supplements because they contain high concentrations of isoflavones."

They go on to say that it is fine for others to eat soy as part of a balanced diet, but they, too, fail make any mention of the difference between traditional forms, and highly processed forms in the typical Western diet.

We know that diet has an epigenetic effect – long-term or generational diets impact on the gene expression of certain populations (see page 9 for an article on vegetarian populations and genes). For Asian populations that have consumed traditional soy foods for centuries, consumption of those foods seems to offer a protective effect. For the rest of us, and where modern processed soy products are concerned, the jury is still out on whether the effect is beneficial, detrimental or neutral. Far more research is needed and specifically on processed soy and soy by-products that are found in so many of our processed foods.

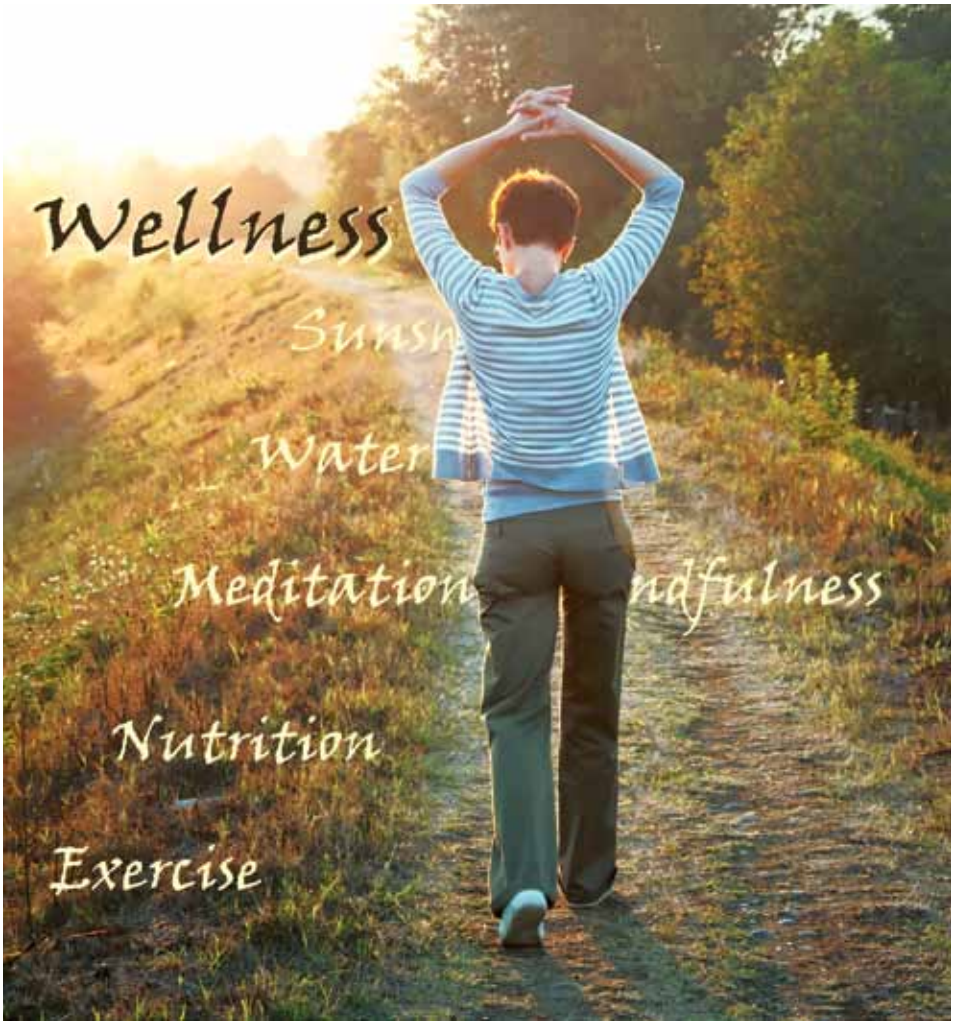
† AMPA (Aminomethylphosphonic acid) is the primary degradation product of glyphosate.

References for this article can be found on the BCN website at www.bcn.org.nz.

Taking Control By Jasmine*

I am a fit, 36 year old woman who has two degrees in accounting, and a Masters in law. Stress, working hard and trying to maintain a healthy lifestyle was part of my daily routine. I exercised two to three hours most days, ate berries and nuts for breakfast, salads for most lunches and a healthy dinner. I married my beautiful husband. Life was perfect. Nothing could go wrong.

The October long weekend in 2014 was one of the best and worst weekends of my life. My husband and I celebrated the acquisition of our unit opposite the beach, I made a trip to the Blue Mountains to rock climb and had a boat trip on the Sydney harbour with friends. I normally hate it when I get sunburnt, but in this case it brought my attention to a lump on my left breast, which saved my life.



DIAGNOSIS

I was diagnosed with a three-centimetre tumour that was oestrogen, progesterone and HER2 positive. Doctors recommended that I commence six rounds of neoadjuvant chemotherapy (chemotherapy before surgery) immediately. I felt I was no longer in control of my life. I could not let this happen so I went to many doctors trying to find an answer they would not give me. I had cancer and nothing other than surgery and chemotherapy would help to get rid of it.

My husband and I spent numerous hours on research only to decide to do the surgery first and then the chemotherapy. The doctors told me that it was best to do the chemotherapy first as it can show that the chemotherapy is working on the cancer by shrinking it. Statistics show that the rate of reoccurrence is the same regardless of whether you chose to do chemotherapy before or after the surgery. Fortunately my decision was correct. I was informed by my oncologist that I would now need only four rounds of chemotherapy instead of six.

This demonstrates that taking the time to make your own decisions helps you regain control and make the right choice; listen to your intuition.

TREATMENT

I was on docetaxel and cyclophosphamide and, as a result, also had to take dexamethasone, anti-histamine and panadol. I was prescribed Maxalong and Zofran but did not need to take these. A natural alternative for dizziness and nausea is ginger tablets.

In addition, my oncologist prescribed a huge bag of drugs for symptoms. Fortunately I did not need to take any of them. I believe my diet and positive state of mind assisted with experiencing few, relatively minor, symptoms, which included slight redness on the chest; some aches and pains that lasted for a few days; hair loss (if possible use the Cold Cap to minimise this); sore red throat; pimples; rise in temperature to 37.5 degrees that prompted my oncologist to decrease my chemotherapy slightly as a precaution; and minor eye twitching on a few occasions.

Nutrition was the key factor in getting through treatment with limited side effects. I did a lot of research on this subject and visited a few nutritionists and naturopaths. I came to the conclusion that a predominately whole-food, plant-based diet, coupled with gentle exercise and meditation would assist me through my treatment.

