

# AI搭載ツール「Safety Assistant」 ユーザーガイド

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※タイトルをクリックすることで該当スライドへ移行します

# Safety Assistantユーザーガイド

AI駆動型のSafety Assistantは、OFF-Xのコンテンツのみに基づいた多様な安全性データへの迅速なアクセスを提供し、PV、前臨床、臨床などにおける医薬品安全性関連業務担当者の業務効率化を実現します。

Safety Assistant を使用することで、医薬品やターゲット全体に渡った時間のかかるマニュアル作業による検索の必要性を大幅に減少させ、ユーザーは、基盤となる情報源に対する高い信頼性を維持しながら、安全性シグナルの迅速な特定、前臨床段階と臨床段階間におけるトランスレーショナルな安全性リスクの理解、重複する毒性・クラス効果・薬剤特有の効果の評価、オフターゲット／オンターゲットの安全性に関する検討を行うことが可能となります。

## 2026年6月10日時点におけるAI Assistantの主な制約について：

- a. OFF-XがカバーするRWEデータ（FAERSおよびJADER）の利用
- b. パスウェイマップの利用
- c. （独自のテキストマイニング手法を用いて特定された）Additional referencesの利用
- d. グラフ、レポート、ダウンロード可能なファイルなどの視覚的なアウトプットの生成

※現在AI Assistantより返される回答は英語のみとなります。

# Safety Assistantの機能・活用シーン

# より多くの仕事をより速く

専門家がキュレーションした信頼性の高いデータを強化

質問を入力するだけ

複雑なドラッグやターゲットの安全性に関する  
質問に即座に回答

さらなる調査のためのデータソースへのリンクを  
提供

価値の高いニッチな知見（例：中止理由）  
を抽出

チャット履歴で文脈を把握し、手戻りを防止

Which are the main organ toxicities of IRAK4? Please provide a table summarizing the findings with the number of alerts

How was this generated? \*

Intention — You asked for the main organ toxicities (System Organ Class categories) associated with drugs whose primary target is IRAK4, and requested a table summarizing the findings with the number of alerts.

Answer — The main organ toxicities (SOC categories) associated with IRAK4-targeting drugs, ranked by number of safety alerts, are as follows. The evidence score reflects the strength of association between IRAK4 and each SOC. All 350 available results are included in this summary.

Table —

System Organ Class (SOC)	Target Score	Alert Count
Infections and infestations	High Evidence	82
Gastrointestinal disorders	Medium Evidence	44
Investigations	Low Evidence	40
Nervous system disorders	Medium Evidence	39
Musculoskeletal and connective tissue disorders	Low Evidence	32
General disorders and administration site cond.	Medium Evidence	25
Blood and lymphatic system disorders	Low Evidence	16
Cardiac disorders	Low Evidence	13
Respiratory, thoracic and mediastinal disorders	Low Evidence	12

# 【要約】 医薬品の開発中止理由の 調査

- 通常、開発中止に関する情報を得るにはSafety alertsにてFilter> Source Type | Alert context> Discontinuation/Terminationの設定をする必要があるが、AI Assistantを利用することで効率よく情報を抽出

Wednesday, Jun 10

Magrolimabの開発中止理由を挙げてください

How was this generated? ▾

**Intention** — The question asked for the reasons for discontinuation of magrolimab development. The search was filtered by:

- **Drug:** magrolimab
- **Alert title:** discontinuation, termination, terminated development, development discontinued, program halted, program terminated, program discontinued

**Answer** — The primary reason for the discontinuation of magrolimab development was an increased risk of death, mainly due to infections and respiratory failure, observed in the ENHANCE-3 phase III trial for acute myeloid leukemia (AML). This risk was also noted in the ENHANCE and ENHANCE-2 studies. The discontinuation was formally announced by Gilead in a company communication dated February 7, 2024. In these studies, patients were receiving magrolimab in combination with azacitidine and venetoclax. No regulatory agency-imposed clinical hold or external regulatory action was identified; the discontinuation was a sponsor decision based on emerging safety data.

