

My clinical experiences using propolis in the treatment of patients with advanced cancer

Osamu Mizukami, MD, PhD, DrPH
Health Promotion Clinic, Tokyo

Introduction

- ❑ I am a doctor of internal medicine from Japan.
- ❑ I have my clinic located at the center of Tokyo.
- ❑ Ninety percent of my patients have all sites of cancer, and most of them are advanced cancer patients.
- ❑ My clinic is a complementary clinic.
- ❑ My standpoint is that choice of merits from conventional and complementary medicine would be beneficial for most patients.
- ❑ The purpose of my clinic is that difficult patients can have their own hopes. I support them as much as possible.

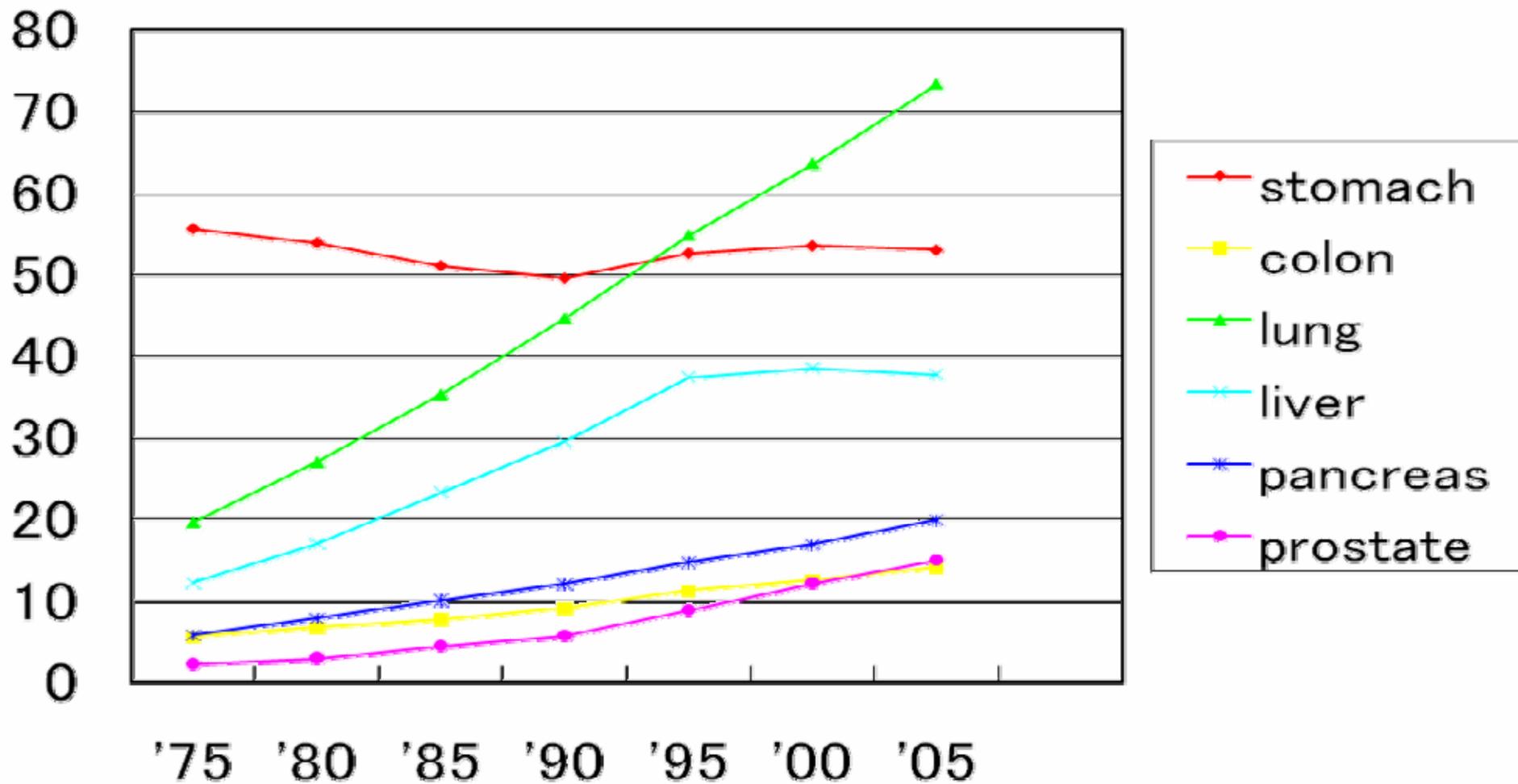
Introduction (cont.)