I also looked into taking various vitamins. I wanted to ensure that these would not negatively affect my treatment but boost and sustain me through the treatment. Through my research I formed three categories: vitamins that were safe, controversial, and where there were mixed reviews. I decided to only take the safe vitamins (see table on page 6):

ADDITIONAL THINGS TO ENSURE

Water: During the actual chemotherapy treatment I would ensure I drank one litre of water. Daily I would have at least two litres or more of water, plus fresh juices.

Organic: I went 95% organic. Where possible only buy organic food; I even started buying natural cleaning products to limit my toxic exposure.

Daily Juices: At least one large glass daily but preferably also one at lunch. Vegetable juice is preferred but you can add an apple to make it sweeter. I would juice carrots, celery, parsley, kale (make sure to blanch kale), beetroot, apple and lemon. To replace fibre lost in the juicing you can add one teaspoon of chia seeds. Ensure you sip this mindfully.

To avoid juicing daily, I bought a cold press juicing machine so I could prepare juice for three days. By using a cold press machine liv-

CONTINUED ON PAGE 6

Type	Quantity	Purpose
Multi B vitamins (BioMedica BioTress)	1 morning and night	Protect healthy cells.
Probiotic (Nutrition Care Polybac 8)	1 before breakfast and at night	Support healthy gut and reduce diarrhoea.
Zinc 30mg (BioMedica BioZinc)	1 at night	Protect healthy cells. You can also eat Pepitas, cashews and oysters to obtain zinc.
Vitamin D		Short spurts of sunshine 8-12 minutes between 11am and 2pm (no sunscreen) Boosts immune system and shown to improve outcomes for many cancers including breast cancer.
Antioxidant multi (BioMedica Oxygard)	1 morning and night	Protect healthy cells – main ingredients include green tea, St Mary's thistle, turmeric, selenium and glutamine.
Slippery Elm	3 capsules at lunch and just before each chemotherapy session	Protects stomach lining.
Silica (Q silica)	1 morning and night	I did this to assist with hair growth.
Magnesium (Muscle Ease)	Half serving around 4pm and half serving before bed	This helped tremendously with the aches and pains.
Selenium (Selenosite)	4 drops per day	Check your blood levels to ensure you are in the healthy Selenium range. High doses can be toxic.
Flax seed oil	At least 1 teaspoon with breakfast	Lignans in flaxseed have weak estrogenic or anti-estrogenic effects and there is evidence they decrease cell growth in breast tissue.
Flax seeds	1 teaspoon sprinkled on my breakfast	This helps with constipation and oestrogen clearance.

Food on a typical day would include:

- Breakfast: quinoa and banana porridge or Bircher muesli with a juice of carrot and beetroot.
- Lunch: veggie sandwich/wrap or salad, occasionally eggs.
- Dinner: veggie spelt pasta/lasagne, vegetarian curry,
- Snacks: vegan types and home-made, such as banana bread, carrot cake, bliss balls, hummus, green smoothies, coconuts, seeded bread with almond spread and honey, spelt savoury muffin and fruit

ing enzymes are retained for a longer period than any other type of juicer.

Exercise: Do gentle exercise like walking and swimming. I would wake up early before my chemotherapy and do some Tai Chi and meditation. This would allow me to be positive, relaxed and prepared for the treatment.

Increase plant based anti-oxidants: berries, cinnamon, turmeric and herbal teas.

Avoid refined sugar: Replace all refined sugar with maple syrup, honey, stevia and xylitol but still keep these to a minimum.

Avoid grapefruit and other foods that interfere with the way the body metabolises drugs.

Check iron levels: if you follow a vegan diet eat kale, parsley, spirulina, pine nuts, cashews, buckwheat, lentils and broad beans. I had a bowl of mussels maybe once a month.

Keep soy to a minimum: this is a controversial topic. As there is no definitive answer on this I recommend avoiding it or at least limiting your consumption of soy.

High calcium diet: eat lots of dark green leafy vegetables like spinach and kale. Occasionally I would add a spoonful of organic yoghurt to my fruit and nuts in the morning.

Hot magnesium baths: this assists with aches and pains.

Prune or pear juice: 30ml in hot water: to combat constipation.

Stress Management

- Avoid stressful situations, if possible.
- See a counsellor.
- Daily mediation – minimum 20 minutes but aim for more.
- Eight hours of sleep each night.
- Mindfulness.
- Attend a retreat. I did one just before I started my treatment and it put me in a positive mood.

Fermented foods: for boosting immune system – 1 teaspoon of sauerkraut daily, which is nice to add to salads.

Boost protein: this is to rebuild your cells after each chemotherapy session. This does not need to be animal-based. You can get an adequate amount of protein from a plant-based diet. To increase your protein include raw Amazonia Protein Powder (e.g. 24g in a spirulina mango smoothie), hummus, nuts and beans in your diet.

Meat: if you eat meat then it is best to keep to low fat meat like turkey or non-farmed fish from clean waters like Australia or New Zealand.

I highly recommend reading *The China Study.* It discusses research on the benefits of a vegan diet for improving long term health and, in particular, decreasing your risk of cancer, heart disease and other health issues.

Acupuncture – I did this weekly.

* The author has chosen to use a pseudonym.

Stop Press: Prolonged Nightly Fasting Reduces Risk of Recurrence

Women with breast cancer who have a short overnight fast (time between dinner and breakfast) of less than 13 hours have a 36 percent higher risk of breast cancer recurrence compared with women patients who fasted 13 or more hours per night, according to a new study by University of California, San Diego School of Medicine researchers.

Fasting fewer hours per night was also associated with significantly less sleep and higher levels of glycated hemoglobin (HbA1c), which is a measure of average blood sugar levels over a period of months. These findings are relevant to cancer prevention and control efforts because elevated HbA1c and poor sleeping habits have been linked to an increased risk of breast cancer.

"Prolonging the overnight fasting interval may be a simple, non-pharmacological strategy for reducing a person's risk of breast cancer recurrence and even other cancers," said Catherine Marinac, from UC San Diego Moores Cancer Center.

"Previous research has focused on what to eat for cancer prevention, but when we eat may also matter because it appears to affect metabolic health."

The study involved 2,413 non-diabetic breast cancer survivors between the age of 27 and 70.

Source: UC San Diego Health Newsroom Press Release, 31 March 2016

The New Big Thing

By Sue Claridge

Tumours shrunk 'dramatically' in 11 days; Remarkable Breast Cancer Trial Destroys Tumours In Just 11 Days; Breast cancer breakthrough: Tumours wiped out in 11 days.

If you are a regular consumer of current affairs you will probably have seen some of these headlines. You may have had a rush of adrenaline and hoped that this might be the news women around the world have waited for, for decades; or, your natural scepticism may have kicked in and you thought, "yeah, heard similar proclamations before, but here we still are, waiting for a cure."

In March it was widely reported that a new breast cancer treatment could completely eradicate tumours in just 11 days. *The New Zealand Herald* reported that doctors described the results as staggering and that they had never seen breast cancer patients respond so quickly to a cancer treatment. The results of the research, which was undertaken in the UK, were announced at the European Breast Cancer Conference in Amsterdam, on the 11th of March.

