

# Management of Orbital Lymphoma Using Radiotherapy

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## Purpose

Orbital lymphoma is a rare form of extranodal lymphoma, comprising only 1% of all NHL. The aim of this study is to retrospectively review the treatment techniques, disease outcome, survival analysis, and complications experienced by orbital lymphoma patients after completion of radiotherapy.

## Methods

We retrospectively analyzed medical records of 50 patients (36 women and 14 men, age range 33-92 with a median age of 71.5 years) dating from 1984 to 2017 from two institutions – Southern California Kaiser Permanente in Los Angeles, California and the Cancer Care Institute in San Jose, California. All patients underwent biopsy for clinically proven diagnosis of orbital lymphoma. 32 patients were diagnosed with Stage 1 orbital lymphoma, one patient with Stage 2, 2 patients with Stage 3, and 15 patients with Stage 4. The histological grade was low in 42 (84%), intermediate in 7 (14%), and high in 1 (2%). For treatment, 41 patients were treated with radiotherapy alone while 9 patients received chemotherapy for treatment of lymphoma at other sites before or after radiotherapy for orbital lymphoma. The median dose for total patients was 3040 cGy (range 2000-4000). Five-year local control rate and overall survival were determined using the Kaplan-Meier method.

## Results

The median follow-up for patients post-radiation was 26.5 months. At 5 years, the local control rate was 100%. At 5 years, the overall survival rate for patients was 70%. For Stage 1 patients, the 5-year survival rate was 82%. Only one patient was diagnosed with Stage 2 (n=1) orbital lymphoma and survived for 22 months. For Stage 3 patients (n=2), the 5-year survival rate was 50%. For Stage 4 patients (n=15), the 5-year survival rate was 60%. Ten patients reported cataract formation as a result of radiotherapy. Dry eye syndrome was recorded in 6 patients, but none were reported as severe. Twenty-five patients reported no complications after completion of radiation. Other complications amongst patients included conjunctivitis (n=4), diplopia (n=2), ptosis (n=2), keratitis (n=2), tearing (n=1), and decreased vision (n=1).

