

Date

(Physician's Name)

1000 Main Street

Suite 100

Uniontown, MA 11111

Re: Collaboration in Caring for Cancer Patients

Dear Dr. (Physician's name):

In an effort to enhance the care that you provide to your patients, I am happy to provide the following information regarding the interprofessional management of cancer. Specifically, I wish to emphasize what the dental profession can offer as part of your comprehensive care plan.

An overwhelming majority of cancer patients have not seen a dentist for some time. Starting treatment with a diseased oral cavity can obviously worsen oral complications that may occur following chemotherapy or radiation. According to the National Institute of Dental and Craniofacial Research, approximately one-third of Americans diagnosed with cancer will develop oral complications from their treatment. Patients who undergo chemotherapy and/or radiation for cancer may experience a variety of problems within the oral cavity because of effects on oral structures including mucositis, xerostomia, osteoradionecrosis, and osteochemonecrosis.

Xerostomia is a short-term complication of chemotherapy. However, it can be a life-long complication of radiation therapy. Dry, fragile tissues may easily ulcerate, causing mild to severe mucositis. Because of changes in the quality and quantity of salivary flow, there is a continual risk of rampant tooth decay. Additionally, a dry mouth can cause alterations in diet as swallowing is more difficult. Dysgeusia and hypogeusia are frequently seen when mucositis affects the tongue impacting the quality of life. Osteoradionecrosis tends to affect the mandible more than the maxilla, typically occurring within three years of radiotherapy, but patients remain at risk for life. The key to prevention is pre-treatment dental evaluation. Knowledge of radiation treatment fields, dosage, prognosis and patient commitment, in addition to panoramic radiograph and clinical exam, help the dental team determine the life expectancy of the remaining dentition, and plan for medically necessary treatment before cancer treatment begins.

Chemotherapy involving intravenous bisphosphonates (e.g., pamidronate, zoledronic acid, or ibandronate) for treatment of cancer-related osteoporosis presents a unique problem. Numerous reports have been published relating these drugs to osteonecrosis (a.k.a. osteochemonecrosis) of the maxilla and mandible with resultant bone exposure. Interestingly, from the patient's perspective the bone exposure is generally asymptomatic. Obviously, prevention is the best treatment in this case. Consequently, patients should receive a full dental evaluation and all invasive dental treatment should be completed prior to commencing intravenous bisphosphonate therapy.

During chemotherapy, it is not uncommon for patients to be told specifically to discontinue using toothbrushes and dental floss when platelet counts drop below $40,000/\text{mm}^3$. This is generally poorly advised unless there are extenuating circumstances. Healthy gingival tissues do not bleed unless traumatized, and discontinuing routine oral hygiene can increase the risk of infection that could not only promote bleeding, but also increase the risk of local and systemic infection because of accumulation of bacterial plaque. This misconception further supports the necessity of pre-cancer therapy dental treatment to reduce or eliminate gingival or periodontal conditions. With comprehensive monitoring, patients can often safely brush and floss throughout the treatment regimen. While the use of foam brushes instead of a toothbrush is often promoted to reduce the risk of bleeding, this is usually ill-advised. Studies have shown that foam brushes cannot adequately remove dental plaque along gingival margins, thus promoting gingival infection and bleeding.

Reviewing complications of cancer therapy and the need for meticulous oral hygiene to prevent or reduce oral effects of therapy cannot be overemphasized. Patients should be instructed to begin a prescribed oral hygiene regimen as soon as possible. This may include brushing, flossing, oral rinses, and fluoride therapy as appropriate. Frequent recall evaluations are critical to monitoring progress/long-term effects.

Through research and extensive collaboration, an expert panel from the Multinational Association of Supportive Care in

Cancer (MASCC) and International Society for Oral Oncology (ISOO) has developed clinical practice guidelines and proposes a collaborative model for integrating health-care members, including dental professionals, to ensure the best possible outcome for the patient. Once the treatment plan has been established, dental professionals can help to educate cancer patients about the associated side effects in the oral cavity (verbally and through written materials given to the patient). Individualized oral care and teaching sessions for patients and their family members have been shown to be highly effective.

I have also included a thumbprint of a patient education brochure on the oral complications of treatment for head and neck cancer, that can be downloaded free of charge, from www.caseyhein.com, under Library of Free Resources, to provide to your patients as appropriate. This brochure summarizes the potential effects of chemotherapy/radiation treatment on the oral cavity, the role of the dental professional prior to and during the treatment process, and the potential role of the dental team in any reconstructive procedures should surgical approaches be necessary. If I can be of any further assistance or you would like to discuss any of this material, please feel free to call at your convenience.

Respectfully yours,

(Name of dentist)