- ❑ I became aware of the limitations of conventional medicine from the time I was a medical student. I was disappointed at the fact that conventional medicine couldn't cure advanced cancer patients.
- ❑ This awareness has led me to a long-term study how to treat advanced cancer patients, and use of complementary medicine in my practice.
- ❑ I have treated more than 4,000 patients with advanced cancer in the last 35 years, using conventional and complementary medicine.

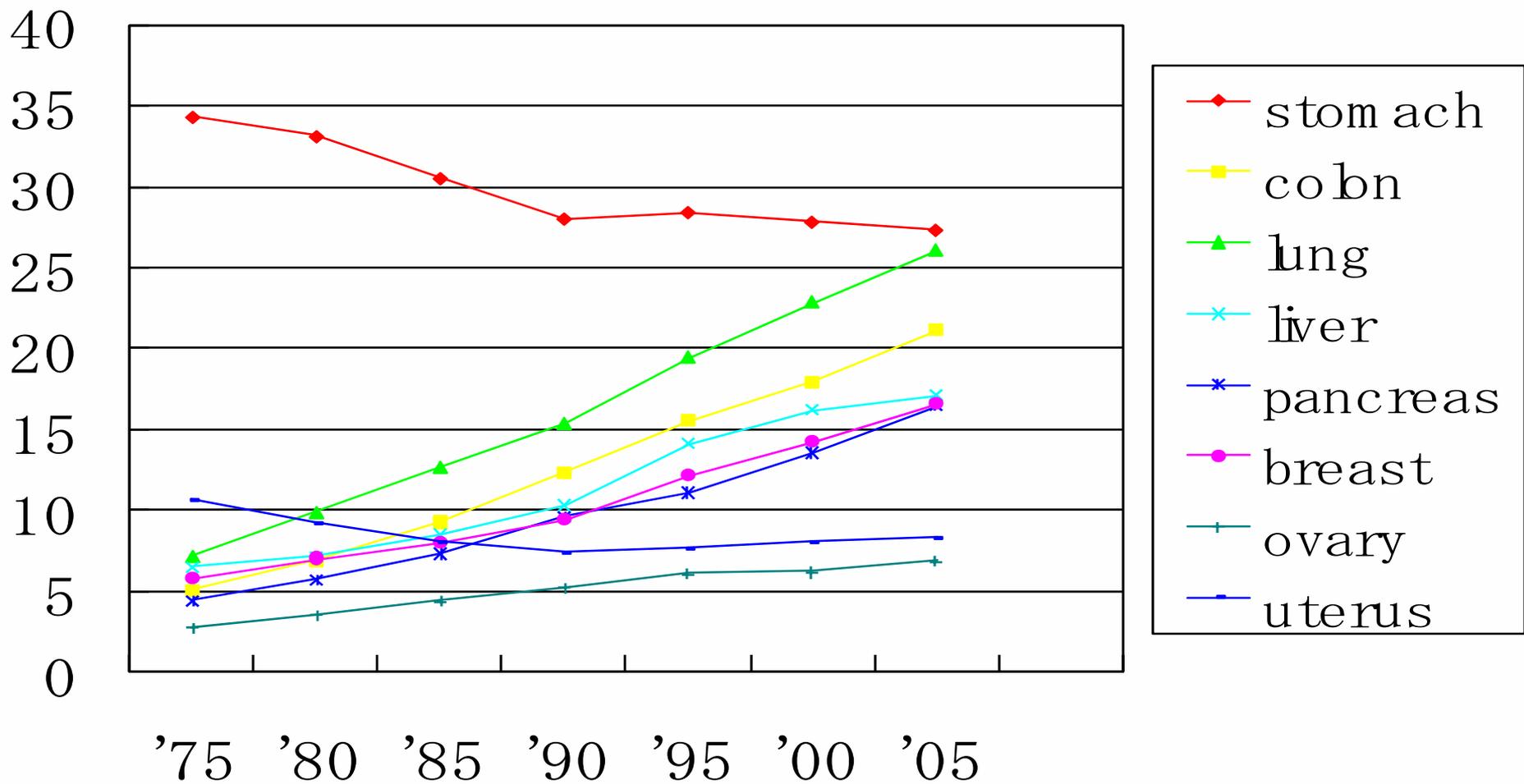
Cancer trend among Japanese

- ❑ Cancer is a No.1 cause of death in my country. The number of Japanese diagnosed with cancer has been increasing. This increase is especially pronounced among the so-called “cancers of the West” such as colon, pancreas, prostate, breast, and ovary cancers.
- ❑ This trend has been attributed to a westernization of the typical diet in Japan. My country was heavily influenced by the United States after World War II and we too have developed a fondness for beef steak and hamburgers.
- ❑ Japan boasts the longest life expectancy in the world, and this is thought due to healthy Japanese diet. However, Japanese life expectancy could fall in the coming years.