Supporting evidence includes:

- **Gilead communication (Feb 7, 2024):** Discontinuation of magrolimab for hematologic malignancies due to increased mortality (mainly infections and respiratory failure) in the ENHANCE-3 trial. [Link below]
- **Clinical trial publications (2023–2025):** Multiple phase I/II and III studies report high rates of anemia, infusion-related reactions, and infections as common adverse events, but the specific trigger for discontinuation was the mortality imbalance in phase III.

# 【要約・表作成】 医薬品有害事象に関する ミニレポートの作成

- OFF-Xに含まれる特定のターゲットやドラッグに関する膨大な毒性・安全性情報を効率よく要約。コピーしてExcelに貼り付けることで簡単にミニレポートを作成。

Wednesday, Jun 10

Nivolumabで報告される主要な毒性5つについて500文字程度で要約してください

How was this generated? ▾

### Intention —

You asked for a summary of the top 5 main toxicities (adverse events) reported for nivolumab, including evidence scores and alert counts, summarized in about 500 characters.

The search was filtered by:

- **Drug:** nivolumab

### Answer —

The top 5 main adverse events reported for nivolumab are:

1. **Immune-mediated adverse reaction** (Very High Evidence, 751 alerts)
2. **Diarrhoea** (Very High Evidence, 379 alerts)
3. **Pneumonitis** (Very High Evidence, 354 alerts)
4. **Fatigue** (High Evidence, 342 alerts)
5. **Rash** (Very High Evidence, 306 alerts)

These findings are based on a total of 17,892 safety alerts for nivolumab in OFF-X. All results are included.

### Summary (approx. 500 characters):

Nivolumab is most frequently associated with immune-mediated adverse reactions, diarrhoea, pneumonitis, fatigue, and rash. These toxicities are supported by high to very high evidence scores and are well-documented across clinical studies and case reports. Immune-related events, especially pneumonitis and rash, are notable for their clinical significance and require careful monitoring.

# 【要約・表作成】 医薬品有害事象に関する ミニレポートの作成

特定のターゲットやドラッグの毒性・安全性情報に関心のある項目ごとに表形式で情報を整理。コピーしてExcelに貼り付けることでそのままレポートとして利用可能。

Nivolumabの前臨床毒性を動物種ごとに表形式で要約してください

Species	Adverse Event	Alert Count	Drug Score
Mouse	Immune-mediated adverse reaction	3	Very High Evidence
Mouse	Dermatitis	2	High Evidence
Mouse	Hepatitis	2	High Evidence
Mouse	Nephritis	2	High Evidence
Mouse	Pneumonitis	2	Very High Evidence
Mouse	Weight decreased	2	High Evidence
...	...	...	...
Monkey	Death neonatal	7	Medium Evidence
Monkey	Abortion spontaneous	5	Low Evidence
Monkey	Developmental delay	3	Not Associated
Monkey	Teratogenicity	3	Not Associated
Monkey	Abnormal organ weight	2	Not Associated
...	...	...	...
Human (in vitro)	Cardiotoxicity	3	Medium Evidence
Human (in vitro)	Myocarditis	2	High Evidence
Human (in vitro)	Colitis	1	High Evidence
Human (in vitro)	Colitis microscopic	1	Medium Evidence
Human (in vitro)	Graft versus host disease	1	High Evidence
Human (in vitro)	Inflammatory bowel disease	1	Low Evidence
Human (in vitro)	Skin disorder	1	High Evidence



# 【抽出】 索引付けされていない情報の抽出

- 現在のOFF-Xでは投与経路や投与量に関する索引付けは行われていないため、これらの情報をAI Assistantを利用することで効率よく抽出

ibandronateにおける有害事象で投与経路別にみられる主要なものを挙げてください。  
その上で、静注、経口で最も多く見られるものをそれぞれ挙げてください。

How was this generated? \*

Intention — This search listed the main adverse events observed for ibandronate, broken down by route of administration (intravenous and oral), and identified the most frequently reported adverse event for each route, including evidence scores and number of alerts. The search was filtered by:

- **Drug:** ibandronate
- **Route of administration:** intravenous, oral

Answer — **1. Main adverse events by route of administration:**

- For both intravenous and oral ibandronate, the main adverse events reported in OFF-X include arthralgia, myalgia, osteonecrosis of jaw, atypical femur fracture, diarrhoea, dyspepsia, and others. The evidence scores for these events are generally High or Very High, indicating strong support in the literature and regulatory sources.
- The total number of safety alerts for oral administration is 145, and for intravenous administration is 95.