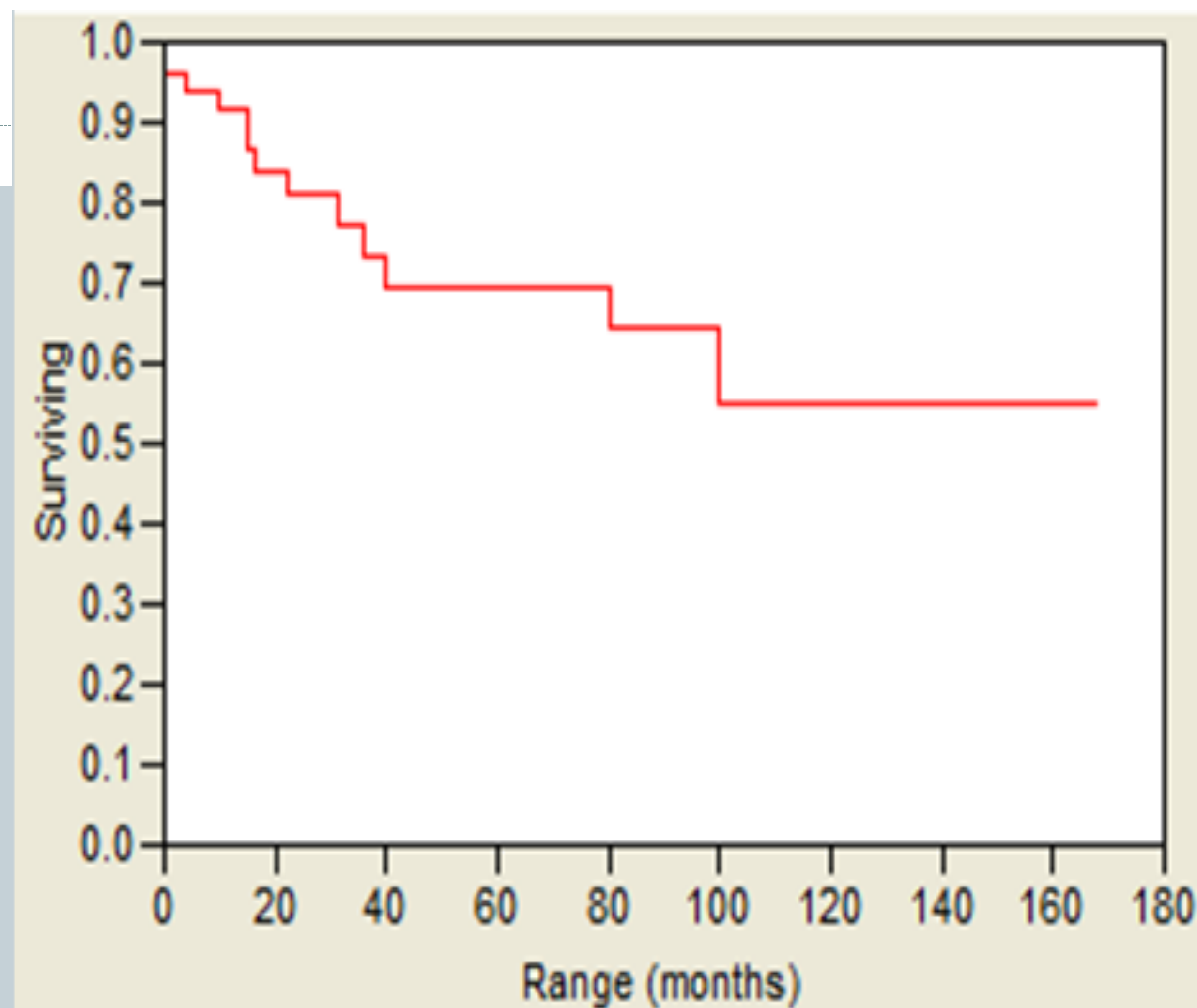


Fig. 2 Overall Survival for Total Patients

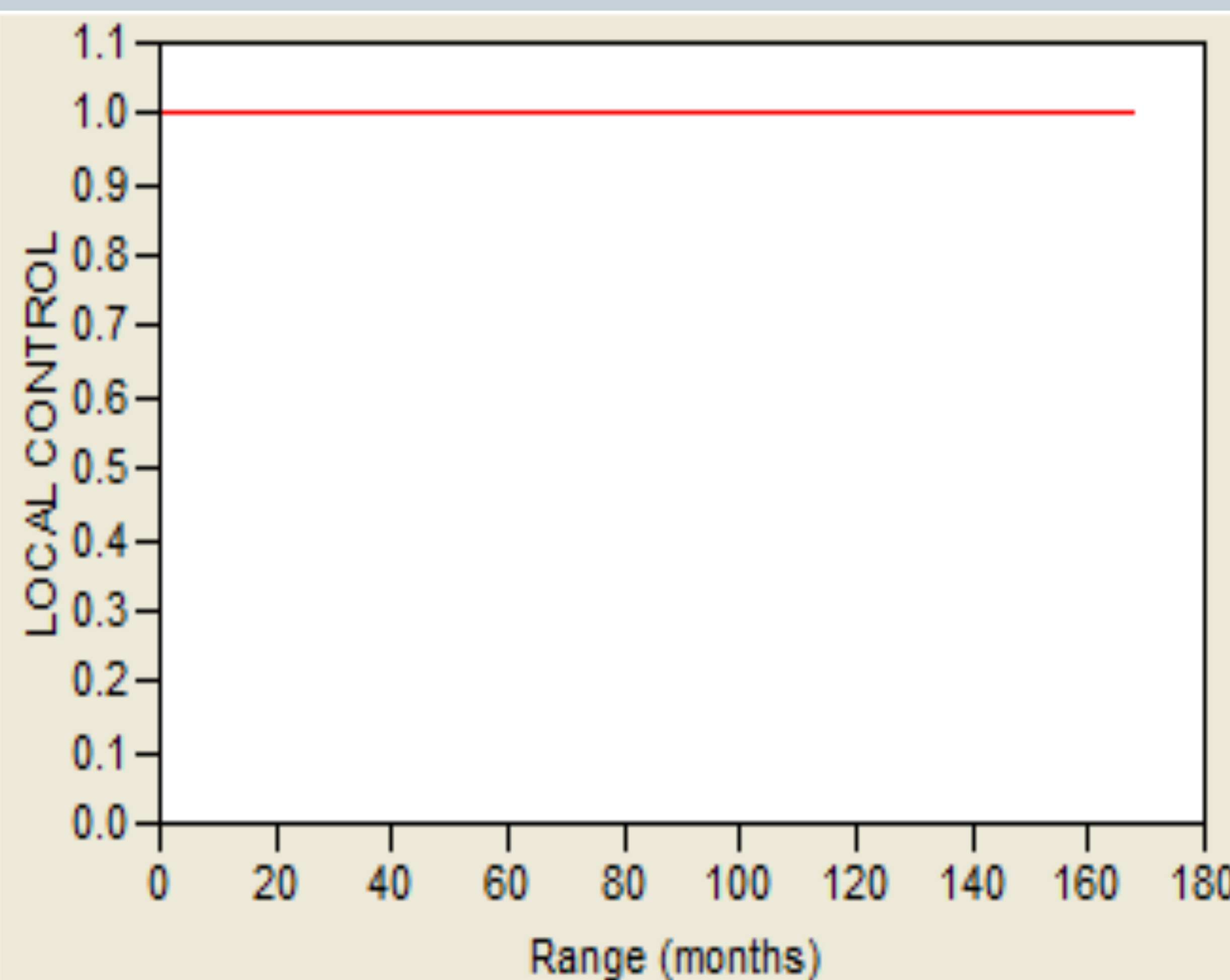


Fig. 1 Orbital Local Control

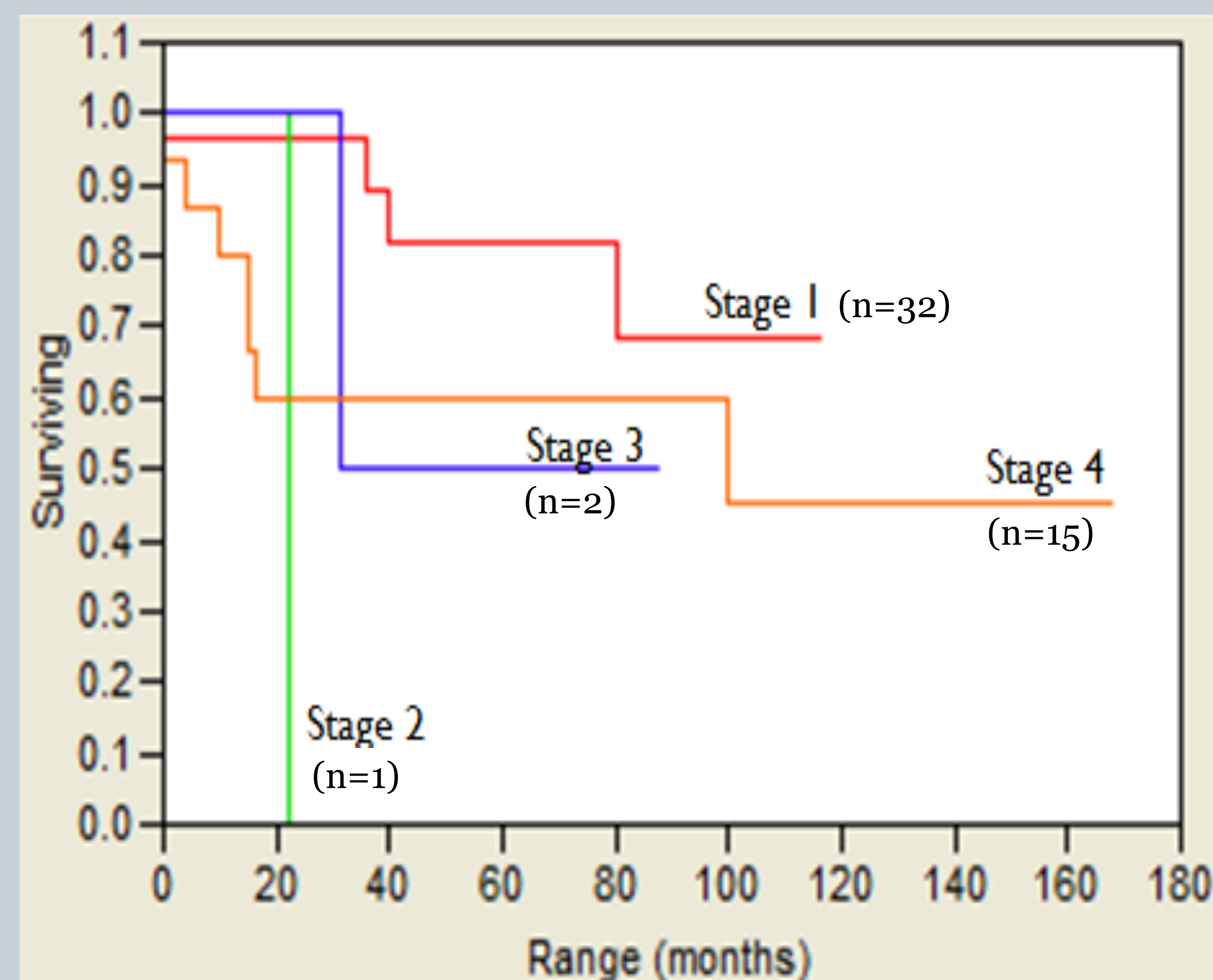


Fig. 3 Overall Survival for Patients by Stages

## Conclusion

Radiotherapy is a safe and effective treatment option in the management of orbital lymphoma with excellent local control and acceptable overall survival for patients treated. The majority of complications experienced reported by patients from radiation treatment were minimal and did not require medical intervention.

