

Safety and pharmacokinetics of ONC201 (dordaviprone) administered two consecutive days per week in pediatric patients with H3K27M-mutant glioma

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## Abstract

**Background:** This study evaluated the safety and pharmacokinetics (PK) of oral ONC201 administered twice-weekly on consecutive days (D1D2) in pediatric patients with newly diagnosed DIPG and/or recurrent/refractory H3 K27M glioma.

**Methods:** This phase 1 dose-escalation and expansion study included pediatric patients with H3 K27M-mutant glioma and/or DIPG following  $\geq 1$  line of therapy (NCT03416530). ONC201 was administered D1D2 at three dose levels (DLs; -1, 1, and 2). Actual administered dose within DLs was dependent on weight. Safety was assessed in all DLs; PK analysis was conducted in DL2. Patients receiving once-weekly ONC201 (D1) served as a PK comparator.<sup>1</sup>

**Results:** Twelve patients received D1D2 ONC201 (DL-1, n=3; DL1, n=3; DL2, n=6); no dose-limiting toxicities or grade  $\geq 3$  treatment-related adverse events occurred. PK analyses at DL2 (D1-250mg, n=3; D1-625mg, n=3; D1D2-250mg, n=2; D1D2-625mg, n=2) demonstrated variability in C<sub>max</sub>, AUC<sub>0-24</sub>, and AUC<sub>0-48</sub>, with comparable exposures across weight groups. No accumulation occurred with D1D2 dosing; the majority of ONC201 cleared before administration of the second dose. C<sub>max</sub> was variable between groups but did not appear to increase with D1D2 dosing. AUC<sub>0-48</sub> was greater with D1D2 than once-weekly.

**Conclusions:** ONC201 given D1D2 was well-tolerated at all DLs and associated with greater AUC<sub>0-48</sub>.

**Keywords:** ONC201, dordaviprone, H3 K27M mutation, dose optimization

**Key points:**

- ONC201 administered twice-weekly on consecutive days (D1D2) did not result in DLTs or treatment-related adverse events leading to discontinuation.
- As expected, D1D2 ONC201 administration resulted in greater exposure, but did not lead to accumulation.

**Importance of Study:** ONC201 has previously demonstrated promising efficacy and safety in patients with H3 K27M-mutated diffuse glioma, a disease associated with exceptionally poor survival. Prior trials evaluated once-weekly or once-every-three-week administration of ONC201; this dose optimization study evaluated the safety and pharmacokinetics of twice-weekly ONC201 administered on two consecutive days in pediatric patients with H3 K27M-mutant glioma. Safety was comparable to once-weekly administration, and dose escalation proceeded to the highest dosing level without any dose-limiting toxicities. Pharmacokinetic analyses demonstrated no accumulation with twice-weekly ONC201 administration. Dose optimization remains an important consideration in clinical trials of novel compounds; this analysis suggests that twice-weekly administration of ONC201 has comparable safety to once-weekly administration and is currently being evaluated in a large Phase 3 trial (ACTION).

## Background

Diffuse intrinsic pontine glioma (DIPG) is a childhood central nervous system (CNS) cancer for which there currently is no cure. Despite the use of radiation therapy, median progression-free survival is 6 months (95%CI, 5.6-6.4) and overall survival (OS) is 11 months (10.5-11.5).<sup>2</sup> Significant surgical resection is not an option given the location of the tumor<sup>3</sup> and chemotherapy has not shown any benefit to date.<sup>4,5</sup> Molecular analysis of autopsy and biopsy tissue of DIPG have found that up to 70% of DIPGs and 60% of adult thalamic gliomas contain the H3 K27M mutation.<sup>6,7</sup> In 2016, the World Health Organization classified DIPG and other diffuse gliomas with the H3K27M mutation to be a new grade IV termed *diffuse midline glioma, H3 K27M-mutant*. In 2021, the definition was expanded to *diffuse midline glioma, H3 K27-altered* to additionally include diffuse midline gliomas with EZHIP overexpression, which can also cause loss of H3 K27me<sub>3</sub>, similar to the H3 K27M mutation.<sup>8,9</sup> New therapeutic options are desperately needed.