**2. Most frequently reported adverse event for each route:**

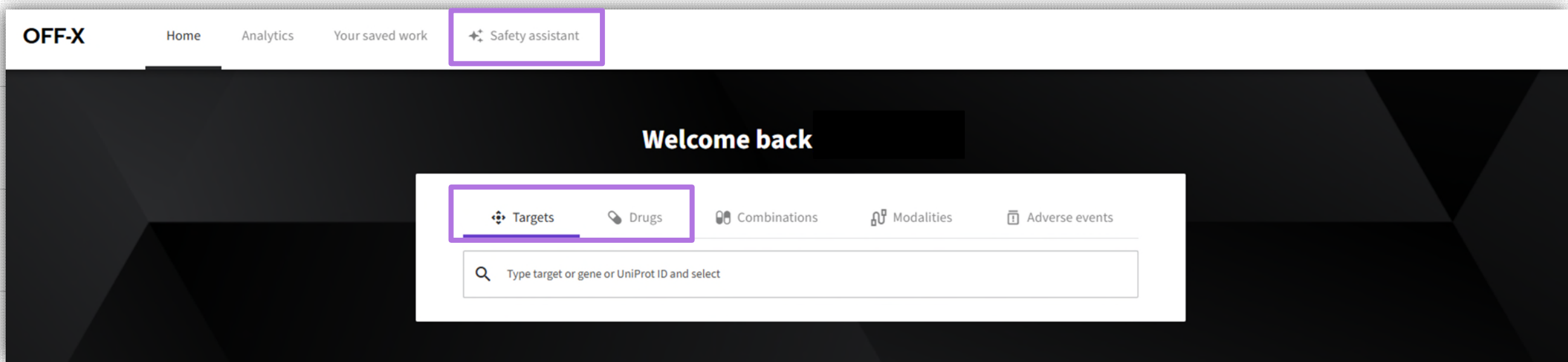
- **Intravenous administration:**
  - The most frequently reported adverse event is **arthralgia** (joint pain), with a High Evidence score and 2 alerts.
- **Oral administration:**
  - The most frequently reported adverse event is also **arthralgia**, with a High Evidence score and 5 alerts.



# Safety Assistantの基本操作

# Safety Assistantユーザーガイド

1. ログイン後のTOP画面中、上部にある「Safety assistant」をクリック。  
(Safety AssistantへはTargets、Drugsからもアクセスが可能です。アクセス方法は[こちら](#)を参照。)



# Safety Assistantユーザーガイド

2. チャット画面へ移行します。検索ボックスに自然言語で質問を入力することで回答を取得することができます。

OFF-X Home Analytics Your saved work Safety assistant New Targets

新規チャット立ち上げ  
チャット履歴（過去の会話を再開することが可能）

Hi what is your question?  
Get answers across drugs and targets from our high-quality, comprehensive, and verified safety data.

Explore target or drug toxicity  
"What are the main organ toxicities of IRAK4 inhibitors?"

Surface safety insights  
"List dose-limiting toxicities, including links to the original sources, reported in phase I trials with Bcl-2 inhibitors"

Assess potential class effects  
"Is lipase increased a class effect of GLP-1 receptor agonists?"

Regulatory safety communications  
"Have any FDA safety communications or label warnings related to anaemia been issued for pacritinib?"

