# The Radiation Oncologist's Role in Treating Limb Cancers

*Prepared on behalf of National Medical Professional RRG, Inc.*

## INTRODUCTION

Radiation Oncologists assume additional medical malpractice risk when performing radiation therapy on a patient's limb, and they should be aware of the key risk factors, as well as the important preventative steps, that will minimize a suit or malpractice claim. In the event that a limb is amputated as a result of natural complications and a lawsuit ensues, we believe the radiation oncologist's defense is a complex one to implement successfully in a courtroom, even when the proper dose of radiation is delivered. National Medical Professional wants you to be cognizant of the latent risk involved in treating limbs to better protect you from litigation.

## Case Description 1

Consider the case where a patient was given radiation therapy to the leg four weeks after a tumor was removed from the same leg. Although the radiation was delivered to a different region on the patient's leg relative to the scar left by the surgery, the area of incision did not heal well. Subsequently, the patient was hesitant to follow through with the radiation therapy, and was given the option to discontinue treatment. He chose to continue. Several months later, after being turned over to a medical oncologist and undergoing chemotherapy, the patient cancelled a return appointment to the radiation oncologist, stating that he would be treated under the primary care of the wound center physician. After several further complications, and without the radiation oncologist's opinion, the patient's leg was amputated ten months after radiation.

The patient subsequently sued the physician, and the case went to trial years later. The plaintiff argued that the radiation was the main cause for the leg amputation, and that the doctor had breached the standard of care by not properly informing the patient about the potential loss of his leg. The defense argued that the alternative to radiation was a likely amputation, and this treatment represented the best chance to save the limb. The recurrence probability had radiation not been performed was great than 20%[1]. Additionally, the patient had a high risk of dying from the sarcoma (greater than a 45% chance, due to the stage of the malignancy[2]).

Experts further believed that post surgery the leg would have healed on its own and did not need to be amputated, and more widely felt that the radiation was not the main contributor to the amputation. One of the key pieces of evidence in the case was the wound care physician's medical record, which described 'radiation necrosis". The plaintiff argued that radiation necrosis led to an improper healing of the wound, which led to the amputation of the leg. The defense argued that the radiation was properly delivered; the tissue damage could not have resulted from radiation necrosis as the radiation was not targeted at the wound. The defense also argued that the treatment was successful in that the cancer was cured, thus saving the patient's life. The case ultimately went to a jury verdict, which awarded the plaintiff $1.5 million.

Trials that involve an amputation are very difficult to defend, and usually the defense will attempt to settle these cases without going to trial. This strategy is due to the difficulty for the jury to maintain a non-sympathetic and objective opinion though out the trial. In this case, even though the patient is cancer-free and the treatment saved his life, the plaintiff was viewed as the "victim" upon sight – this was ultimately the most important factor for the jury.

## Case Description 2

Another example highlights the medical liability risk for the radiation oncologist when the potential for amputation is a significant consideration. In a recent case, a patient with recurring skin lesions on his arm had surgical resections performed. One of the lesions was found to have an ulcerated basal cell carcinoma that extended into the subcutaneous tissue. The tumor board subsequently recommended radiation

treatment due to the basal cell features. The treating radiation oncologist noted that the arm was a risk for amputation in one of the consultation summaries, and went ahead with radiation without seeking a biopsy to confirm the board's opinion. Many radiation treatments later and several months after the patient was discharged, a lesion reappeared. The patient eventually lost his limb, sued the physician, who was forced to settle before going to trial for a significant sum.

## CONCLUSION

These cases are both clinically and legally complex. Should the limbs have been amputated and when? What patient, clinical, surgical and radiation factors are important causes or predispositions for a non-healing wound and the need for an amputation? How precise can radiation therapy be delivered today in the era of IGRT and IMRT to protect the normal structures without increasing the risk for local recurrence and thus amputation? Because the answers to these questions are currently unclear, you as a physician are at a greater risk. In each case we presented, an excellent defense could be made based on the accuracy of radiation and sound medicine. But sound medicine is not always the issue. The plaintiff has lost a limb, and the case is built on sympathy for the patient and blame for the radiation oncology physician.

## RECOMMENDATIONS

**Emphasize patient communication regarding amputation and complication risk.** We believe the radiation oncologists should emphasize the risk for amputation to a radiated limb, no matter how unlikely the amputation. This communication should be carefully documented in the patient's chart.

**Maintain patient involvement with treating physicians post treatment.** Particularly for large wounds, we also recommend that the radiation oncologist maintain involvement and communication with the physicians who work with the patient after radiation. In the earlier case, closer coordination between the medical oncologist, radiation oncologist, surgeon and wound care physician probably would have resulted in increased cooperation by the patient and a more effective plan for treatment.

[1]Yang JC et al. Randomized prospective study of the benefit of adjuvant radiation therapy in the treatment of soft tissue sarcomas of the extremity. J Clin Oncol. 1998 Jan; 16(1): 197-203

[2]Greene FL, Page DL, Fleming ID, et al. AJCC cancer staging manual, 6th ed. (New York; Springer, 2002).