Real-World Efficacy and Safety of Photoimmunotherapy for Recurrent Nasopharyngeal Carcinoma: A Nationwide Multicenter Study in Japan

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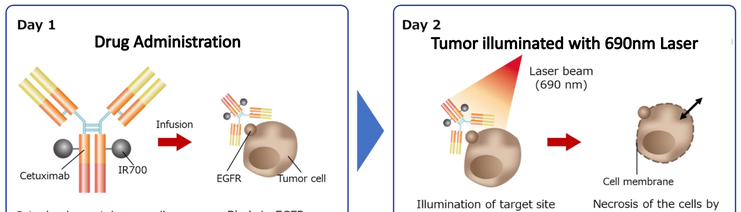
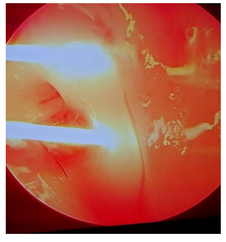
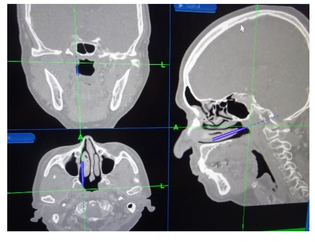
Background

Recurrent nasopharyngeal carcinoma (NPC) remains a therapeutic challenge. Re-irradiation can be effective but is associated with substantial toxicity, while surgery is potentially curative but highly invasive.

Photoimmunotherapy (PIT; ASP-1929) is a novel locoregional treatment that may provide effective tumor control with a favorable safety profile. In this study, we evaluated the real-world efficacy and safety of PIT for recurrent NPC.







Methods

43 patients with recurrent or residual NPC treated with PIT were enrolled from 26 sites across Japan. Patients with at least 3 months of follow-up after initial PIT were evaluated. Clinical characteristics, prior treatments, PIT illumination techniques, treatment response, overall survival, EBV-DNA levels, and treatment-related adverse events were analyzed.

2026 ASCO annual meeting COI Disclosure
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I have no conflict of interests related to this presentation

In recurrent NPC, PIT demonstrated a high local response rate (86%) in this real-world cohort, with responses lasting > 2 months

Patients

Age（at initial treatment）	63yo（range：36–85yo）
Sex M : F	29 : 14
Disease status	
Recurrence	36 (83.7%)
Residual disease	3 (7.0%)
Others	4 (9.3%)
Prior treatment	CRT 33 (80.5%)
	RT alone 8 (19.5%)
Radiation dose 30–74.4 Gy	

Adverse events

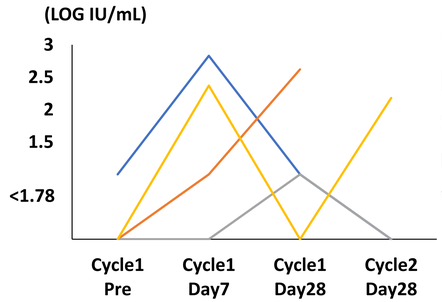
Grade ≥3 TEAEs: 10/43 (23%)

Grade ≥3 TRAEs: 7/43 (16%)

Osteomyelitis and mucositis were the most common grade ≥3 adverse events (5 cases), highlighting the importance of careful local infection control.

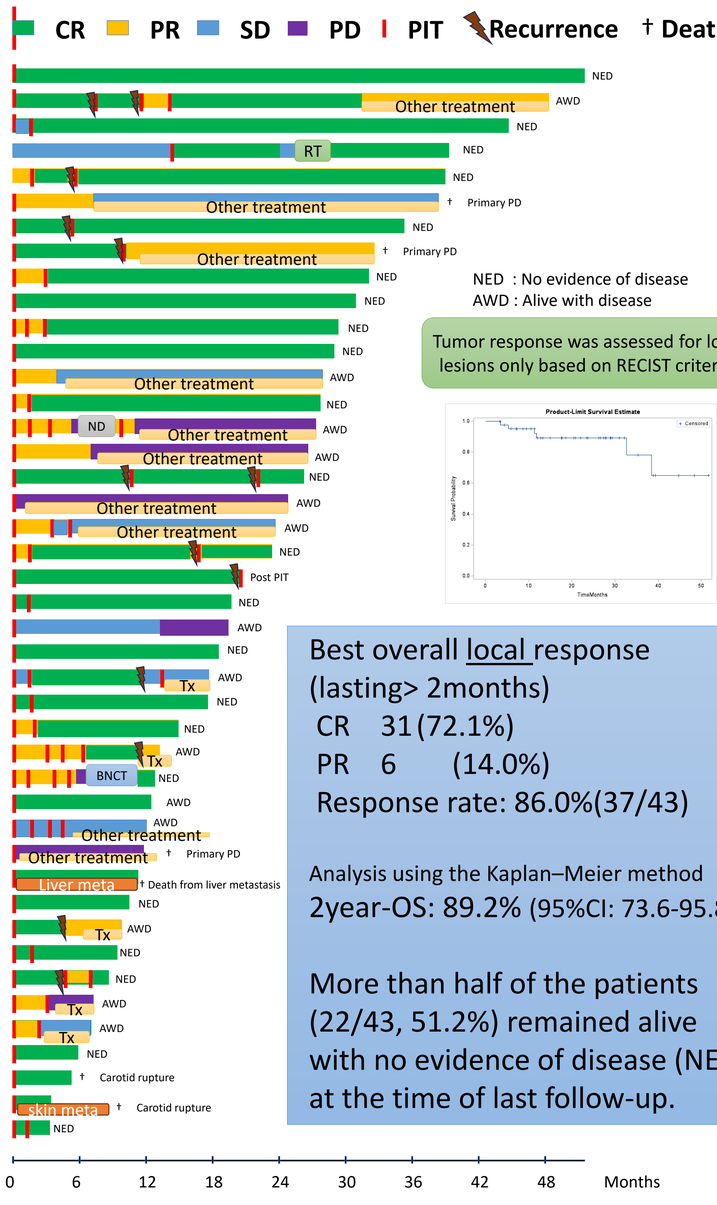
Two fatal carotid hemorrhages occurred, possibly in association with underlying osteomyelitis.

EBV-DNA



75% (3/4) showed elevated EBV-DNA levels on Cycle1 Day7, suggesting that EBV-DNA levels may reflect biological changes associated with PIT treatment.

Swimmer Plot (RECIST-based local tumor response)



NED : No evidence of disease
AWD : Alive with disease

Tumor response was assessed for local lesions only based on RECIST criteria.

Best overall local response (lasting> 2months)

CR 31 (72.1%)

PR 6 (14.0%)

Response rate: 86.0%(37/43)

Analysis using the Kaplan–Meier method

2year-OS: 89.2% (95%CI: 73.6-95.8)

More than half of the patients (22/43, 51.2%) remained alive with no evidence of disease (NED) at the time of last follow-up.