Trends of cancer deaths (/0.1million) among male Japanese



Trends of cancer deaths(/0.1million) among female Japanese



Problems associated with conventional cancer treatments

- ❑ Conventional treatments in Japan are surgery, chemotherapy, and radiation like the other countries.
- ❑ Death from cancer in Japan has increased annually and has quadrupled in the last 50 years.
- ❑ Half of the patients die from cancer.
- ❑ Advanced cancer is difficult to cure using solely conventional treatments.

Problems associated with conventional cancer treatments (cont.)

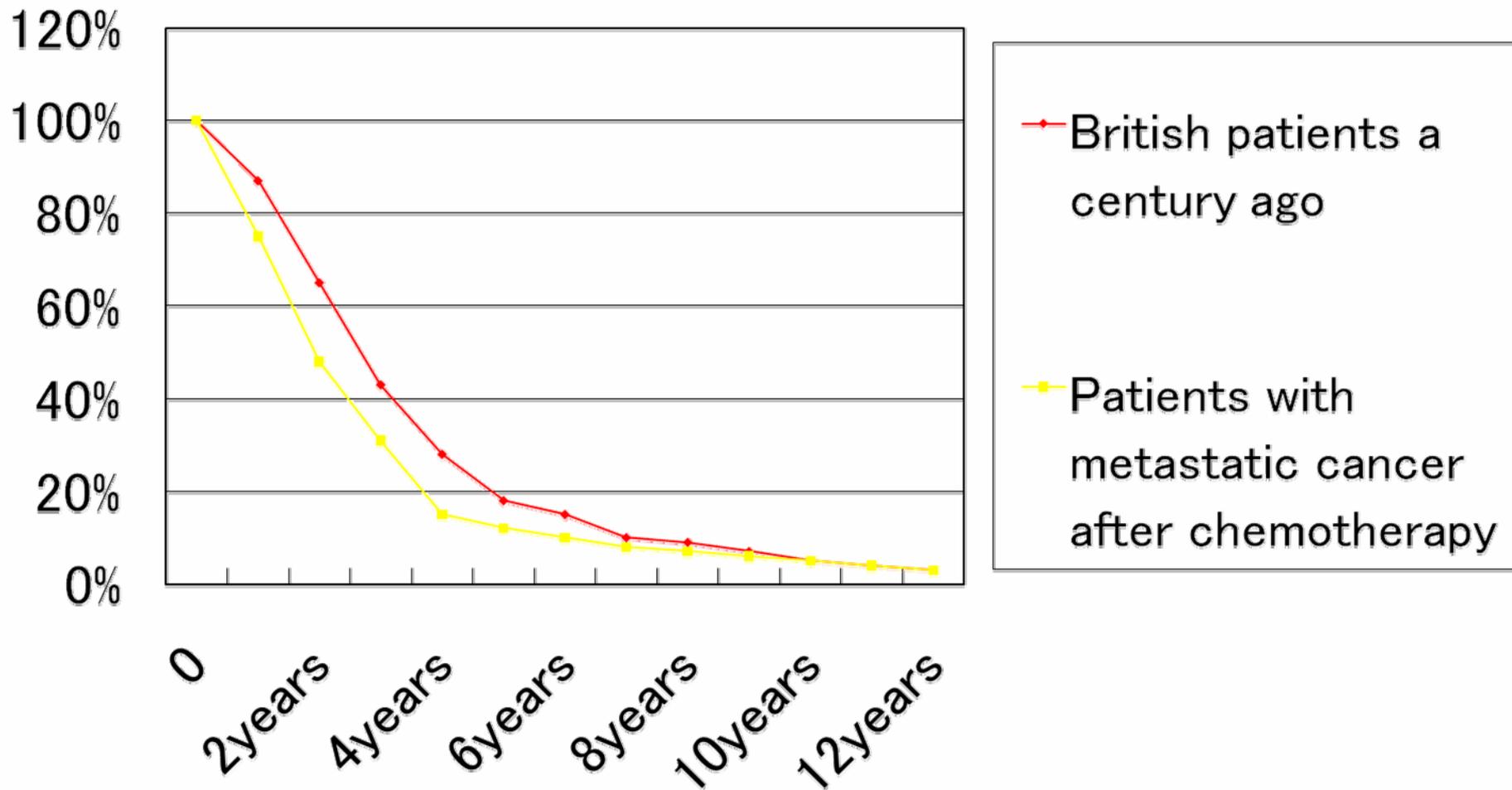
- ❑ Conventional cancer treatments may negatively impact patients' quality of life.
- ❑ These treatments are sometimes dangerous.
- ❑ Post-surgical mortality rates can be 1% to 3% depending upon the site of the cancer and surgeons' abilities.
- ❑ Mortality rates during chemotherapy can be 3% to 5%, and patients' quality of life is negatively affected. Chemotherapy can deteriorate bone marrow, kidney, liver, lung and heart function.
- ❑ Radiation therapy is associated with adverse reactions, some of which may be life-threatening.