ONC201, the first in the imipridone class of agents, is a small, blood-brain barrier penetrant antagonist of dopamine receptor D2 and an agonist of caseinolytic peptidase P (ClpP). The compound induces the TRAIL pathway in a p53-independent manner, the integrated stress response, and other effects that subsequently lead to tumor cell death.<sup>10-14</sup>

In the first-in-human trial of ONC201 in adults with refractory solid tumors, ONC201 was administered once every 3 weeks at doses ranging from 125–625 mg to identify the recommended phase 2 dose (RP2D); this schedule was selected based upon *in vitro* efficacy, pharmacokinetics (PK), and pharmacodynamic data.<sup>15,16</sup> In that study, the maximum planned ONC201 dose of 625 mg every 3 weeks was reached without dose-limiting toxicity.<sup>15</sup> Subsequent studies in adult cancer patients found that ONC201 administered once-weekly at 625 mg ONC201 was well-tolerated and resulted in increased systemic immunostimulatory activity compared to the every three week schedule.<sup>17</sup>

In a phase 2 study of ONC201 administered once every three weeks in adults with molecularly unselected recurrent glioblastoma, one patient who incidentally harbored the H3 K27M mutation experienced a durable objective response.<sup>18,19</sup> Subsequently, a phase 1 study of ONC201 in pediatric patients with H3 K27M-mutant DMG and/or DIPG initiated in January 2018. This open-label, dose-escalation and dose-expansion trial administered ONC201 as an intact capsule once-weekly following at least one prior course of therapy, which included irradiation. The drug was well tolerated with no  $\geq$  Grade 3 adverse events attributed to ONC201 and the RP2D was the adult equivalent RP2D of 625 mg, scaled by weight.<sup>1</sup> Subsequently, the trial was expanded to include additional arms, including a dose escalation arm of patients who received ONC201 twice weekly on two consecutive days.

In the present report, Day 1 Day 2 dosing regimen was selected to provide prolonged ONC201 exposures over a period of time of at least 48 hours. Per preclinical data, sustained ONC201 exposure was associated with death of newly diagnosed and recurrent glioblastoma cells.<sup>20</sup> The present study evaluated twice-weekly dosing of ONC201 for the first time in patients to assess the applicability of preclinical findings to the clinical setting. Here we describe the RP2D, PK, and safety outcomes of pediatric patients who received ONC201 administered on this schedule.

## **Materials and Methods**

### **Patient Population and Study Design**

ONC014 (NCT03416530) was a phase 1 multi-arm, open-label, dose-escalation study in pediatric patients with DIPG or H3 K27M-mutant glioma. The protocol was reviewed and approved by individual institutions IRB; written informed consent was obtained for all patients. Eligibility included patients with a glioma with the H3 K27M mutation shown by immunohistochemistry or sequencing in a Clinical Laboratory Improvement Amendment-certified laboratory or agreement to postmortem biopsy. Because of the high frequency of H3 K27M mutation in DIPG<sup>7</sup>, tissue confirmation of the

mutation was not required at study entry for patients with DIPG. At study entry, patients were aged 2 to <19 years, had a Karnofsky/Lansky performance status (KPS/LPS) score of  $\geq 50$ , adequate organ function, and a minimum weight of 10 kg. Patients must have completed at least one line of prior therapy, with appropriate washout from anti-cancer therapies before initiating ONC201 treatment; this included five half-lives from any investigational agent, four weeks from cytotoxic therapy (except 23 days for temozolomide and six weeks from nitrosoureas), six weeks from antibodies, or four weeks (or five half-lives, whichever is shorter) from other anti-tumor therapies. For patients who received radiotherapy, patients were at least two weeks from the completion of local radiotherapy (re-irradiation for progressive disease or upfront radiation at initial diagnosis). Evidence of tumor progression/recurrence was not required. Exclusion criteria included patients with diffuse leptomeningeal disease or cerebral spinal fluid dissemination based on investigator assessment. The primary endpoint of the overarching trial was determination of the RP2D; secondary outcomes included safety, PK, and progression free survival.