What is the Treatment and What Did the Research Find?

The treatment is a novel approach using two established drugs in combination – trastuzumab (Herceptin) and lapatinib (Tyverb*) both of which target HER2 receptors – before surgery for early stage breast cancer. The trial involved 257 women who had been diagnosed with HER2 positive breast cancer and were waiting to have surgery, and was run in two parts. In the first, 130 women were assigned to one of three groups – some received trastuzumab, others received lapatinib. Both these groups were treated for 11 days after diagnosis and before surgery. A third group received no drug treatment before surgery (the control group).

During the trial evidence emerged that giving both drugs together might be more effective and another 127 women were recruited to either a control group, a Herceptin only group, or group given a combination of Herceptin and Tyverb. After the trial all women went on to receive standard breast cancer treatment, including surgery.

After surgery, the researchers examined the breast tissue removed during surgery to determine if there was a difference in the response of the tumours to the differing pre-surgical trial drug treatment. The results from seven of the 66 women who had the combination treatment was what led to the big headlines: these women had what is known as a pathologic complete response. In lay terms, their tumours had disappeared!

In another 11 women, the drug combination shrank their tumours considerably, and there were only microscopic traces of the disease left after treatment.

How Excited Should We Be?

The first thing to note is that the findings of the research were presented at a conference, and as such have not yet been subject to the peer review that is the benchmark for publication in the most highly regarded medical journals. In other words, these are preliminary results.

Another important point is that the treatment is only relevant to women with HER2 positive breast cancer, about 25% of women diagnosed. HER2 positive breast cancer is more aggressive than HER2 negative breast cancer with a higher likelihood of recurrence.

So, while the reports were talking about the treatment resulting in 11% of women having their tumours disappear and another 17% who were left with only residual disease, this amounts to 2.75% and 4.25% respectively of all women diagnosed with early breast cancer. If this trial drug combination translates to a viable pre-surgical treatment and the figures are comparable, in the New Zealand context that amounts to 82 women and 127 women respectively, out of 3000 women a year who are diagnosed.

While overall the numbers are low compared with the total number diagnosed, this is not to be sneezed at. Even if all the combination treatment does is prevent these women from having to go through chemotherapy that is still a considerable benefit. As we all know, chemotherapy has significant side-effects and it is a bonus if a pre-surgical treatment can limit the number of women having to have this treatment.

However, this study was a very preliminary one. The follow-up was not long, and did not look at disease-free survival, a benchmark for measuring the benefits of any cancer treatment. There also seems to be nothing in the reports thus far that looks at safety and side-effects, although with such short treatment times (between diagnosis and surgery) these may well be negligible. However, the long-term effects of giving both drugs at once would need to be properly assessed.

Perhaps the last word should go to the lead researchers of the study, who despite their obvious excitement about the potential for the combined drug treatment, said in a statement made at the conference:

"We wish to emphasise that our research has shown this treatment to be suitable for a group of women with a particular type of breast cancer. We have no evidence that it would be effective for anything other than patients with newly-diagnosed, HER2 positive breast tumours. In addition, we do not yet know what effect the treatment will have on long-term survival. While we do not wish to downplay the significance of the findings, we also urge caution in their interpretation. Further trials will be needed before we can confirm these results, even in HER2 positive patients."

Sources:

BBC News: Tumours shrunk 'dramatically' in 11 days, 10 March 2016.
Cancer Research UK: 'Unprecedented' breast cancer trial results explained, 11 March 2016.
European Cancer Organisation: EBCC10 NEWS: Statement on EPHOS-B (lapatinib/trastuzumab combination) trial, 11 March 2016.

* also known as Tykerb

Protein Without Meat

By Sue Claridge

How to get enough protein from plant foods

Complete Protein Sources

	Serve size (gm)	protein/ serve (gm)	Amino Acid Score	Notes
Pumpkin seeds	64	12	136	
Avocados	150	3	129	
Wheatgerm	115	27	123	
Spinach	30	1	119	
Chia seeds	28	4	115	
Pistachio	123	25	109	
Amaranth	193	26	108	
Tofu	126	20	107	
Chestnuts	143	5	107	
Chickpeas	164	15	106	
Quinoa	170	24	106	
Kidney beans	177	15	103	
Spirulina	112	64	103	
Cashew nuts	28	5	100	

Incomplete Protein Sources

LEGUMES				
Pinto beans	171	15	89	1, 4
Lima beans	178	38	95	1
Broadbeans (Fava)	150	39	84	1, 4
Peas	145	8	84	1, 4
Lentils	198	18	86	1, 2, 4
Peanuts*	146	38	70	3
SOY				
Natto	175	31	97	4
Edamame	118	12	90	3
Tempeh*	166	31	79	4
NUTS AND SEEDS				
Flaxseed	168	31	92	3
Cocoa	86	17	90	3
Sun flower seeds	46	10	88	3
Coconut, desiccated	28	2	87	3
Pine nuts*	135	18	77	3
Brazil nuts*	133	19	67	3
Sesame seeds*	150	31	62	3
Pecan*	109	10	61	3
Walnuts*	125	30	58	3
Almonds*	145	32	55	3, 4
GRAINS				
Buckwheat	170	23	99	3
Corn/maize	154	5	83	3
Oats	156	26	81	3
Barley (hulled)	184	23	77	3
Brown Rice (long grain)*	185	15	75	3
White Rice (long grain)*	185	13	71	3
OTHER				
Kale	67	2	92	1
Green beans	110	2	88	1, 4
Brown mushrooms†	20	1	86	2, 4

* included because good source of protein by weight although has a poorer amino acid profile
† Brown mushrooms are a good source of lysine to complement foods lacking lysine
1: combine with Brazil nuts, sesame seeds, chestnuts to improve amino acid score
2: good source of lysine
3: poor source of lysine
4: poor source of methionine+cystine

There is quite a bit of long-term evidence that greater reliance on plant foods, and lower consumption of meat, is good for our health as well as that of our precious planet (the production of plant foods takes less room and significantly fewer resources, such as water, than does the production of meat). Numerous studies have found a reduced incidence of cancer among vegetarians or those who predominantly eat plant foods, and, of course, there is regular research which demonstrates a raised risk for red and processed meat eaters.

While some of the research is contradictory, and the risk posed by eating meat depends in part on how the meat is raised and what it is fed (e.g. grain-fed versus grass-fed beef and lamb), there is strong evidence advocating that those with cancer, or those wanting to significantly lower their risk of cancer, switching to a vegetarian or predominantly plant-based diet.

One of the biggest issues with this is getting enough of the right sort of protein. Protein is an essential building block for body tissues and repair, and requirements for protein during periods of growth, illness and recovery from injury are significant (see Heather Moore's Food for Thought column, page 10 in this edition). There are 20 amino acids that combine to form proteins, and the human body can make eleven of them. The other nine must be obtained – in the correct proportions – from the food we eat.