Little progress in advanced cancer therapy

- ❑ The conventional wisdom is that considerable progress has been made in cancer therapy, but a lot of the available data do not support this characterization. By testing, we can detect early stage cancer that is curable, but we can find little progress in advanced cancer therapy.
- ❑ The next slide illustrates the lack of progress in advanced breast cancer survival rates over the past century.

Advanced breast cancer survival rates

A century ago and today



Complementary medicine

- ❑ New cancer treatment methods are needed outside of conventional medicine. This need is one reason why complementary medicine has become so popular in many developed countries.
- ❑ Approximately 70% of Japanese cancer patients are reportedly using some kind of complementary medicine, such as acupuncture or Chinese herbal medications in combination with conventional medicine. The majority of these patients do not tell their doctors about their use, because most Japanese doctors are skeptical about complementary medicine.

My cancer strategy

- ❑ It would be ideal to cure advanced cancer by only natural remedy.
- ❑ However, it is very difficult to cure advanced cancer by only natural ways. Because the speed of cancer cell proliferation is too high to stop by the natural ways.
- ❑ In most cases, conventional treatment is needed to alleviate the cancer cell proliferation.

How I used propolis

- ❑ I first learned about propolis 20 years ago when I was in US, and I became very interested in this bee product.
- ❑ After I took propolis every day, I am free from flu syndrome which often attacked me.
- ❑ My then 73-year-old father was diagnosed with end-stage pancreatic cancer 16 years ago. I advised him to take propolis for cancer treatment and he took water-extracted propolis. He died a year later, but experienced no pain or severe symptoms.
- ❑ I have since felt that propolis could be an effective part of cancer treatment.

Propolis and cancer

- ❑ Since my father's experience, I have been using propolis as complementary medicine for more than 500 patients with advanced cancer.
- ❑ Why do I use propolis?
- ❑ More than 1200 academic papers are available on propolis from around the world. Propolis thus has more scientific support compared to other supplements.
- ❑ The research has shown that propolis possesses many anti-cancer properties.