Intact ONC201 capsules were administered orally twice weekly on two consecutive days; cycles were 21 days, (i.e. each cycle consisting of 6 doses). Dose escalation was performed using a 3+3 design with a dose expansion for six patients at dose level 2 if feasible. Dose cohorts were sequentially designated as -1, 1 and 2 with the target dose per cohort based on the body weight adjusted adult target of 375, 500, and 625 mg, respectively (**Supplementary Table 1**). For patients  $\leq 55$  kg, the dose was allometrically scaled using a power model assuming an average adult weight of 70 kg and an exponent of  $\frac{3}{4}$ .<sup>21</sup> Doses were rounded to the nearest 125 mg capsule. Dose by body weight was 3.1-4.2 mg/kg in dose level -1, 6.3-8.3 mg/kg in dose level 1, and 12.5-16.7 mg/kg in dose level 2. Body weight was assessed at the start of each 21-day cycle and rounded to the nearest 5 kg interval, with consideration of adjusted weight for patients on steroids.

The RP2D was defined as the maximum tolerated dose or maximum administered dose (MAD). Dose limiting toxicity (DLT) was defined as a drug-related adverse event (AE) or abnormal laboratory value

that occurred in the first cycle of treatment, met criteria for DLT in **Supplemental Table 2**, and was assessed as unrelated to disease, disease progression, inter-current illness, or concomitant medications, and was judged by the investigator to be “possibly related”, “probably related” or “definitely related” to ONC201.

Treatment beyond disease progression (including with bevacizumab and/or re-irradiation) was permitted if it was considered in the best interest of the patient and no significant adverse events attributed to the ONC201 were present.

PK data was assessed for patients in all dose levels. For the primary analysis, patients treated with twice-weekly ONC201 at dose level 2 were compared to patients treated with once-weekly ONC201 at dose level 2 in a separate arm of the same clinical trial<sup>1</sup>. For summary analyses of Tmax, Cmax, AUC0-24, and AUC0-48, as well as the plasma-concentration time-curve, twice-weekly patients were compared against patients who received once-weekly ONC201 at dose level 2 and had a matching administered dose (mg). For analyses by body weight, patients treated at dose level 2 in the once- and twice-weekly regimens were included, regardless of actual administered dose (mg).

Sparse plasma PK sampling was collected from all patients on cycle 1 day 1 (C1D1) before ONC201 administration and 0.5, 2, 4, and 24 hours post-dose, with the 24-hour collection occurring prior to treatment on C1D2. For patients receiving twice-weekly dosing, additional samples were collected on cycle 1 day 2 (C1D2), sparse plasma sampling was collected at 0.5, 2, and 4 hours post treatment. In all patients, additional collections occurred on C1D3 (24 hr sample from day 2), C1D8 (pre-dose), C1D15 (pre-dose), and C2D1 (pre-dose); in subsequent cycles, plasma was collected prior to treatment on the first day of even numbered cycles (**Supplementary Figure 1**). The samples were analyzed using 50 mL of K2EDTA plasma by a validated LC/MS-MS method with positive ESI-MRM mode that had a linear range of 1-500 ng/mL. Deuterated ONC201 was used as an internal standard. ONC201 PK parameters were calculated using noncompartmental analysis.



## Study Evaluations

History and physical exam were performed weekly during the first cycle and prior to the start of each subsequent cycle. Laboratory studies including complete blood count (CBC), comprehensive metabolic evaluation, magnesium, phosphorus, uric acid, lactate dehydrogenase (LDH), amylase, and pregnancy test for individuals of child-bearing potential were performed prior to each cycle. A standard 12-lead electrocardiogram (ECG) was performed prior to the start of ONC201 and repeated during therapy as deemed necessary. AEs were assessed following initiation of therapy and continued until 30 days following the last dose of ONC201 using the National Cancer Institute Common Terminology Criteria for Adverse Events (CTCAE) version 5. The cutoff date for analyses was February, 16<sup>th</sup>, 2023.

## Results

### Patient Characteristics

Among 12 patients receiving twice-weekly ONC201, all patients had previously received radiation. Median age was 9 years (range, 4-18 years) and nine patients (75.0%) had a KPS/LPS  $\geq$ 80. The most common tumor location was the pons (n=8, 66.7%), followed by thalamus (n=2, 16.7%), midbrain and spinal cord (each n=1, 8.3%; **Table 1**). H3 K27M status was available in eight patients, of which five (41.7%) were detected by immunohistochemistry and three (25.0%) by next generation sequencing. Median time from initial diagnosis was 5.9 months (range, 3.0-13.1) and median time from prior radiation to ONC201 initiation was 60.5 days (range, 29-290). Median duration of treatment was 3.2 months (range, 1.2-28.3). Eight patients (66.7%) were treated prior to recurrence. Three patients (25.0%) were treated following a second course of radiation therapy. Dose level assignment and actual administered dose are summarized in **Supplementary Table 3**.