Most fruit and vegetables are low in protein, and very few offer complete protein in the way that meat does. Being a healthy vegetarian or vegan is not just a matter of removing meat or all animal products from your diet. It takes some work and careful consideration of your protein requirements: how to combine plant foods, to ensure that you get enough of the right balance of protein.

A plant that provides complete protein is one that contains all the essential amino acids (tryptophan, threonine, isoleucine, leucine, lysine, methionine, cystine, phenylalanine, tyrosine, valine, histidine) in the right proportions. An excellent website for checking the nutritional value of a wide range of foods is www.nutritiondata.self.com, where you can search for both whole and processed foods to obtain nutritional information, including protein content. On this website an amino acid score of 100 or higher indicates complete or high quality protein. For example, as healthy as broccoli is, it has a

Chickpeas, cashews, kidney beans and quinoa all supply complete protein.

score of 72 and only 2 grams of protein per 71 gram serve. Chickpeas, on the other hand, have 15 grams of protein per 164 gram serve and a score of 106. A bonus is that many plant foods that are high in protein are also high in dietary fibre (12 grams in that serve of chickpeas!).

In the table below there are essentially three categories of high protein foods: complete proteins with an amino acid score of 100 or more; incomplete proteins but still a high score (80 to 99); and those substantially lacking in some important amino acids foods but with a high proportion of protein, weight for weight, such as most of the nuts. Those in the last category are predominantly lacking in lysine, an essential amino acid that is primarily found in animal products.

Ovo-lacto vegetarians (those who eat eggs and dairy products) can get their lysine from non-meat animal products. If you want to avoid animal products altogether, lentils are a very good plant source of lysine. Brown (Italian or Crimini) mushrooms are higher in lysine than other plant foods, but this doesn't apply to other types of mushrooms.

There is a reason that traditional vegetarian diets involve a lot of beans and rice: they are complementary with most beans being higher in lysine and low in methionine, while rice is low in lysine and high in methionine.

Please note that this table is not exhaustive, and there are plant-foods that, while they may be low in protein overall, or provide far from complete protein, may "fill in the gaps" in your essential amino acid intake. For example, watercress is high in lysine, although it is low in protein overall and has a low amino acid score. The table also only includes traditional soy products, and not the modern western, highly-processed forms of soy protein (see So, Soy? page 3 this edition)

If you are serious about plant-based nutrition, and want to ensure that you eat enough of the right sorts of protein, you should do more research; find some good books in your local library or check out the internet. There are many useful websites devoted to plant-based nutrition.

One of the best places to start is www.pcrm.org/health, the health and nutrition section of the website of the Physicians Committee for Responsible Medicine, with lots of info and recipes.

Vegetarian Populations Show Genetic Changes

Researchers at Cornell University in the US have found evidence that a vegetarian diet has led to a genetic mutation that may increase people's risk of heart disease and cancer.

Populations who have had a primarily vegetarian diet for generations were found to be far more likely to carry DNA which makes them susceptible to inflammation, and inflammation is one of the processes that leads to an increased risk for both diseases.

The Cornell researchers believe that the mutation occurred to make it easier for vegetarians to absorb essential fatty acids from plants, but it has the effect of boosting the production of arachidonic acid, which is known to increase inflammatory disease and cancer. When coupled with a diet high in vegetable oils – such as sunflower oil – the mutated gene quickly turns fatty acids into dangerous arachidonic acid.

The study results may help explain one of the many diet and cancer contradictions: that vegetarian populations are nearly 40% more likely to suffer colorectal cancer than meat eaters, which is in direct contrast to the results of other research that show that eating red meat raises the risk.

The study compared hundreds of genomes from a primarily vegetarian population in Pune, India to traditional meat-eating people in Kansas and found there was a significant genetic difference.

"Those whose ancestry derives from vegetarians are more likely to carry genetics that more rapidly metabolise plant fatty acids," said Tom Brenna, Professor of Human Nutrition at Cornell.

"In such individuals, vegetable oils will be converted to the more pro-inflammatory arachidonic acid, increasing the risk for chronic inflammation that is implicated in the development of heart disease, and exacerbates cancer.

"The mutation appeared in the human genome long ago, and has been passed down through the human family."

To make the problem worse, the mutation also hinders the production of beneficial Omega 3 fatty acid which is protective against heart disease. With our increased use of vegetable oils such as sunflower and canola there has been a shift away from consumption of Omega 3s to Omega 6s.

Of importance to vegetarian readers, or those considering changing to a plant-based diet, are the following points:

- This study was undertaken in populations in which there were generations of vegetarians and the genetic mutation developed over time. There is nothing in this study that suggests that recent converts to vegetarianism are affected.
- It is important for everyone to have a greater intake of Omega 3 fatty acids than Omega 6s. The simplest way of achieving this is to increase intake of fruit oils, such as olive oil and avocado oil, as well as nuts and oily fish, such as salmon.

Sources:

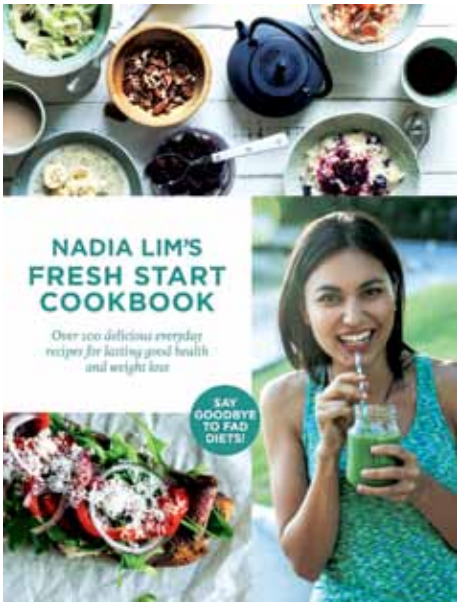
Researchgate: Human genome shaped by vegetarian diet increases risk of cancer and heart disease, 29 March 2016 at www.researchgate.net/blog

Kumar SD: *Molecular Biology and Evolution*, Advance Access March 29, 2016.

food for thought By Heather Moore

PROTEIN - how much should I be eating?

Protein is a vital component of our bodies. It functions as enzymes, hormones, structural tissue and transport molecules, all of which make life possible. Proteins wear out on a regular basis and must be replaced; this is accomplished by consuming foods that contain protein. When digested, these proteins give us a new supply of amino acid building blocks to use in making protein replacements for those that wear out.



Nadia Lim's Fresh Start Cookbook

Indications of protein depletion are lack of energy, easy tiredness, impaired memory and cognitive function, impaired muscle function, poor immune function, and fat weight gain despite dieting. It is interesting to note that all of these symptoms correspond with those that might be part of living with an inflammatory disease like cancer, or recovery from surgery or chemotherapy. In each case, the body's demand for protein to heal is extremely high.