Anti-cancer effects of propolis

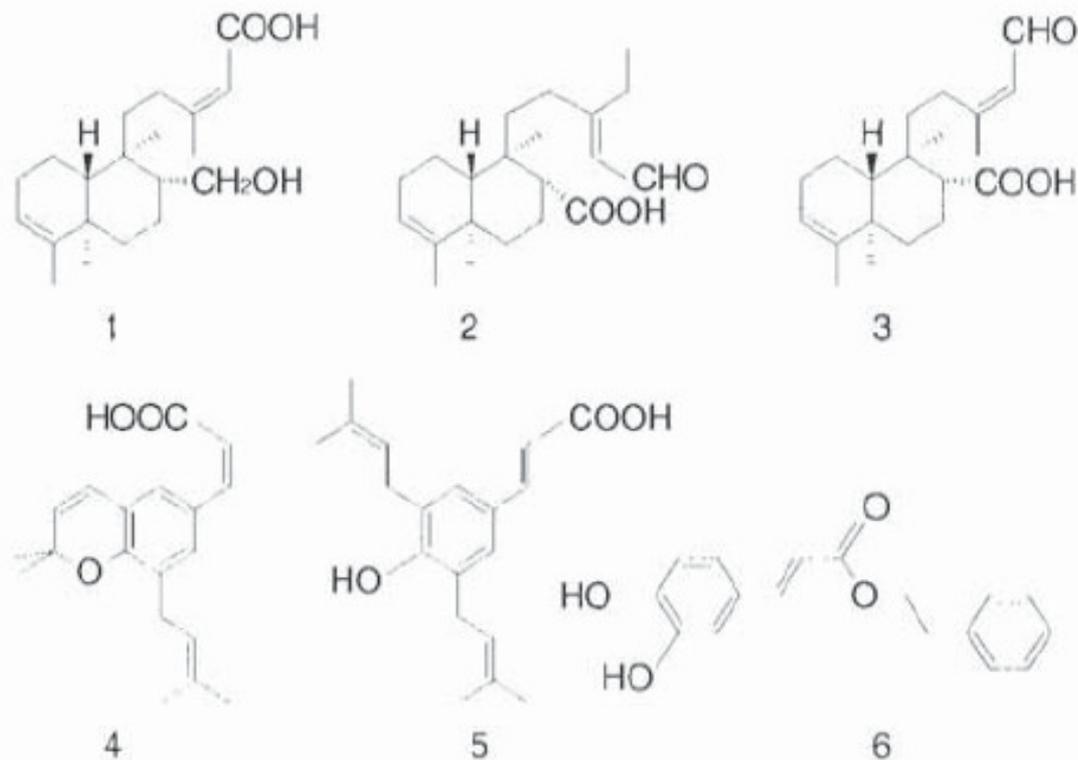
Propolis has

- 1. Direct anti-cancer effect**
- 2. Immune-enhancing effect**
- 3. Anti-oxidant effect**
- 4. Anti-angiogenic effect**
- 5. Anti-inflammatory effect**
- 6. Anti-viral and anti-bacterial effects**
- 7. Tissue-regenerating effect**
- 8. Chemo-protective effect**
- 9. Radio-protective effect**

Direct anti-cancer effect

- ❑ Propolis possesses many direct anti-cancer agents.
- ❑ Caffeic acid phenyl ester (CAPE) increases the CD4(+) T-cell subset, IL-2, IL-4 and IFN- γ in mice. CAPE also prevents metastasis to the lungs in breast cancer rats.
- ❑ Propolis induces apoptosis of human melanoma cells in vitro.

Chemical structures of anti-cancer agent in propolis



- 1 : PMS 1, 2 : 13Z symphyoreticulinic acid, 3 : 13E symphyoreticulinic acid,
 4 : (Z) 2,2 dimethyl 8 prenylbenzopyran 6 propanoic acid, 5 : Artepillin C,
 6 : Caffeic acid phenethyl ester (CAPE)

Immune-enhancing effect

- ❑ Almost all cancer patients have reduced immunity for years.
- ❑ Propolis has a macrophage-enhancing effect in vitro.
- ❑ Propolis activates lymphocytes and improves CD4/CD8 in mice.