## Safety

The trial proceeded through dose level 2 without any DLTs. Three patients were treated on dose level -1 and 1, and a total of six patients were treated at dose level 2 (three initially and three in dose expansion). All patients in the twice-weekly treatment regimen experienced at least one treatment-emergent AE (TEAE). Grade 3 or higher TEAEs occurred in five (41.7%) patients (dose level -1, n=2; dose level 1, n=1; dose level 2, n=2), the most common of which was gait disturbance (n=3, 25.0%; **Table 2**). No grade 3 or higher TEAEs were determined to be related to treatment.

Treatment-related TEAEs (TR-TEAEs) occurred in eight patients (66.7%); all TR-TEAEs were grade 1-2 in severity and included fatigue (n=2, 16.7%), headache, nausea, anemia, diarrhea, alanine aminotransferase increase, hypertension, lymphocyte count decreased, amylase increased, ataxia, face edema, hypophosphatemia, insomnia, and weight increased (each n=1, 8.3%).

Four patients experienced serious AEs that were not considered treatment-related by the investigator, including dysphagia (n=2, 16.7%), vomiting, fatigue, gait disturbance, pyrexia, headache, and hydrocephalus (each n=1, 8.3%). No treatment-related SAEs occurred. No AEs resulted in a dose reduction or DLT, regardless of causality. One patient discontinued ONC201 due to AEs considered unlikely to be related to treatment (8.3%). After onset of these AEs, an MRI confirmed disease progression, which was felt by the investigator to be the cause of the AEs.

## Pharmacokinetic Assessment

Among six patients treated with twice-weekly ONC201 at dose level 2, data for PK analysis was available for four patients (250 mg, n=2; 625 mg, n=2). In order to evaluate differences in the pharmacokinetics of once- and twice- weekly dosing, patients who received ONC201 once-weekly at dose level 2 with matching administered doses (250, n=3; 625, n=3) were used as a comparator.

When comparing like doses within dose level 2, median time of maximum concentration (T<sub>max</sub>) was 14.25 (250 mg) and 25.25 hours (625 mg) for twice-weekly patients, compared to 0.5 (250 mg) and 2 (625 mg) hours for patients receiving once-weekly ONC201 (**Figure 1; Supplementary Table 3**).

Mean C<sub>max</sub> was 2670 and 3700 ng/mL following twice-weekly administration of 250 (n=2) and 625 mg ONC201 (n=2), respectively. For the same administered doses in the once-weekly arm, mean C<sub>max</sub> was 4743 and 1787 ng/mL (**Supplementary Table 4**). Across cohorts, C<sub>max</sub> was variable. Noticeably, C<sub>max</sub> did not appear to increase with successive twice-weekly doses. As expected, AUC<sub>0-48</sub> was greater in patients receiving twice-weekly ONC201 compared to the once-weekly weekly regimen; this trend was consistent across doses (250 mg and 625 mg).

Following noncompartmental analysis and reporting of PK parameters for direct comparison of doses within dose level 2, an exploratory analysis was conducted to evaluate the effect of body weight on exposure parameters AUC<sub>0-24</sub>, AUC<sub>0-48</sub>, and C<sub>max</sub>, which were plotted by weight and identified by dose (**Figure 2**). As dose level 2 administered ONC201 in the range of 12.5 to 16.7 mg/kg, all patients in dose level 2 with available data were included, regardless of actual administered dose. The analysis for AUC<sub>0-24</sub> and AUC<sub>0-48</sub> contained four patients from the twice-weekly dosing arm (250 mg, n=2; 625 mg, n=2). The analysis for C<sub>max</sub> contained six patients from the twice-weekly dosing arm (250 mg, n=2; 375 mg, n=1; 500 mg, n=1; 625 mg, n=2), which was inclusive of two patients excluded from AUC analyses due to lack of Day 2 pre-dose timepoints, which were required for AUC calculation. For AUC<sub>0-24</sub>, AUC<sub>0-48</sub>, and C<sub>max</sub> body weight analyses, 18 patients from the once-weekly dosing arm (125 mg, n=1; 250 mg, n=3; 375 mg, n=9, 500 mg, n=2; 625 mg, n=3) served as a comparator. There was variability within doses for all exposure parameters. As identified in non-compartmental analysis, AUC<sub>0-48</sub> exposures trended higher in twice-weekly dosing; this trend was maintained across increasing body weight. C<sub>max</sub> analysis was variable, displaying the greatest exposures following 250 mg in lower body weight patients (~25 kg).