The amino acids that are needed for making our tissue proteins are provided by the food we eat. They are called essential amino acids because our bodies cannot make them. Food proteins of the highest quality are those that provide, upon digestion, the right kinds and amounts of amino acids needed to efficiently synthesise our new tissue proteins. The best protein to do this job is the flesh of animals. These proteins can be used efficiently and are called "high quality". While so-called "lower quality" plant proteins may be lacking in one or more of the essential amino acids, as a group they do contain all of them. Through enormously complex metabolic systems, the human body can derive all the essential amino acids from the variety of plant proteins that we encounter each day. In fact, with long-term survival in mind, eating predominately "low quality" plant proteins may well be in our best interest.

People who choose to eat a plant-based diet will often ask "Where do I get my protein?" as if plants don't have protein. So when my friend, who has metastatic breast cancer, asked me last week how much protein she should be eating, I knew immediately that she meant how much animal protein? It would be easy to calculate her requirement using the method at the end of this article but as always the answer depends on so many variables. The most important variable is whether she is eating a large quantity of vegetables. All vegetables contain usable amino acids. Other variables include whether she has just had surgery and whether she is still detoxing pharmaceutical treatment drugs. The answer would also depend on whether she has a gastrointestinal tract that functions well, producing enough stomach acid and enzymes to break down food into useable amino acids.

Nadia Lim's Fresh Start Cookbook, which you'll find at your library or bookshop, is a good start point for a well-researched eating plan of plant-based recipes that also include animal protein. It is well worth consulting this book if you want a good baseline of information for healthy eating. As a cautionary note, I'd also suggest reading chapters 2 ,3 and 4 from a book called *The China Study*, by Colin Campbell. These chapters discuss significant research that shows that casein in milk is a cancer promoter, and that the level of animal protein we eat in the West causes cancer to progress far more rapidly than with very low levels of animal protein. The safest form of protein in terms of cancer progression, in these rat studies, is plant protein.

With so many variables, how is it possible to know that you're getting enough protein from your diet to heal your body? If, during periods of high demand for protein, such as stress, surgery and inflammatory illness, food intake is insufficient to supply the necessary amino acids then the body will break down muscle. Anthropometric assessment, to determine body composition of lean muscle to fat, is one way of assessing whether the body in question has had an amino acid supply sufficient for its requirements. All dieticians and nutritionists learn to do this at university, but sadly it is little used. It would be well worth enquiring about so that you at least have baseline knowledge of your lean muscle to fat ratio. There are also rather expensive scales which measure lean muscle:fat ratio. One brand, Tanita BC587, is available online for $199. Without this knowledge, it is difficult to know just how much protein would be ideal for each meal and whether a protein powder supplement would be advisable.

So, in summary, a safe way to proceed would be to ensure that the bulk of your protein is from plant foods and to include a small, measured quantity of animal protein (if this suits your body type) at each meal.

Heather Moore is a retired nutritionist, naturopath and medical herbalist.

Calculating Protein Requirements

Protein requirement (g/day)
= Ideal Weight (IW) kg x 0.9 x Exercise Factor (EF)

- EF 1.1 - little/no exercise
- EF 1.3 - moderate exercise
- EF 1.5 - heavy/intense exercise

Convert to requirement per meal - divide by 3 (g/meal)
Convert to food portion - divide by % protein of specific food
eg. 62 kg woman, aerobics 3x week = EF 1.2

Protein requirement 62 x 0.9 x 1.2 = 67 g/day = 22g/meal

- Meat portion = 22 g protein / 0.30 = 73 g
- Poultry portion = 22 g protein / 0.23 = 96 g
- Seafood portion = 22 g protein / 0.18 = 122 g
- Tofu portion = 22 g protein / 0.08 = 275 g
- Nuts portion = 22 g protein / 0.26 = 85 g

Roslyne Peters, retired Practice Leader for Breast Screening at the Rununga of Ngati Whatua.

Tautoko with Māori Women with Breast Cancer

"Your results are positive, you have Breast Cancer"

I have heard these words spoken to several *wahine*/women whose side I sit by in *tautoko*/support of their journey. Once the word "cancer" is said, the wahine I sit next to shuts down, which is when I have to listen for both of us so that what has been said we can *kārero*/talk about later on the drive home.

My main role at the Rununga of Ngati Whatua was to promote Breast Screening awareness to Māori. Transport was also part of my *mahi*/work, including transport to mammography appointments and, when needed, to all aspects of treatment. We had not foreseen what a huge part of the mahi would be taken up by transportation, as the need for transport was just one aspect of a wahine's needs. We also found that *karakia*/prayer, *waiata*/song, aroha/love, *tika*/truthfulness and *pono*/honesty were needed to help strengthen us all on our journey. These things we have in us as they are part of who we are.

Not all wahine needed all of these, but every single one of them needed aspects of this cultural support. I have to say here that, although it was not my strongest skill, I did enjoy the waiata; at times our waiata kept fear at bay and at others it was singing just for the sake of singing on our journey home.

Finding a lump is a devastating happening for any woman, as they immediately respond negatively.

For many Māori they see the *urupā*/graveyard and death and the gaps this will leave: "who is going to look after my tamariki/children"; "who is going to cook for my *whanau*/family"; "my *moko*/grandchildren will grow without me"; "no more days at the beach"; "no more days in the sun"; "I will become a burden to my whanau".
SURVIVAL IS NOT IN THEIR MINDS!

It is not surprising that the number of Māori *wahine* who have mammograms is low.

Many of us prefer not to know; you will hear us say "what we don't know can't hurt us". It needs to be remembered that many of us grew up watching our elders die with what we now know were cancer-driven diseases, so we are wary and already half-way sure that we, too, will go this way; in pain and not recognisable to those that love us.

What now needs to be acknowledged and brought to the fore is the survival rate of women who are proactive about screening and treatment. In the nine years that I worked with the BSA Programme not one of the women we gave tautoko passed and all are still enjoying life and have a positive future.

Giving the women the power of control and the standard of care and understanding from those that tautoko them in their journey, such as doctors, nurses, whanau and friends, and modern day medicine, together with an unseen force for survival within the wahine, increases their ability to beat breast cancer.

I thank the wahine who allowed me to join them in their journeys through the world of breast cancer, as we shared the fear, pain, tears and much laughter, which always showed the joy of life.

We all need to encourage wahine to have regular mammograms as the belief that "what we don't know won't hurt us", means that they may leave us sooner than they should, and everyone loses when that happens.

These women are our grandmothers, mothers, sisters, aunties, nieces and granddaughters; they are our future as well as our past.

