# Safety of Combining Radiotherapy With Sacituzumab Govitecan in Patients With Advanced Triple-Negative Breast Cancer: An International Multicenter Cohort Study

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## BACKGROUND

Antibody-drug conjugates (ADC) such as sacituzumab govitecan (SG) have significantly improved outcomes in advanced triple-negative breast cancer (TNBC). However, many patients undergoing SG require radiotherapy (RT) for symptom control or oligoprogression. Clinical data on the safety of concurrent or sequential SG and RT are scarce. We aimed to evaluate the tolerability and survival outcomes associated with combining RT and SG in real-world clinical practice.

## MATERIALS/METHODS

We retrospectively analyzed 303 female patients treated for metastatic or unresectable locally advanced TNBC between August 2021 and May 2025 across multiple oncology centers in Poland, The Czech Republic, and Slovakia. All patients received SG; 66 (21.8%) received RT either prior to (n=33) or during (n=33) SG therapy. Progression-free survival (PFS) was defined as the time from SG initiation to disease progression or death. Overall survival (OS) was defined as the time from SG initiation to death from any cause or last follow-up. Survival was estimated using the Kaplan-Meier method; group comparisons were performed using Fisher's exact test. Analyses were performed with Stata Statistical Software 19.0 (StataCorp LLC, College Station, TX, USA).

## RESULTS

Among the 303 patients, the median PFS was 5.1 months in those who did not receive RT (237 patients, 78.2%) and 4.2 months in those who did (66 patients, 21.8%; p=0.42). The 6-month PFS rates were 42.0% (95% CI, 35.3-48.5%) and 36.9% (95% CI, 24.5-49.3%), respectively. Median OS was 11.9 months in the non-RT group versus 9.3 months in the RT group (p=0.14), with 12-month OS rates of 49.5% (95%CI, 42.1-56.4%) and 36.2% (95% CI, 23.7-48.8%), respectively. Patients in the RT group more frequently had central nervous system metastases (27.3% vs 4.6%, p<0.001), indicating higher baseline disease burden. SG dose reductions occurred in 34.9% of patients receiving RT and 38.4% of those not receiving RT (p=0.35). The most common reason for SG discontinuation in both groups was disease progression. Discontinuation due to adverse events or declining performance status was rare: 1.5% in the RT group and 2.1% in the non-RT group (p=1.00). There were no statistically significant differences in the rates of all grade treatment-related toxicities between groups: neutropenia (74.2% with RT vs 67.5% without RT, p=0.37), diarrhea (15.2% vs 20.7%, p=0.38), anemia (47.0% vs 37.6%, p=0.20), thrombocytopenia (16.9% vs 8.0%, p=0.06), or fatigue (43.3% vs 39.1%, p=0.56). The safety profile of SG was not adversely affected by the addition of RT.

**Figure 1.** Kaplan–Meier curves for progression-free survival in patients who received radiation therapy combined with sacituzumab govitecan versus those who did not receive radiation therapy.

**Table 1**. Radiation sites

| Location | No. of Tx N = 83 [%] |
|---|---|
| Cervical spine | 2 [2.4%] |
| Thoracic spine | 11 [13.3%] |
| Lumbar spine | 6 [7.2%] |
| Pelvis | 7 [8.4%] |
| Other bones (skull, extremities, ribs) | 6 [7.2%] |
| Brain | 28 [33.7%] |
| Lung | 2 [2.4%] |
| Liver | 2 [2.4%] |
| Breast/Chest wall ± lymph nodes | 15 [18.1%] |
| Other (lymph nodes, retroperitoneum) | 4 [4.8%] |

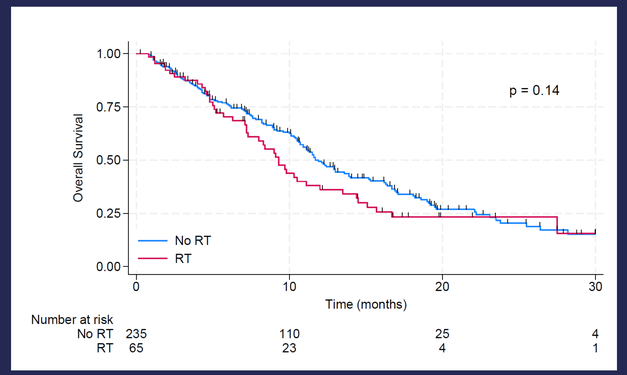
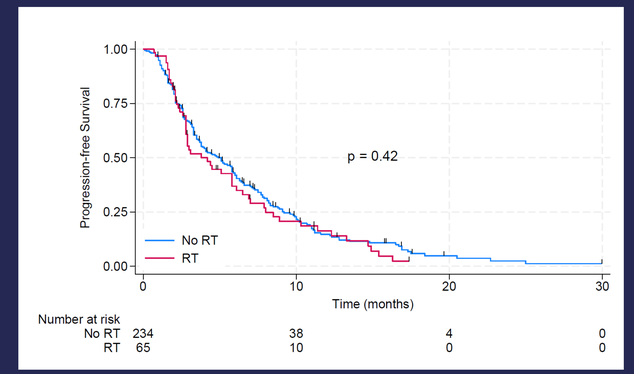



**Figure 2.** Kaplan–Meier curves for overall survival in patients who received radiation therapy combined with sacituzumab govitecan versus those who did not receive radiation therapy.




## CONCLUSIONS

In this large real-world multicenter cohort, the addition of radiotherapy to sacituzumab govitecan appearedsafe and was not associated with increased toxicity, dose reductions, or treatment discontinuation. The modest differences in survival outcomes likelyreflect greater disease burden, particularly CNS involvement, in patients receiving RT. Prospective studies are needed to optimize the integration of RT withADC-based therapies in advanced TNBC.

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