## Discussion

Among pediatric patients with H3 K27M glioma, a twice-weekly dosing on consecutive days regimen was well tolerated and did not result in DLTs or TR-TEAEs leading to discontinuation, which was comparable to previously reported once-weekly ONC201 administration.<sup>1</sup> Furthermore, TR-TEAEs observed with twice-weekly on consecutive day dosing were limited to Grade 1-2 severity, of which the most common was fatigue.

Relative to once-weekly dosing, twice-weekly ONC201 administration resulted in a greater exposure over 48 hours after dosing (AUC<sub>0-48</sub>); this was not unanticipated since the twice-weekly regimen provides twice the weekly dose. Mean C<sub>max</sub> in the twice-weekly population was 2670 (250 mg) and 3700 (625 mg) ng/mL. This exceeded the target therapeutic concentration of 1000 ng/mL, which was established based on the approximate EC<sub>50</sub>s for ClpP and DRD2 identified in preclinical research.<sup>12,13,18,20</sup> Exposure varied within doses given to the same body weight and across increase body weight, however, ONC201 remained well tolerated in lower body weight patients. The small population size (twice-weekly n=2; once-weekly, n=3, once-weekly) in the PK analysis as well as the sparse PK sampling schedule contributed to the PK variability observed on study. The pronounced variability observed for C<sub>max</sub> in particular may be attributed to the lack of PK sampling in between 0.5 to 2 hours post dose, the range of the once-weekly T<sub>max</sub>.

Previously, an integrated analysis was conducted to evaluate the safety and efficacy of ONC201 monotherapy in adult and pediatric patients with recurrent H3 K27M-mutant diffuse midline glioma; most patients were treated with once-weekly (n=49), with the exception of one patient who was treated once every three weeks (n=1). The overall response rate was 20.0% (95%CI, 10.0–33.7) by RANO-HGG criteria. The median time to response was 8.3 months (range, 1.9–15.9) and responses were durable, with a median duration of response of 11.2 months. Median OS was 13.7 months (95%CI, 8.0–20.3). Similar to the present analysis, treatment was generally well tolerated, with no discontinuations or deaths due to TRAE, and no Grade 4 TRAEs reported.<sup>22</sup> In the

present analysis, the mixed population of patients with various tumor sites and recurrent/non-recurrent disease precluded interpretation of treatment efficacy using this regimen. A comprehensive analysis of the efficacy of twice-weekly dosing is therefore warranted. To this end, the Phase 3 ACTION trial is evaluating the efficacy and safety of both once- and twice-weekly ONC201 in pediatric and adult patients with H3 K27M-mutant diffuse glioma (NCT05580562; Arrillaga-Romany, 2023).

A limitation of this analysis is the sparse sampling within the limited PK dataset. It is not known if the trends highlighted in this small cross-cohort comparison will carry over into the larger patient population. Additional data and analysis will be needed to confirm trends.

Dose optimization remains an important consideration when developing novel cancer therapies; the present analysis demonstrates comparable safety of once-weekly and twice-weekly on consecutive days treatment regimens, as well as an increase in exposure. Given the preclinical data suggesting added benefit of prolonged ONC201 exposure<sup>20</sup>, the twice-weekly on consecutive days regimen of ONC201 merits additional investigation to determine its utility in clinical use. The ongoing Phase 3 clinical trial for ONC201 will expand upon the present findings of this clinical evaluation, including administration of crushed capsules in food/liquid, and increased population size to allow better interpretation of the data and utility of the twice-weekly on consecutive days regimen in clinic.