Tenā Koutou
Tenā Koutou
Tenā Koutou Katoa
Roslyne Peters

Oncoplastic Breast Surgery – Part 2

By Louise Bobbitt – Clinical Nurse Specialist Breast Reconstruction, BCN Committee member

Last year, I was funded by the Professional Development Fund at Waitemata District Health Board (WDHB) to attend the Oncoplastic and Reconstructive Breast Surgery (ORBS) meeting in Nottingham England. ORBS was established seven years ago to provide a scientific platform for the advancement and sharing of knowledge in oncoplastic and reconstructive breast surgery.

In the last edition of *Upfront U Kaiora* I introduced this relatively new discipline and approach to breast cancer treatment. In this edition I present some of the highlights of the conference where the presentations focused specifically on oncoplastic breast conserving surgery.

Long term oncological outcomes for oncoplastic surgery have not been widely published, as the techniques are still new and developing over time as the surgeons become more skilled. The individual nature of breast cancer and patient population mean that there have been no randomised controlled studies or case controlled studies.

ONCOPLASTIC TECHNIQUES HAVE SIMILAR OUTCOMES

Krishna Clough, a surgical oncologist and a plastic surgeon specialising in breast surgery, presented the findings of a study that he has recently completed on women who have undergone level 2 oncoplastic surgery. Level 2 techniques allow for 20 to 50% of the breast volume to be excised and can result in major loss of volume, and skin excisions are usually required. Breast conserving surgery is suitable for large ill-defined tumours, such as extensive DCIS (ductal carcinoma in situ) and invasive lobular cancers. In Krishna's study he looked at 316 cases; of these 11.9% had an involved margin after resection. Excluding patients who went on to have a mastectomy the local regional recurrence (LRR) rate at 50 months was 1.9%. This is the same as for small cancers with a simple mastectomy. For DCIS patients the LRR in the treated breast was 2.4%, metastatic recurrence was 1.5%. Survival at 50 months was 98.5%. This compares favourably with small DCIS. All these patients had radiotherapy following surgery. Of the 176 patients followed up at 50 months for invasive cancer, 1.6% had local recurrence. Survival at 50 months was 93.4%. Krishna concluded that long term oncological outcomes allowed for wider excisions of larger cancers with a lower local recurrence rate and few complications or delays in treatment.

Mario Rietjens started oncoplastic breast surgery in Milan in 1994 and his latest research, published in *Breast Cancer Research*, looked at outcomes for almost 500 patients from 2000 to 2008. It compared the outcomes of these patients with the outcomes of twice the number of women who had a wide local excision (partial mastectomy) and no oncoplastic surgery. Data was matched, including the size and type of tumour. There was a small increase in the number of local recurrences in the women who had an oncoplastic procedure. Following discussion with the radiation oncologist, it was concluded that oncoplastic surgery made it more challenging to radiologically define the exact site of the cancer, making a radiotherapy boost to the area difficult. As a result of this finding, women have the site marked with small clips visible on x-ray that allow better targeted radiotherapy.

The disease-free survival was not significantly different between the two groups and there was no difference in regional or distant metastases. Mario concluded that oncoplastic breast surgery techniques were oncologically safe, produced better cosmetic results and allowed for larger tumour margins.

Douglas Macmillan, a specialist consultant oncoplastic breast surgeon presented findings from data he has collected as part of his research at Nottingham. He presented evidence that the majority of women opted for bilateral surgery in which the healthy breast was reduced to match breast size and ensure symmetry. In his study, 400 women with invasive cancer had bilateral surgery and 76 had surgery to one breast only. Of women who were followed up for five years, the local recurrence rate was 2.3%, and at ten years it was 3.5%. Of these women the occurrence of a breast cancer in the other breast was 0.05%. This is a low number and it is thought likely that reducing the size of the other breast reduced the risk of breast cancer. There is some data that suggests breast reduction reduces the risk of breast cancer proportional to the amount of tissue removed.

BETTER COSMETIC RESULTS, GREATER PATIENT SATISFACTION

Mike Dixon, Professor of Breast Surgery, outlined the approach to breast conservation that he uses in Edinburgh. Mike presented data identifying a correlation between cosmetic result and anxiety and depression, body image, sexuality, and self-esteem. When taking greater than 10% of the breast tissue, cosmetic results are not as good. The best cosmetic results are in small cancers with a narrow excision. Most of these women do not require oncoplastic procedures. Where women meet certain criteria, such as a small to moderate size breast, or small cancer where the volume to be excised is greater than 10% or in a visible part of the breast, he can do a wide excision with immediate lipofilling. Lipofilling or liposuction and fat grafting puts fat into the breast for good cosmetic results. Controversially, he challenged the case for other volume replacement techniques by discussing how lipofilling is easier, has fewer complications and is more flexible. It can be easily repeated if margins are involved. He only had small numbers to present however in terms of

patient satisfaction with satisfaction at 42% with lipofilling versus 20% with standard breast conservation techniques.

BREAST CONSERVATION IN THE ELDERLY

Stephen McCulley, Consultant Plastic Surgeon at Nottingham, spoke about surgery in the elderly. He said there were a number of myths about cancer in the elderly, including that:

- most older patients don't want surgery;
- complications are higher;
- older patients don't tolerate surgery;
- outcomes are poorer; and that
- older patients are not concerned about cosmetic outcomes.

These perceptions are not backed up by the evidence, which shows that elderly patients tolerate surgery really well, and that low percentages are medically frail in the 70 to 80 age range. In addition, their patient reported outcome measures are higher than average and they have only a slightly higher rate of venous thrombosis.

Stephen highlighted that breast conservation techniques in the elderly are a good alternative to mastectomy. BCS is quicker and provides easier and shorter recovery than mastectomy. Therapeutic mammoplasty is the mainstay of BCS in the elderly, and is a good primary procedure with low re-excision rates and few complications. From his experience, what the elderly patients like and want is the feeling of the breast in the bra and the look. They are not so concerned with nipple reconstruction or the look unclothed. He concluded that, done properly and carefully, elderly patients do very well with BCS and outcomes in those that want it are similar to younger patients and they are at least as happy "…indeed probably more so".

Gotta Get More Ds!

Vitamin D deficiency has been found to increase the rate of breast tumour growth and spread throughout the body.

In the last edition of *Upfront U Kaiora*, our feature article was on the role of vitamin D in the prevention of breast cancer. Once thought to be primarily concerned with bone health, research over the last two decades has found that vitamin D has a complex role in the body that involves the immunes system, and significantly, potentially a huge role in both the prevention of a number of cancers as well as how well people do after a cancer diagnosis.

The latest research, from the Stanford University School of Medicine, found a direct link between circulating vitamin D levels and the expression of a gene called ID1, known to be associated with tumour growth and breast cancer metastasis.

The study found that breast tumours in laboratory mice deficient in vitamin D grow faster and are more likely to metastasise than those in mice with adequate levels of vitamin D.