Anti-oxidant effect

- ❑ Free radicals increase in cancer patients, and this increase stimulates cancer cell proliferation which can result in recurrence and metastasis.
- ❑ CAPE and Artepillin C have a strong anti-oxidant effect.
- ❑ Propolis prevents lipid peroxidation.
- ❑ Propolis exhibits a stronger anti-oxidant effect compared to vitamin E in rats with cerebral infarction.

Anti-angiogenic effect

- Whenever cancer cells proliferate, angiogenesis (neovascularization) occurs to increase the blood supply to these cancer cells.
- Propolis exhibits an anti-angiogenic effect in vitro and in vivo like a chemical anti-cancer agent: Avastin.

Anti-inflammatory effect

- ❑ Cancer itself has inflammatory properties which lead to a battle between cancer cells and immune cells.
- ❑ Anti-inflammatory agents such as the Cox-II inhibitor are useful in cancer prevention and treatment.
- ❑ Propolis exhibits anti-inflammatory effect both *in vitro* and *in vivo*.

Anti-viral and anti-bacterial effects

- ❑ The type B and C hepatitis viruses can cause hepatic cell carcinoma.
- ❑ HIV causes AIDS.
- ❑ *Helicobacter pylori* is a risk factor for stomach cancer. Half of the Japanese have *pylori* infection, and many of us have suffered stomach cancer.
- ❑ Propolis has anti-viral and anti-bacterial properties in vitro and in vivo, and these properties are useful in cancer treatment.
- ❑ Propolis should help prevent death from infectious diseases (one-third of patients with advanced cancer were reported to die from infectious diseases such as pneumonia due to deteriorated immunity)

Tissue-regenerating effect

- If regeneration of cancer tissue occurs faster, recovery from cancer could occur faster.
- Propolis stimulates tissue regeneration in vivo.

Chemo-protective effect

- Many animal studies suggest that chemotherapy accompanied by the use of propolis decreases adverse reactions.
- Propolis combined with chemotherapy has synergetic effects compared to only chemotherapy *in vitro* and *in vivo*.

Radio-protective effect

- Many animal experiments show that radiation therapy accompanied by the use of propolis decreases adverse reactions.
- Propolis combined with radiation therapy has synergetic effects compared to only radiation in vitro and in vivo.

My experience with propolis

- ❑ I have treated over 500 patients with advanced cancer using propolis.
- ❑ These patients suffered a variety of cancers including lung, stomach, colon, prostate, breast, ovary and pancreas cancer.
- ❑ We must accept the fact that cancer patients will simultaneously undergo multiple therapies including both conventional and complementary therapies.
- ❑ Thus the effect of propolis alone cannot be measured in such cancer patients. It is not ethical for me to have double-blind tests among advanced cancer patients.

My experiences with propolis (cont.)

- ❑ Most cancer patients undergo conventional treatment, but I recommend the use of propolis as complementary medicine.
- ❑ Patients who take propolis tend to experience a better quality of life, less pain, less fatigue, and improved appetite.
- ❑ The survival period of patients who took propolis tended to be longer, sometimes double, triple or 10 times longer than expected.
- ❑ A small number of patients have had tumors shrink to some degree without conventional treatment.
- ❑ A few patients have had their cancer (1 cm or less in diameter) completely disappear without conventional treatment.

My experience with propolis (cont.)

- ❑ Patients using propolis in combination with chemotherapy or radiation tend to exhibit better treatment results and less adverse reactions compared to only conventional therapy.
- ❑ I have been using ethanol-extracted, 30% (w/v) of Brazilian propolis derived from the *Baccharis dracunculifolia* plant.
- ❑ Although my usual recommended dose for propolis is 10 ml (3g) of propolis a day, I have been using 30 ml (9g) or more in patients with advanced cancer.

