Radioactive plaque brachytherapy is the standard treatment for choroidal melanoma, but with posterior amelanotic tumours it may be technically difficult to localise the margins for accurate plaque placement and there is a significant risk of damage to vision from radiation sequelae.

The Australian and New Zealand Study of PDT in Choroidal Amelanotic Melanoma (ANZSOPICAM) is an investigator-initiated prospective multicentre clinical trial of photodynamic therapy (PDT) in posterior amelanotic melanoma. 43 patients have been recruited since June 2009. Their ages ranged from 29 to 92 years and tumour height was between 1.5 and 7 mm. After full ocular and systemic assessment PDT was applied with the Zeiss Visulas laser, using verteporfin as the photosensitiser. PDT was repeated at three monthly intervals until the melanoma had completely regressed.

Complete regression of the melanoma has been achieved in 31 patients (72%) after between one and six treatments. Five patients (12%) are still undergoing treatment and all have demonstrated a response. There were three primary treatment failures (7%). Seven participants (16%) developed local recurrences; five responded favourably to further PDT, whilst two required plaque brachytherapy. Visual acuity has remained stable or improved in 39 patients (91%). So far no evidence of systemic metastatic disease has been found in any of the subjects.

The results of this study to date indicate PDT is an effective alternative treatment for many cases of amelanotic melanoma and has an advantage over brachytherapy in that it does not compromise vision in the majority of patients.