

## Chinese Medicine and Cancer

**Associate Professor Kylie O'Brien**, Director, Integrative Chinese Medicine Centre and Director of Education, National Institute of Integrative Medicine

**Professor Daniel Weber**, Consultant, NIIM Integrative Chinese Medicine Centre

National Institute of Integrative Medicine, 11-23 Burwood Rd, Hawthorn Victoria 3122

Developed over three thousand years ago, the medical system of Chinese medicine (CM) is underpinned by a philosophy of holism. In essence, that means that the human is interconnected with her/his environment. Within the body, this concept of holism is extended to explain how **the** body functions, how the various organ systems inter-relate, and the inter-relationship between the mind, emotions and the body.

There are some fundamental concepts in CM that underpin its practice. First, there is the Theory of Yin/Yang, two mutually dependent yet opposite forces called yin and yang, which are necessary for life. At a basic level these concepts are used to explain the functioning of the body; harmony and what happens when there is illness; disharmony. Put simply, when there is health, there is a balance of yin/yang and when there is illness, yin/yang are out of balance. The second basic concept is that of Qi. Qi is a subtle life force or energy that flows through the body via special pathways called meridians, as well as in the blood. Qi regulates, nourishes and sustains. When Qi is adequate, it protects the body against external pathogens, and ensures the normal physiological functioning of the body. When Qi is deficient, particularly over a prolonged period of time, chronic diseases such as cancer may occur.

Chinese medicine may be used to assist in the treatment of cancer, often as an adjunct to conventional medicine. The two main modalities are Chinese herbal medicine and acupuncture.

There are many Chinese herbs and their active constituents or 'isolates' which have been found, **through** scientific research, to have anti-cancer properties and address several of the pathological mechanisms or pathways that occur in cancer<sup>1</sup>. For example,  $\beta$ -elemene, an active constituent of Curcuma wenyujin Y. H. Chen et C. Ling (Chinese herb Wenyujin) is used as an anti-cancer drug in China<sup>2</sup>.  $\beta$ -elemene can effectively inhibit proliferation and induce apoptosis (programmed cell death)<sup>3</sup>. Gambogic acid, isolated from the resin of the Garcinia species including Garcinia hanburyi Hook.f. (Chinese herb Tenghuang) has anti-inflammatory, analgesic, anti-pyretic and anti-cancer activities and has been shown to be able to kill cells (it is cytotoxic) of a variety of malignant tumours including breast, lung and liver cancers and glioblastoma<sup>2</sup>. Laboratory research in cells and animals has demonstrated that some of the anti-cancer mechanisms of Chinese herbs include inducing apoptosis and differentiation, inhibiting cell growth, enhancing the immune system, inhibiting development of new blood vessels (angiogenesis) that occurs in cancer, inhibiting tumour metastasis and invasion, and reversing multi-drug resistance<sup>2-5</sup>. Other herbs have been found to reduce the toxicity associated with chemotherapy and is able to sensitise chemo-resistant cancer cells (to chemotherapy agents) and act synergistically with particular chemotherapy drugs<sup>2,4,6</sup>.

When Chinese herbs are prescribed (for any disease or condition), these are typically individualised to the patient according to what is known as the underlying 'pattern of disharmony'. In CM, a disease can have several patterns of disharmony, each of which is characterised by particular signs and symptoms, reflective of the underlying aetiology (root cause) and pathogenesis (or course) of the disease. Thus, someone diagnosed with breast cancer may have a different pattern of disharmony compared to another woman diagnosed with the same disease. Chinese herbs are

typically combined in a medicinal formula of anywhere between 2-12 herbs (sometimes more), and are not typically used on their own. Herbs may be in raw form (cooked up in a pot with water to form a 'decoction'), or in pill or powder or liquid form. The herbs chosen by the CM practitioner will address not only the disease, but also be tailored to the pattern of disharmony; this is truly individualised medicine. In this way, Chinese herbal medicine differs from western medicine and western herbalism. In the case of Chinese herbal medicine treatment of cancer, particular herbs are often included in a medicinal formula because of the anti-cancer properties that have been demonstrated through scientific research and not just based on traditional theory. Thus scientific knowledge is adding to traditional knowledge about herbs (based on hundreds of years of experiential evidence). Modern forms of Chinese herbal medicine also include the 'isolates' or 'active constituents' of particular herbs and are typically in tablet or capsule form.