Although the research was conducted primarily in mice and on mouse cells, the researchers also found in a study of 34 breast cancer patients that levels of circulating vitamin D were inversely correlated with the expression levels of ID1 protein in their tumours, and they confirmed that a vitamin D metabolite directly controls the expression of the ID1 gene in a human breast cancer cell line.

"Although much more research needs to be done, research from our lab and others suggests that people at risk for breast cancer should know their vitamin D levels and take steps to correct any deficiencies," said Dr Brian Feldman.

In the study, one group of ten mice was first fed a diet lacking in vitamin D for ten weeks; the other ten received a normal dose in their food. Breast cancer cells were then implanted into the mammary fat pad of the mice. The mice with a diet deficient in vitamin D developed palpable tumours an average of seven days sooner than their peers, and after six weeks of growth those tumours were significantly larger in size than those in animals with adequate vitamin D levels.

The researchers also found that types of breast cancer cells

which express significantly lower levels of the vitamin D receptor protein, when injected into mice grew aggressively, and metastasised to the liver during the course of four weeks.

The researchers found that in cases in which vitamin D was lacking from the diet, tumour cells expressed more of a gene called ID1, which has been shown to play a role in breast cancer metastasis.

Finally, the researchers compared circulating vitamin D levels in 34 breast cancer patients at Stanford with the levels of ID1 in tumour cells that were surgically removed during the course of disease treatment. They found an inverse correlation: women with lower levels of vitamin D expressed more ID1 in their tumour tissues than did women with higher levels of vitamin D.

"Our study shows that a deficiency in vitamin D levels, or an inability of tumour cells to respond appropriately to the presence of vitamin D, is sufficient to trigger non-metastatic cancer cells to become metastatic," said Dr Feldman. "It's enough to significantly accelerate tumour progression in our mouse model. Further studies are warranted, but this direct association between vitamin D levels and ID1 expression is very interesting to us."

Source:

Stanford Medicine News Center: Vitamin D deficiency contributes to spread of breast cancer in mice, Press Release, 2 March 2016.
Williams JD: *Endocrinology*, 2016 Mar 2: en20152036. (Epub ahead of print)

From the **Commitee**

With the AGM rapidly approaching, it is the time of year when BCN reviews all its activities to ensure the best service is being provided to its members, and all those people who support BCN with both time and money. The committee is taking an opportunity to reflect on what has been achieved since 1993, and then consider what could be achieved in the next 23 years, and finally creating a strategic plan for the next couple of years. We value your input so feel free to email Anna at admin@bcn.org.nz with any ideas.

We want to say a big thank you to those who volunteer their time for BCN. Without this valuable input BCN would not have achieved what it has over the last 23 years. Recently two members have left our committee owing to changing life circumstances. We have been incredibly blessed to have Robyn Kingdon-Mason and Karen Gow-Campbell commit their time and expertise to the team and they will be missed. Thank you Robyn and Karen for all you have contributed.

This does mean there is an opportunity for other members to join the committee, and we welcome anyone volunteering. There are vacancies for several new members, including one for the role of Treasurer. Contact Anna for more details.

Four of our current committee members with speaker, Dr Gerald Lewis, at the 2015 BCN AGM.

Finally, another exciting development for BCN – our website is being revamped and will hopefully be going live soon. So watch this space! BCN will send out an email when it happens.

Best wishes

Julianne and the committee

Breast Cancer Network
ANNUAL GENERAL MEETING
MONDAY, 9th MAY 2016
6.30 pm for a 7pm start

Auckland Cancer Society Domain Lodge, 1 Boyle Crescent (off Park Road), Grafton (parking available)

Guest speaker: Kaytee Boyd
SURVIVING LONGTERM 101

Kaytee has been involved in the Health and Wellness industry for 19 years, working as a Nutrition Specialist, a Sports & Biomedical Nutritionist, a trainer/strength conditioner as well as a CHEK Holistic Lifestyle Coach. She is also a committee member of Breast Cancer Network. Kaytee shares her knowledge on some of the key factors in supporting quality longevity, no matter the diagnosis.

These include: • understanding genes & epigenetics • useful diagnostic tests • detoxification – the importance & the action • stress – why it matters • exercise – how much do we need? • diet – a perfect day post chemo as well as the often asked question – how much sugar can I have?

With outstanding testimonials from clients, Kaytee is upbeat, warm and compassionate, with a genuine empathy for helping people gain optimal health.

All welcome A light supper will be served.

Enquiries to Breast Cancer Network: phone 021 278 1160 (Anna Southern, Administrator) or 09 413 7457 Julianne (Chairperson) or email: admin@bcn.org.nz. Gold coin koha.

Thank you, Intimo!

Breast Cancer Network wish to thank Intimo Lingerie (Australia) for their generous donation from last year's breast cancer awareness campaign. Established in 1995, Intimo Lingerie is one of Australia's largest direct selling, party plan brands of lingerie and loungewear. They believe that their customers deserve nothing less than the best, and design and manufacture quality product with this philosophy.

Intimo passionately support women. Their mission is "Together we are inspiring women to make a difference. Everyday. Always."

Look out for Intimo Lingerie at your local retailers or go online for their latest collection www.intimo.com.au

supporter members

Breast Cancer Network (NZ) Inc is offering companies and like minded groups 'Supporter Membership'. This is an annual commitment of $250.00 plus GST for companies who believe in the objectives of Breast Cancer Network. For your investment we will advertise you as a supporter of the Breast Cancer Network in *Upfront U Kaiora*, under our supporter section, and also we will display your logo on our website www.bcn.org.nz with a link to your own website. We will allow you the use of our logo and link to promote the relationship established between both parties. We will also acknowledge all Supporter Members at our Annual General Meeting, and ask that our members to support you in turn. Breast Cancer Network (NZ) Inc is a registered charity. For further information contact our office or visit our website www.bcn.org.nz

Breast Care Products (NZ) Ltd (formerly Anita Breast Care)

Living Nature **The Breast Centre** **Naturalwear** **The Julie Lamb Band**

breast events to come

• **18 April – Breast Cancer Support (BCS) Annual General Meeting:** 7pm Auckland Cancer Society, 1 Boyle Cres, Grafton, Auckland. All welcome. Featuring guest author Karen McMillan speaking about her book Unbreakable Spirit: Facing the Challenge of Cancer, an inspirational collection of real life stories including Karen's breast cancer journey. Phone 0800 273 222 for more information.

• **30 April – 1 May – Waikato Breast Cancer Trust is the chosen charity** for The Great NZ Food Show at Mystery Creek. Come along and sample some fantastic flavours and support our cause. Contact Fiona Johnson@waikatodhb.health.nz for more information.

• **9 May – Breast Cancer Network AGM:** 6:30 pm at the Auckland Cancer Society Domain Lodge, 1 Boyle Crescent (off Park Road), Grafton. Guest Speaker is Kaytee Boyd. All welcome, parking available. A light supper will be served. Gold coin koha. Enquiries to Breast Cancer Network: phone 021 278 1160 or 09 413 7457 or email: admin@bcn.org.nz.

