ASSESSING INTERFERON-ALPHA MONOTHERAPY IN PATIENTS WITH ADVANCE OR METASTATIC RECTAL CELL CARCINOMA

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OBJECTIVES: The objective was to evaluate the clinical efficacy and safety of interferon-alpha 2a (IFN) in the treatment of advanced/metastatic rectal cell carcinoma in treatment-naive patients. METHODS: Studies were retrieved from Embase, PubMed, Cochrane library databases using relevant search strategies. Randomized controlled trials, which compared IFN with other pharmacological interventions/best supportive care (BSC), were included according to prespecified inclusion/exclusion criteria. The outcomes of interest were overall survival (OS), progression free survival (PFS), response rate (RR), and adverse events (AEs). Two reviewers independently extracted data from the included studies. Data were analyzed using RevMan (5).

RESULTS: Of the 736 studies identified, seven studies met the inclusion criteria. In total, 1147 patients were randomized to IFN, and 1130 were randomized to comparator interventions. Two studies reported comparison with interferon-alfa 2-IL-2, two with BSC and one each with sorafenib, sunitinib, and temsirolimus. Median OS ranged from 9 to 21.8 months with IFN. Progression-free survival ranged from 1.9 to 5.6 months and overall RR ranged from 4.83% to 12.27% with IFN. Sorafenib had significantly better overall RR (P < 0.001), PFS (P < 0.001), and OS (P < 0.01) compared to IFN. Sunitinib and temsirolimus had better overall RR than IFN (P < 0.01). Results of meta-analysis demonstrate that IFN has better overall RR than BSC (OR: 2.51 [95% CI: 0.87, 7.27]; P = 0.089) and similar RR as IL-2 (OR: 1.09 [95% CI: 0.48, 2.45]; P = 0.836). The AE profile (GI, gastrointestinal, vascular, infectious, and blood disorders) was similar with IFN and comparators. CONCLUSIONS: Survival benefit with IFN-naïve patients had lower median survival. Clinical and economic burden of toxicities are different toxicity profiles and the costs associated with managing toxicities differ between the two drugs. Cost of toxicities treated in the inpatient setting ranged from $10,213 (hypertension and skin rash) to $15,787 (wound-healing complications). Inpatient cost per event for GI perforation is the highest at $13,240, hemorrhage $12,956, infusion reaction $10,326, and hypertension $8453, while inpatient cost per event for skin rash and hypoglycemia is among the lowest at $4423 and $6174, respectively.

CONCLUSIONS: The selected cohort has shown to be more prevalent pathologies. The selected cohort has shown to be more prevalent pathologies. The selected cohort has shown to be more prevalent pathologies. The selected cohort has shown to be more prevalent pathologies. The selected cohort has shown to be more prevalent pathologies. The selected cohort has shown to be more prevalent pathologies.