Analysis of Torisel®: Adverse Events, Extravasation & Safety Signals

FDAble
Search & Analyze FDA Data
860.368.0332
www.fdable.com

Background and Summary

Torisel® (temsirolimus) is an intravenously administered medication for the treatment of advanced renal cell carcinoma [1]. The U.S. Food and Drug Administration (FDA) is currently evaluating Torisel® for "**potential** signals of serious risks / new safety information" [2] using data from its Adverse Events Reporting System (AERS). This ongoing evaluation stems from reports associating **Torisel®** with **infusion site extravasation** [3]. Extravasation of other intravenously-administered chemotherapeutics is sometimes associated with **tissue necrosis** [4], and we believe it is likely that the FDA is investigating extravasation of Torisel® for reports of similar types of adverse reactions.

In this report:

- We present a statistical analysis indicating that extravasation is a potential safety signal for Torisel®.
- We predict the FDA will

Analysis of Extravasation Adverse Events

Extravasation is a Potential Safety Signal for Torisel®

We first wanted to determine whether extravasation was a potential safety signal for Torisel®, as has been reported by the FDA. We assessed this possibility by asking whether extravasation is more frequently reported in adverse event cases that report Torisel® than in cases that do not report Torisel® [5].

Figure 1 (**blue** symbols) shows that **extravasation is more than 30-fold more frequently reported** in cases reporting Torisel® than in cases where Torisel® is not reported (2.5% vs. 0.055%, $p < 0.001$) [6], indicating that **extravasation is a potential safety signal for Torisel®** [5].

Extravasation is a Potential Safety Signal for Torisel® When Compared to a Collection of Intravenously Administered Anticancer Medications

It is conceivable that the relatively high reporting frequency of extravasation for Torisel® when compared to non-Torisel® reports is due to the fact that most other medications are not administered intravenously, and as a consequence they are unlikely to be associated with reports of extravasation, thereby artificially inflating the potential safety signal for Torisel®. To assess this possibility, we also compared the frequency of reporting of extravasation for Torisel® to that of a collection of intravenously administered anticancer agents (cisplatin, carboplatin, doxorubicin, docetaxel, epirubicin, paclitaxel, ifosfamide and mitoxantrone).

Figure 1 (**green** symbols) shows that extravasation is still more than **8-fold more frequently reported** in cases where Torisel® is reported than in cases where these other intravenous medications are reported (2.5% vs. 0.24%, $p < 0.001$) [6], indicating that extravasation is a potential safety signal for Torisel® even when controlling for its route of administration and its use as a chemotherapeutic agent.

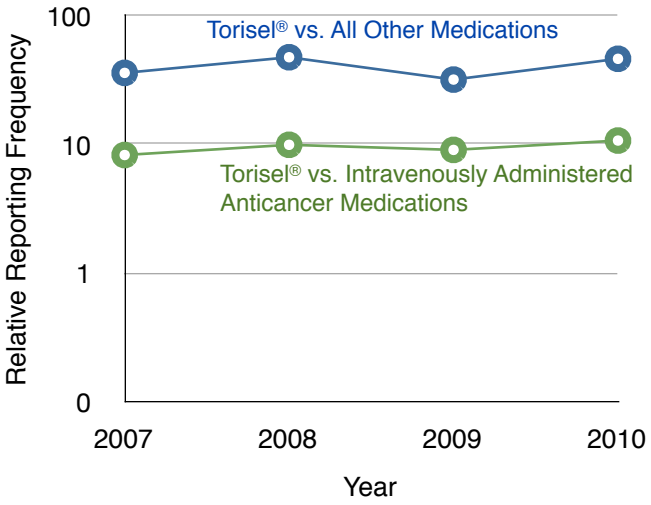

Figure 1. Relative Reporting Frequency of Extravasation for Torisel® compared to non-Torisel® cases or a Collection of Intravenously Administered Anticancer Agents from 2007 – 2010.

See Complete Report for Additional Information.