Survival rates of patients with advanced cancer taking propolis (general trends)



Adverse reactions associated with propolis

- ❑ Two patients complained of a mild skin rash after taking propolis. These individuals were hypersensitive to chemicals. Patients with allergies must be treated with care.
- ❑ A few patients complained of stomach distress after taking propolis especially on an empty stomach.
- ❑ No other serious adverse reactions were reported.

Six impressive cases

- ❑ I have seen many incredible cancer cases using propolis for years.
- ❑ Today I will show you my impressive 6 cancer cases.

Patient 1 Liver cancer

- A 46-year-old female with hepatitis C who subsequently developed hepatic cell carcinoma came to my hospital in 1998. Her liver CT revealed 3 tumors of 1 cm in diameter. I recommended 10 ml (3g) of propolis to be taken daily.
- Her liver tumors had completely disappeared on CT two months later, and her tumor marker, α -feroprotein, was within the normal range. She has been in good health ever since.

Patient 2 Stomach cancer

- A 52-year-old female was diagnosed with scirrhus type stomach cancer by me in 1997. Her cancer belonged to stage III and had an estimated 1-year survival rate of only 10%.
- She underwent a total gastrectomy and the cancer was found to have metastasized to the peritoneum. After the procedure, she took a daily dose of 10 ml (3g) of propolis.
- She has had no recurrence in the 12 years since the procedure.

Patient 3 Stomach cancer

- A 49-year-old male was diagnosed with stomach cancer (stage III) in 2006. He was advised to undergo surgery, but decided against it. He took 30 ml (9g) of propolis for 6 months. His stomach X-ray showed no changes.
- He then decided to undergo surgery, but a gastroscopy performed one day before the procedure revealed no abnormalities. His biopsy showed no cancer cells. The surgeons said this was a miracle. The surgery was thus canceled. He is very healthy at present.

Patient 4 Multiple myeloma

- ❑ A 46-year-old male fractured his pelvic bone and was diagnosed with multiple myeloma (stage IV) in 2003. His estimated 5-year-survival rate was 25%.
- ❑ He took 45 ml (15g) of propolis every day during hospitalization. He underwent 4 cycles of chemotherapy, but exhibited no adverse reactions including leucopenia (low WBC counts). He has been in complete remission.