Acupuncture works by stimulation of acupuncture points (acupoints), specific points along meridians. Meridians are special pathways that are both on the surface of the body and within the body through which the Qi circulates. In acupuncture, the certified CM practitioner inserts very fine, disposable acupuncture needles into acupuncture points that are chosen according to CM theories to address the pattern of disharmony; tonifying or regulating, nourishing and sustaining. Each acupoint (and there are more than 365 'acupoints' on the body if the ear system is included) has several specific therapeutic functions. Acupuncture has been proven to help with lymphedema<sup>7</sup> (fluid build-up after surgery), it can relieve the symptoms of dry mouth (known as xerostomia)<sup>8</sup> as well as relieving chemotherapy-induced nausea<sup>9</sup>. [Note that 'dry needling' is not the same as classical Chinese medical acupuncture. Ensure that your acupuncturist is Australian Health Practitioner Regulation Agency (AHPRA) certified].

Both Chinese herbal medicine and acupuncture can be used to treat many of the symptoms and signs that accompany cancer and the side effects of cancer treatment such as (but not limited to) cancer-related fatigue, digestive problems, sleep problems, depression and pain<sup>10</sup>. In China, Chinese herbal medicine is often used in conjunction with chemotherapy and radiation therapy, as well as after treatment<sup>11</sup>. This practise is not as common in western countries, and this is likely to be largely due to the unfamiliarity of western medicine practitioners and oncologists with Chinese medicine. As more western oncologists become familiar with CM, however, this is changing.

Research indicates that physical activity has been found to be not only beneficial in preventing cancer<sup>12, 13</sup>, but in reducing the risk of dying from cancer and all-causes<sup>14-17</sup>, and physical activity is advocated by major cancer organisations in Australia and the US, as well as other countries, for cancer sufferers<sup>18</sup>. Chinese medicine has its own forms of exercise that may be beneficial in those with cancer- these are Tai Chi and Qi Gong. They are both gentle forms of exercise, that promote flexibility/stretching and can help strengthen particularly the leg muscles. From the CM perspective, they promote the flow of Qi around the body, through a series of sequenced movements. Both have a meditative component to them, where those practising it focus on their breath as they perform the movements (most of which actually have an underlying martial arts application). Importantly exercises such as Tai Chi and Qi Gong can help with stress reduction.

It is important that cancer sufferers (and their families too if necessary, as they are often also under significant stress) consult a *registered* Chinese medicine practitioner. Chinese medicine is regulated nationally by the government, under AHPRA. The Chinese Medicine Registration Board of Australia has a Register of Chinese Herbal Medicine Practitioners and a Register of Acupuncturists that may be searched to check if a practitioner is registered. If Chinese herbal medicine is to be prescribed, this should be done by someone registered in the Division of Chinese Herbal Medicine. Not all registered acupuncturists are qualified in Chinese herbal medicine. The minimum standard of education in

Chinese medicine that is required by the Chinese Medicine Registration Board of Australia is a four-year Bachelor degree. In contrast, the practice of 'dry needling' is largely unregulated and the training is comparatively very short. Other registered healthcare practitioners who are practising acupuncture should have their licence endorsed to practice acupuncture under their own Registration Board- this can be checked by searching their name on the Register of Practitioners on the AHPRA website ([www.ahpra.gov.au](http://www.ahpra.gov.au)) and checking next to the word 'Endorsements' to see if acupuncture is listed there.

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