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## **Data Availability**

Patient-level data collected as part of this study is not available for analysis by independent researchers. Aggregated data will be provided via publicly accessible databases as required by law. For more information, please contact [clinicaltrials@chimerix.com](mailto:clinicaltrials@chimerix.com).

## **Conflict of Interest**

Yazmin Odia has received clinical trial support from Chimerix, Inc. Cassie Kline has received clinical trial funding and support from Chimerix, Inc. Sabine Mueller has received clinical trial funding and support from Chimerix, Inc. Shamia L. Faison is a contract employee of Chimerix, Inc. Joshua E. Allen is an employee of Chimerix, Inc, owns Chimerix, Inc. stock, and owns licenses with milestones and royalties related to ONC201 and other imipridones. Odin J. Naderer, Samuel C. Ramage, and Rohinton S. Tarapore are employee of Chimerix, Inc. and own Chimerix, Inc. stock. Susan Lynne McGovern has served on advisory boards for Chimerix, Inc. Carl Koschmann, Nicholas A. Vitanza, Peter de Blank, Dolly Aguilera, Jeffrey Allen, Doured Daghistani, Matthew Hall, Ziad Khatib, Tobey MacDonald, Soumen Khatua, Wafik Zaky, and Sharon Gardner have no conflict of interests to declare.

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## **Author Contributions**

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**Manuscript Review:** All YO, CKoshmann, NAV, PD, DA, JA, DD, MH, ZK, CKline, TM, SM, SLF,  
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## Figure Legends

**Figure 1.** ONC201 Plasma Concentration-Time Curves for Patients at Dose Level 2 receiving 250 mg (A) or 625 mg (B) ONC201 once or twice-weekly.<sup>a</sup> Red, once-weekly; blue, twice-weekly on consecutive days.

**Figure 2.** ONC201 AUC<sub>0-24</sub> (A), AUC<sub>0-48</sub> (B), and C<sub>max</sub> (C) by Body Weight Among Patients Treated at Dose Level 2

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**Table 1. Demographic and Baseline Characteristics**

<b>Parameter</b>	<b>Patients (N=12)</b>
Age, median (range), years	9 (4–18)
Female sex, n (%)	8 (66.7)
Race, n (%)	
White	9 (75.0)
Unknown	2 (16.7)
Other	1 (8.3)
Body weight, median (range), kg	34.7 (15.3–63.7)
KPS/LPS, median (range)	
<80	3 (25.0)
≥80	9 (75.0)
Time from diagnosis, median (range), month	5.9 (3.0-13.1)
Primary tumor location, n (%)	
Pons	8 (66.7)
Thalamus	2 (16.7)
Midbrain	1 (8.3)
Spinal cord	1 (8.3)
Diagnosis, n (%)	
Diffuse midline glioma, H3 K27M-mutant	8 (66.7)
DIPG (biopsied)	4 (33.3)
Non-DIPG (biopsied)	4 (33.3)
DIPG (non-biopsied)	4 (33.3)
Multifocal disease, n (%)	
Yes	2 (16.7)
No	10 (83.3)
Disease status, n (%)	
Post radiation, not recurrent	8 (66.7)
Recurrent	4 (33.3)
H3 K27M mutation method, n (%)	
Immunohistochemistry	5 (41.7)
Next-generation sequencing	3 (25.0)
H3.3 K27M mutation	3 (25.0)
H3.1 K27M mutation	0
Unknown	4 (33.3)
Number of recurrences, n (%)	
0	8 (66.7)
1	2 (16.7)
≥2	2 (16.7)
Time from prior radiation, median (range), days	60.5 (29.0-290)
Re-irradiation, n (%)	3 (25.0)
Dexamethasone daily dose, median (range), mg	0.2 (0–4)