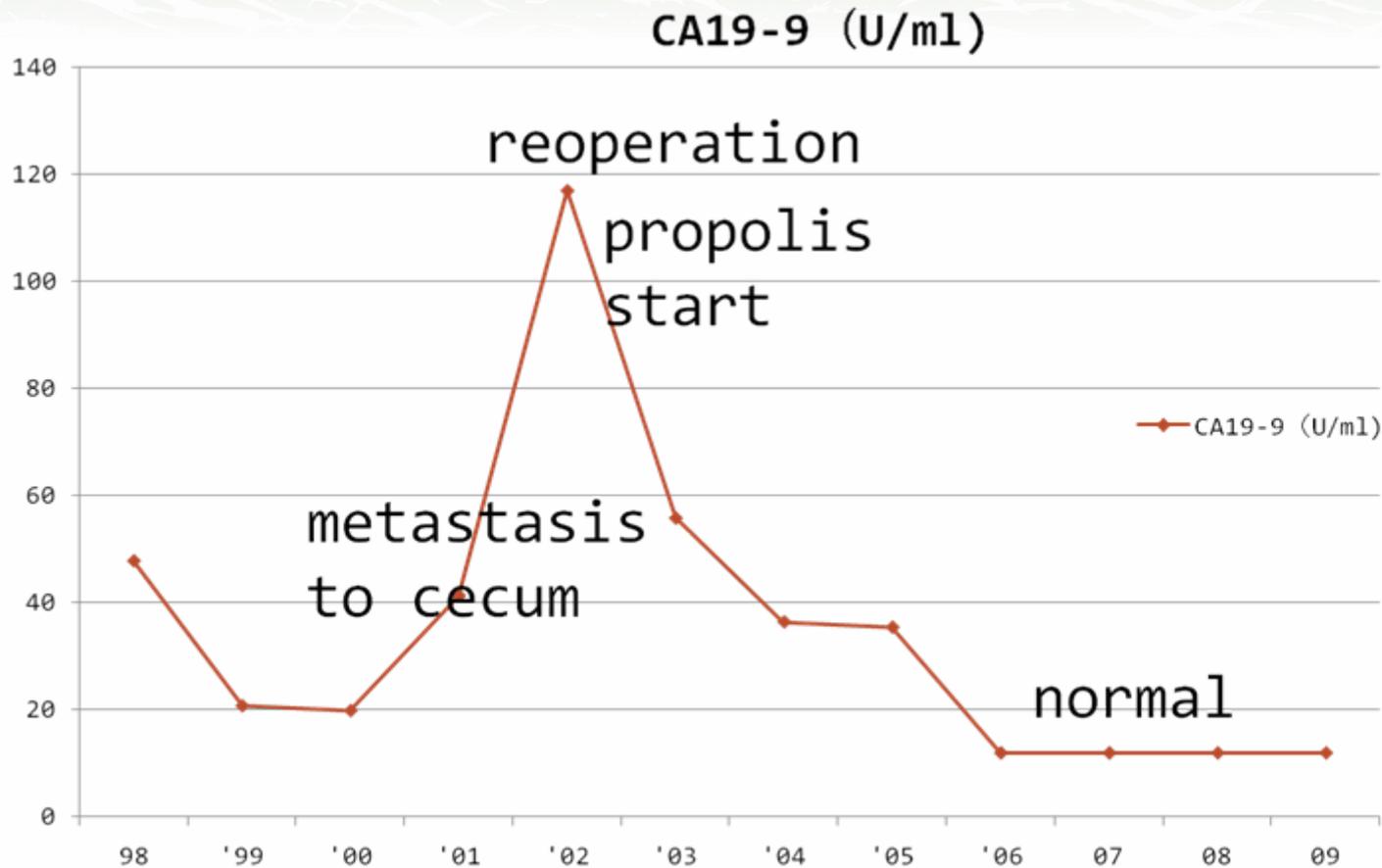
Patient 5 Urinary bladder cancer

- ❑ A 81-year-old male with urinary bladder cancer was to undergo an endoscopic procedure in 2006. He took 12 capsules of propolis (6g) a day for 1 month.
- ❑ Cystoscopy was performed just before the procedure. His cancer tumor completely disappeared after foam-like substance excretion from his urethra. He is healthy at present.

Patient 6 Ovarian cancer

- A 57-year-old female was diagnosed with ovarian cancer. Ovary and uterus resections were performed in 1990. Chemotherapy followed, and she exhibited high fever, diarrhea, and leucopenia (low WBC counts).
- The cancer was found to have metastasized to the cecum in 2002, and she started to take 6ml (2g) propolis. She underwent a second procedure. She again underwent chemotherapy, but had no adverse reactions. Her CA19-9 has been reduced and is now within the normal range. She is currently in good health.

Changes in CA19-9



Cancer prevention and propolis

- ❑ Cancer prevention, especially primary prevention, is critically important compared to secondary and tertiary prevention.
- ❑ It is well-known that simple use of vitamins and minerals couldn't prevent several sites of cancer.
- ❑ Propolis is thought to be effective in primary cancer prevention because of its properties of direct anti-cancer effect, immune-enhancing effect and anti-oxidant effect.
- ❑ Propolis may be useful for cancer treatment, since propolis has much possibility to prevent cancer.

Conclusions

- ❑ More clinical studies are needed to determine the efficacy of propolis.
- ❑ Propolis taken by patients with advanced cancer undergoing chemotherapy or radiation seems to enhance effectiveness and lead to fewer adverse reactions.
- ❑ Propolis taken alone seemed to lead to better quality of life, prolongation of life, and complete remission.
- ❑ High doses of propolis in the range of 10g or more a day may be more effective in patients with advanced cancer.
- ❑ I am convinced that a daily dose of propolis prevents cancer and that increased use of propolis by healthy individuals is highly recommended.
- ❑ Even advanced cancer patients should have hope of recovery using propolis, because we can't live without hope.