Breast Cancer Support (BCS) Young Women's Group meets on the fourth Monday of the month, 7pm-9pm, at Domain Lodge, 1 Boyle Crescent, Grafton, Auckland. For more information please call BCS on 0800 273 222.

Breast Cancer Network would really like to help you publicise your event. The deadline for Breast Events for every edition of *Upfront U Kaiora* is now the 10th of the month before publication (*Upfront U Kaiora* is published in February, April, June, August, October and December each year). If you would like to be reminded prior to each issue of publication date, so that you can ensure your event gets in to Breast Events, please send the email address of the person who should receive the reminder to Sue at sclaridge_bcn@clear.net.nz.

VISIT THESE SITES FOR MORE BREAST INFO! **www.bcn.org.nz** **www.breast.co.nz**

TO JOIN BCN

To support the work of BCN and receive a regular copy of **UPFRONT U KAIORA** send your name and address to:
Breast Cancer Network NZ, C/- 1/42 Pokapu Street, Green Bay, Auckland 0600.

☐ **Membership $40** ☐ **Institutional $100** **(Subscriptions include GST)**

Name: Miss/Mr/Mrs/Ms/Dr

Address:

City: Postcode

Phone: Home (0) Email

Amount enclosed: membership $ **donation $**

☐ My payment has been credited to account **12-3030-0008584-00** (Please use SUB and your SURNAME as reference and mail this form to us)

A/c name: Breast Cancer Network NZ Incorporated, ASB, Remuera Branch.

☐ I prefer to receive *Upfront U Kaiora* (in colour) by email ☐ I prefer to receive *Upfront U Kaiora* (black and white) by post

☐ Please tick here if you have experienced breast cancer. ☐ I am interested in helping with BCN activities

☐ I agree to BCN (NZ) contacting me by email with news, information and updates

Age Group (Optional - Please circle applicable group) (Under 45) (45 – 49) (50 to 69) (Over 69)

Breast Cancer Network (NZ) Inc., C/- 1/42 Pokapu Street, Green Bay, Auckland 0600. **Phone:** 021 278 1160 (Anna Southern, Administrator) or 09 413 7457 Julianne (Chairperson). **Email:** admin@bcn.org.nz **Web:** www.bcn.org.nz

clean, green and healthy

Vegetable Burgers with Thai Cream

This vegetable burger recipe, a favourite of BCN Chairwoman, Julianne O'Brien and her girls, uses two ingredients that offer complete plant protein: chickpeas and cashew nuts. Lentils are also a good source of protein. The approximate protein content in grams is provided in brackets after the ingredient. Each burger made with a patty and a slice of eggplant contains about 10 grams of protein and each tablespoon of Thai cream about 1.5 grams of protein. A meal consisting of two burgers would contain about 23 grams of protein.

INGREDIENTS for Thai Cream

- **¾ cup raw cashew nuts (15 gm)**
- **½ clove garlic crushed**
- **½ cup water**
- **juice of ½ lemon**
- **pinch ground cumin**
- **2 tbsp fresh coriander finely sliced.**

INGREDIENTS - Makes 6 servings

- **1 cup lentils (50 gm)**
- **¾ cup filtered water**
- **2 cups cooked chickpeas lightly mashed (30 gm)**
- **1 tbsp fresh ginger peeled and grated**
- **1 large egg lightly beaten (6 gm)**
- **1 tbsp olive oil**
- **1 red onion finely diced (1 gm)**
- **salt & ground black pepper**
- **1 tbsp yellow curry powder**
- **½ tsp ground cumin**
- **¼ cup ground almond (8 gm) or gluten free breadcrumbs**
- **¼ cup fresh parsley finely chopped**
- **¼ cup fresh coriander finely chopped**
- **coat in LSA or gluten free breadcrumbs**
- **1 eggplant sliced into rounds (6 gm)**
- **olive oil for frying**

METHOD

1. Rinse lentils and place in saucepan with water. Bring to the boil to wash the lentils. Simmer the lentils until tender and then drain and rinse again.
2. Combine in large bowl the cooked lentils, chickpeas, ginger and egg.
3. Heat olive oil in a large frypan and sauté onions until soft. Season with salt, pepper, curry powder and cumin.
4. Combine the onions with lentil mixture and add ground almond or bread crumbs. Mix well.
5. Add parsley, coriander.
6. Divide the mixture into 10 portions and make patties. Put the extra coating in a bowl and place patty on each side in bowel to cover.
7. Heat the oil in frypan and cook each burger until golden brown on each side. If you wish freeze extra patties in natural brown wax paper layered in freezer.
8. Lightly salt eggplant slices and cook on either side in pan until soft.
9. Place burgers and eggplant on paper towels to drain. Layer eggplant then burger and top with Thai cream and sprouts.

METHOD for Thai Cream

1. Combine cashews, garlic in a food processor until well ground
2. Add the water, lemon juice, salt, cumin until the mixture is smooth and creamy
3. Fold in coriander and serve with burger.

The Julie Lamb Band

By Sue Claridge

Julie Lamb has a day job, but music is her passion and BCN benefits from her passion in hard currency!

Julie's mother, Darien Kerkin, was a long-time member of BCN, served as the BCN treasurer for some years and also told her story at BCN's first National conference in 2007. Sadly, Darien lost her battle with breast cancer in January 2008.

Darien was very supportive of Julie's music – which went a long way to helping Julie release her first album in 2008. This was Most and Least, with the by line "My mother made me do it". Darien never heard the finished product, but Julie decided to donate a percentage of the proceeds, particularly those from the single 'Cry As You Must' – a song she wrote with Darien – to BCN. Eight years on and Julie is still supporting BCN and recently made a $1000 donation; a contribution that BCN is enormously appreciative of.

BCN was very important to Darien.

"She believed in what the Network stood for," Julie told me back in 2008. "She believed in the prevention work that BCN does."

So, Julie has helped to continue Darien's work and chosen to support BCN with regular donations from the proceeds of her album sales and live gigs. Since that inaugural album in 2008, Julie has done two more and a fourth is in the works and due for release later this year.

Her website – www.julielamb.co.nz – describes the charting, award winning band's music as 70s vibed indie art rock: earworm melodies over ornate arrangements. Based in Wellington, members in other parts of the country have little opportunity to hear Julie and her band live. By the time you are reading this, the band will have just performed in Auckland for the second time in two years (yay – I'm going and finally get to meet her face-to-face and hear her live). But the cyberworld makes it so much easier to access Julie's music than it once would have been.

Get online, go to her website and have a listen… especially her 2015 single, 'Why Do I Forget' – absolutely an earworm track and on my personal Spotify playlist. And if her music rocks your world, buy it! You'll not just be supporting a fabulous group of Kiwi musicians, but BCN in the process.