

Major amputation in the management of advanced limb melanoma

Melanoma is an aggressive type of skin cancer that can recur at the original excision site or spread to nearby areas of the body (called “in-transit” metastases), to the lymph nodes that drain that region and/or to distant organs. When a cancer such as melanoma has spread, it is said to have metastasized. Advanced melanoma in a limb (arm or leg) can result from local recurrence, in-transit or regional node metastases). Most patients with advanced limb melanoma also have, or go on to develop, distant metastases and the majority will ultimately die from their melanoma.

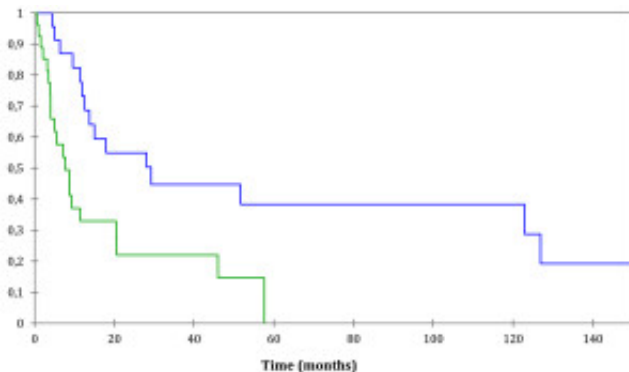


Fig. 1. Melanoma specific survival from the time of amputation comparing palliative (green) and potentially curative (blue) amputation.

There are many different treatments available to patients with advanced limb melanoma. Local treatments include simple surgical excision, injection of the lesions with tumoricidal agents, isolated limb chemotherapy, radiotherapy and systemic therapies. Recently introduced systemic therapies for melanoma, given orally or by intravenous infusion, have dramatically improved outcomes for patients with metastatic melanoma. Because of the variety of treatments available major amputations, which cause significant functional and psychological impairment, are rarely performed for melanoma.

The rarity of major amputation in the treatment of advanced limb melanoma is highlighted in the article ‘The contemporary role of major amputation in the management of advanced limb melanoma’ by Read et al. which identified only 51 patients who underwent major amputation for melanoma over a 29-year period (1984-2012) at Melanoma Institute Australia, one of the world’s largest melanoma treatment centers. In this study a major amputation was defined as one that removed at least the leg below the knee or the forearm below the elbow or a greater part of the affected limb. Most of the melanoma patients who ultimately underwent major amputation had already undergone a variety of other treatments. Two thirds of patients had a specialized procedure

called isolated limb perfusion or infusion that delivered high dose chemotherapy to the affected limb; initial disease control had been achieved in approximately 80% of patients.

In the study by Read et al. major amputations were classified as palliative if there was known residual disease at the time of amputation or if the patient had previously been diagnosed with distant metastatic disease and potentially curative if they were performed for local, in-transit or regional node disease and amputation removed all known disease.

Major amputation is used as a last resort in melanoma patients when limb-sparing strategies have failed. It is utilized in patients with otherwise unmanageable soft tissue or bone disease and/or uncontrolled pain. The timing of major amputation is important. Patients incapacitated by pain and advanced disease may have benefited from earlier amputation, when their overall fitness would have facilitated rehabilitation. Ultimately, the decision to undergo major amputation is personal, quality of life outcomes vary and there is little evidence to guide decision-making.

The survival of patients after major amputation for melanoma is remarkable. In spite of advanced disease and extensive prior treatment patients who underwent potentially curative major amputation had a 38.5% rate of survival at five years. However, no patient who underwent palliative amputation survived five years (Fig. 1.). So, although generally regarded as a procedure of last resort, the long-term outlook for patients undergoing major amputation for melanoma is not uniformly hopeless. These patients should be managed in specialist melanoma centers where a variety of treatment options are available and experienced clinicians can give advice to patients regarding about their options.

Rebecca L Read¹ and John F Thompson^{2,3,4}

¹*Melanoma Institute Australia, North Sydney, NSW, Australia*

²*Melanoma Institute Australia, North Sydney, NSW, Australia*

³*Department of Melanoma and Surgical Oncology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia*

⁴*Discipline of Surgery, Sydney Medical School, The University of Sydney, Sydney, NSW, Australia*

Publication

[The Contemporary Role of Major Amputation in the Management of Advanced Limb Melanoma.](#)

Read RL, Stalley P, Thompson J.

Ann Surg Oncol. 2015 Nov