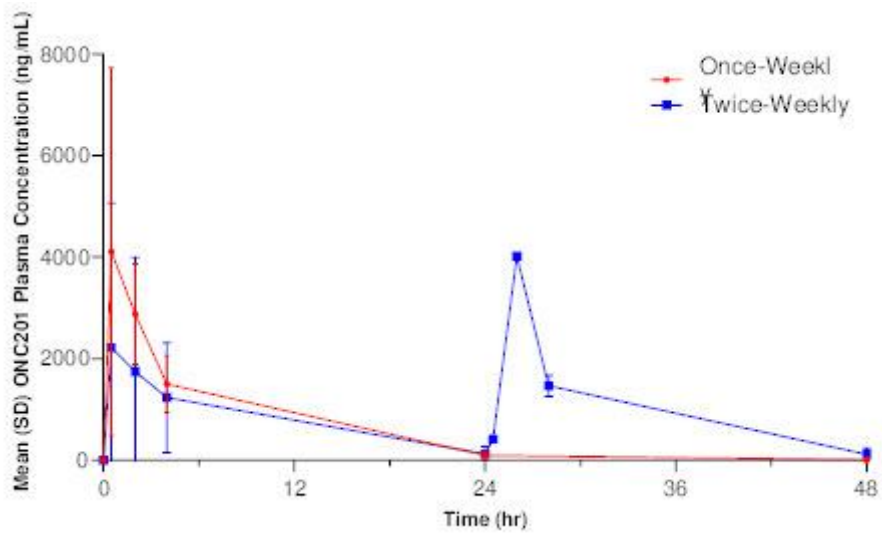
**Table 2.** Summary of Safety

	Patients (N=12)			
	All Causality		Treatment-related	
	All grades	Grade ≥3	All grades	Grade ≥3
Patients with any TEAE, n (%) <sup>a</sup>	12 (100.0)	5 (41.7)	8 (66.7)	0
Fatigue	8 (66.7)	1 (8.3)	2 (16.7)	0
Headache	7 (58.3)	0	1 (8.3)	0
Vomiting	6 (50.0)	1 (8.3)	0	0
Decreased appetite	4 (33.3)	0	0	0
Gait disturbance	4 (33.3)	3 (25.0)	0	0
Hyperglycemia	4 (33.3)	0	0	0
Hyponatremia	4 (33.3)	0	0	0
Nausea	4 (33.3)	0	1 (8.3)	0
Anemia	3 (25.0)	0	1 (8.3)	0
Blood lactate dehydrogenase increased	3 (25.0)	0	0	0
Diarrhea	3 (25.0)	0	1 (8.3)	0
Muscular weakness	3 (25.0)	0	0	0
Pyrexia	3 (25.0)	0	0	0
Alanine aminotransferase increased	2 (16.7)	0	1 (8.3)	0
Dehydration	2 (16.7)	1 (8.3)	0	0
Dysarthria	2 (16.7)	0	0	0
Dysphagia	2 (16.7)	1 (8.3)	0	0
Facial nerve disorder	2 (16.7)	0	0	0
Hemiparesis	2 (16.7)	1 (8.3)	0	0
Hypercalcemia	2 (16.7)	0	0	0
Hypermagnesemia	2 (16.7)	0	0	0
Hypertension	2 (16.7)	1 (8.3)	1 (8.3)	0
Illrd nerve disorder	2 (16.7)	0	0	0
Lymphocyte count decreased	2 (16.7)	0	1 (8.3)	0
Vith nerve disorder	2 (16.7)	0	0	0
Accessory nerve disorder	1 (8.3)	0	0	0
Amylase increased	1 (8.3)	0	1 (8.3)	0
Anal incontinence	1 (8.3)	0	0	0
Anxiety	1 (8.3)	0	0	0
Aspartate aminotransferase increased	1 (8.3)	0	0	0
Aspiration	1 (8.3)	0	0	0
Ataxia	1 (8.3)	0	1 (8.3)	0
Chills	1 (8.3)	0	0	0
Confusional state	1 (8.3)	0	0	0
Conjunctival irritation	1 (8.3)	0	0	0
Conjunctivitis	1 (8.3)	0	0	0
Constipation	1 (8.3)	0	0	0
Cushingoid	1 (8.3)	0	0	0
Dysuria	1 (8.3)	0	0	0
Face oedema	1 (8.3)	0	1 (8.3)	0
Facial asymmetry	1 (8.3)	0	0	0

