At its core, the MM CC Program is about living with Multiple Myeloma. The newly diagnosed MM patient (NDMM) usually thinks of conventional therapies such as chemo, radiation, and surgery, when they think about living with MM.

I have learned through painful experience however, that living with MM is about much more than chemo, radiation and surgery. Living with MM is about both conventional therapies and non-conventional therapies. Living with MM means understanding possible symptoms, side effects and the common causes of death (COD) for MM patients and survivors.

Because MM survivors don’t die from MM, they die from complications caused by their MM and/or their MM therapies, the NDMM patient must ask him/herself, what does it mean to undergo one or more therapies that are designed to treat a MM symptom yet can cause a MM side effect and can lead to a MM COD?

I don’t believe it is a coincidence that:
- MM symptoms
- MM side effects
- MM causes of death

are all almost identical. The fact that MM symptoms, side effects and COD are almost the same, opens the possibility that over-treatment of the NDMM patient’s symptoms can lead to severe MM side effects which then can lead to MM COD.

The four most common MM symptoms are:
- Myelosuppression (blood problems-Infection, pneumonia, etc.)
- Renal Insufficiency (kidney failure)
- Bone Disease (bone damage, fractures)
- Blood Clots (DVT, hyper-viscosity) (READ MORE)

The four most common side effects/complications caused by MM therapies are:
- Myelosuppression (blood problems-Infection, pneumonia, etc.)
- Renal Insufficiency (kidney failure)
- Bone Disease (bone damage, fractures, leading to death)
- Nerve Damage (pain, numbness, tingling) (READ MORE)

The four most common causes of death for multiple myeloma survivors are:
- Myelosuppression (Infection, pneumonia, etc.)
- Renal Insufficiency (kidney failure)
- Bone Disease (bone damage, fractures)
- Blood Clots (DVT, hyper-viscosity) (READ MORE)

I think evidence-based complementary and integrative therapies must be combined with manageable conventional toxic therapies for the NDMM patient to live his/her longest, best life.
SYMPTOMS OF MULTIPLE MYELOMA: PROBLEMS CAUSED BY THE DISEASE ITSELF

- **FATIGUE.** Healthy cells allow your body to fight invading germs easily. As myeloma cells replace bone marrow, your body has to work much harder with fewer disease-fighting cells, and you tire more easily.

- **BONE PROBLEMS.** Myeloma can prevent your body from making new bone cells, causing problems like bone pain, weakened bones, and broken bones.

- **KIDNEY PROBLEMS.** Myeloma cells produce harmful proteins that can cause kidney damage and even failure.

- **LOW BLOOD COUNTS.** Myeloma cells crowd out healthy blood cells, leading to low red blood counts (anemia) and low white blood cells (leukopenia). Unhealthy blood cell levels make it harder to fight infections.

- **FREQUENT INFECTIONS.** Fewer antibodies in your blood make fighting infections more difficult. (READ MORE³)

HOW TO MANAGE THE SIDE EFFECTS OF MULTIPLE MYELOMA TREATMENT

“Medications, radiation, and other cancer treatments destroy cancer cells, but they can also damage healthy ones in the process. Others make your immune system weak, which makes it harder for your body to fight off infections… (READ MORE⁵)”

side effects caused by myeloma treatment

Chemo drugs kill cancer cells but also can damage normal cells. They are given carefully to avoid or reduce the side effects of chemotherapy. These side effects depend on the type and dose of drugs given and the how long they are taken. Common side effects of chemotherapy include:

**SHORT TERM SIDE EFFECTS:**

- Hair loss
- Mouth sores
- Loss of appetite
- Nausea and vomiting
- Chemotherapy often leads to low blood counts, which can cause the following:
  - Infection: An increased risk of serious infection *(from low white blood cell counts)*
  - Easy bruising or bleeding *(from low blood platelets)*
  - Anemia: Feeling excessively tired or short of breath *(low red blood cells)* (READ MORE⁶)

**LONG-TERM AND LATE STAGE SIDE EFFECTS:**

- Chemotherapy-Induced Peripheral neuropathy
  “Peripheral neuropathy is one of the most important complications of multiple myeloma treatment. Neurological damage can be observed at the onset of the disease, due to the effect of monoclonal protein or radicular compression, but more often is treatment related… (READ MORE⁷)”

- Chemobrain
  “Results from a recent study indicate that many myeloma patients are likely to suffer impaired cognitive function after their initial multiple myeloma therapy, and stem cell transplantation often causes further impairment. Nearly half of the patients in the study had cognitive impairment, often referred to as ‘chemo brain,’ after receiving initial anti-myeloma therapy. Half of the patients experienced further impairment of cognitive function at one month and again at three months following autologous (own) stem cell transplantation…” (READ MORE⁸)
Corticosteroids, such as dexamethasone and prednisone, are an important part of the treatment of multiple myeloma. They can be used alone or combined with other drugs as a part of treatment. Corticosteroids are also used to help decrease the nausea and vomiting that chemo might cause.

COMMON SIDE EFFECTS OF THESE DRUGS INCLUDE:
- High blood sugar
- Increased appetite and weight gain
- Problems sleeping
- Changes in mood (some people become irritable or “hyper”)

Side effects of radiation can include:
- Skin changes in the area being treated, which can range from redness to blistering and peeling
- Fatigue (tiredness)
- Nausea
- Diarrhea (if the belly or pelvis is being treated)
- Myelosuppression (low blood counts)

(READ MORE)

WHAT DO MULTIPLE MYELOMA PATIENTS DIE FROM?

“I must begin my reply by saying that I don’t believe the 74 year old MM survivor should undergo an ASCT. Too much toxicity. I have worked with many elderly MM survivors who enjoy a higher quality of life by undergoing low-dose therapies coupled with one of the many evidence-based integrative therapies… (READ MORE)”

MULTIPLE MYELOMA SYMPTOM, SIDE EFFECT - THICK BLOOD, ESR RATE, BLOOD CLOTS

“Multiple myeloma is associated with a significant risk of venous thromboembolism (VTE-blood clot), causing substantial levels of morbidity and mortality. Thick blood, documented by a high ESR rate is a common multiple myeloma symptom. A deep vein thrombosis, according to research, is a common multiple myeloma side effect of many chemotherapy regimens… (READ MORE)”

POST-THROMBOSIS SYNDROME - MULTIPLE MYELOMA SIDE EFFECT

“A natural human enzyme made by genetically altered bacteria effectively dissolves clots in the arteries of heart attack victims and could give doctors a safe new way to stop these seizures as they happen, researchers say… (READ MORE)”

FOOTNOTES