Glossopharyngeal nerve disorder	1 (8.3)	1 (8.3)	0	0
Hydrocephalus	1 (8.3)	1 (8.3)	0	0
Hyperkalaemia	1 (8.3)	0	0	0
Hyperphosphataemia	1 (8.3)	0	1 (8.3)	0
Hypocalcaemia	1 (8.3)	0	0	0
Hypoglossal nerve disorder	1 (8.3)	0	0	0
Hypomagnesaemia	1 (8.3)	0	0	0
Hypophosphataemia	1 (8.3)	0	0	0
Insomnia	1 (8.3)	0	1 (8.3)	0
Intraocular pressure increased	1 (8.3)	0	0	0
Musculoskeletal pain	1 (8.3)	0	0	0
Neuropathy peripheral	1 (8.3)	0	0	0
Oedema peripheral	1 (8.3)	0	0	0
Optic nerve disorder	1 (8.3)	0	0	0
Renal colic	1 (8.3)	0	0	0
Sinus tachycardia	1 (8.3)	0	0	0
Skin infection	1 (8.3)	0	0	0
Somnolence	1 (8.3)	0	0	0
Stomatitis	1 (8.3)	0	0	0
Urinary hesitation	1 (8.3)	0	0	0
Urinary incontinence	1 (8.3)	0	0	0
Urinary tract infection	1 (8.3)	0	0	0
Visual impairment	1 (8.3)	1 (8.3)	0	0
Weight increased	1 (8.3)	0	1 (8.3)	0
White blood cell count decreased	1 (8.3)	0	0	0

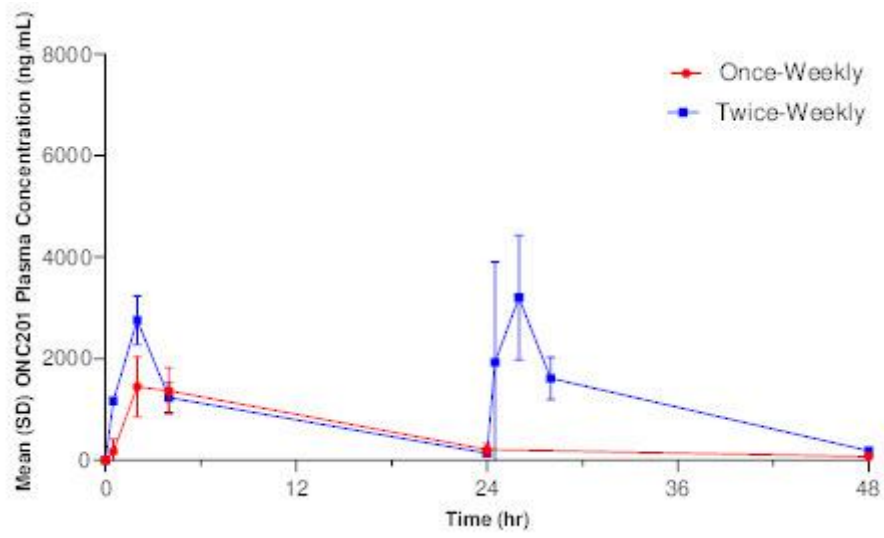
<sup>a</sup>Some patients experienced more than one TEAE

Figure 1A



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Figure 1B



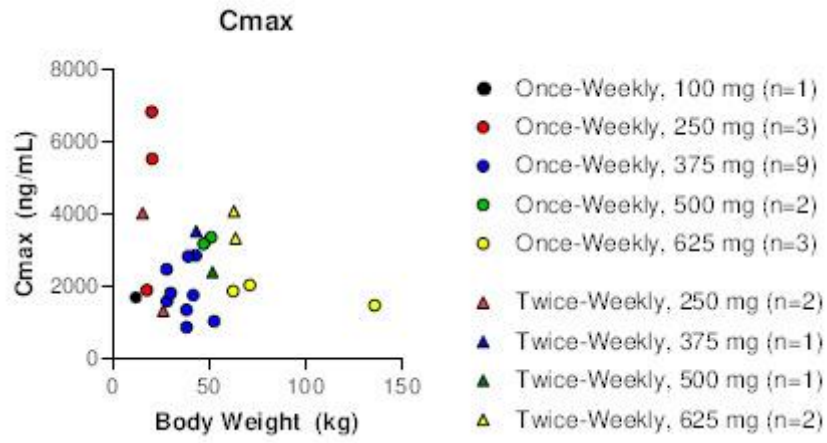
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Figure 2C



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