検索ボックスに自然言語で質問を入力し会話を開始

# Safety Assistantユーザーガイド

## 3. 質問に対する回答を確認します。

The screenshot shows the OFF-X Safety Assistant interface. At the top, there are navigation tabs: Home, Analytics, Your saved work, and Safety assistant (marked as 'New'). A search bar on the right contains the text 'Type target or gene or UniProt ID and select'. Below the navigation, the date 'Wednesday, Jun 10' is displayed. A grey box contains the question: 'BCL-2阻害剤で報告された用量制限毒性を情報源へのリンクと共にリストしてください'. Below this, a dropdown menu 'How was this generated?' is visible. The main content area is divided into two sections: 'Intention' and 'Answer'. The 'Intention' section explains the search criteria: 'You asked for a list of dose-limiting toxicities (DLTs) reported for BCL-2 inhibitors, including links to the supporting references. The search was filtered by:'. It lists three filters: Target: BCL-2, Action: Inhibitors, and Alert title: dose-limiting toxicity. The 'Answer' section provides a list of dose-limiting toxicities (DLTs) reported for BCL-2 inhibitors in clinical studies, supported by referenced sources. It lists three categories: 1. Small intestinal obstruction, 2. Grade 2 asymptomatic left ventricular ejection fraction (LVEF) decrease, and 3. Grade 3 pemphigus. Each category includes a reference and details. At the bottom, there is a text input field 'Ask the safety assistant' and an upward arrow button. A footer note reads 'AI-generated content: check for accuracy - About'.

質問がどのように解釈されたのかが表示されます

回答が表示されます（現時点では回答は英語のみとなります）

# Safety Assistantユーザーガイド

## 4. 質問に対する回答の情報源を確認します。

venetoclax, AT-101, BGB-11417, and S55746/BCL201. For more details and additional DLTs, please refer to the full list of alerts and references in the OFF-X platform.

Table —

Dose-Limiting Toxicity (DLT)	Reference & Link
Small intestinal obstruction	<a href="#">J Clin Oncol 27:15s, 2009 (suppl; abstr e14537)</a>
Grade 2 asymptomatic LVEF decrease	<a href="#">EHA 2017, poster E1018</a>
Grade 3 pemphigus	<a href="#">EHA 2017, poster E1139</a>
Grade 4 neutropenia, grade 3 diarrhea, grade 3 respiratory disorder	<a href="#">Blood Adv. 2021 Oct 26;bloodadvances.2021005357</a>
Grade 3 febrile neutropenia, grade 4 diarrhea, hypomagnesemia, grade 3 hyperbilirubinemia	<a href="#">15th ICML, Abstract 125</a>
Grade 3/4 thrombocytopenia, increased transaminases, increased bilirubin	<a href="#">ASH 2024, Paper193405</a>
Grade 3 febrile neutropenia, platelet count decrease, bone pain	<a href="#">ASH 2022, Abstract 2989</a>

Sources —

- [OFF-X BCL-2 inhibitor safety alerts](#)

Suggestions — If you need a different breakdown, please specify. For example, you can request DLTs by specific BCL-2 inhibitor, by indication, or by study phase.

Answer copy icon:

Feedback icons:

Ask the safety assistant

AI-generated content: check for accuracy - About

質問に応じて回答にはオリジナルな情報源へのダイレクトリンクが表示されます

SourcesにOFF-X上での情報源などのリンクが表示されます

回答のコピー機能

Safety assistantに対するフィードバック機能

# Safety Assistantユーザーガイド

5. Sourcesをクリックすることで根拠となった情報へアクセスすることが可能です。  
(今回の場合はOFF-XのSafety alertsが参照されたことがわかります)

The screenshot displays the OFF-X Safety Assistant interface. At the top, there is a navigation bar with 'OFF-X', 'Home', 'Analytics', 'Your saved work', and 'Safety assistant'. A search bar on the right contains the text 'Type target or gene or UniProt ID and select'. Below the navigation bar, the main content area is titled 'Target Bcl-2/ Inhibitors'. A secondary navigation bar includes 'Snapshot', 'Safety alerts', 'Target safety profile', 'Comparative views', and 'Biological context'. The 'Safety alerts' section is active, showing a list of adverse events on the left. The selected event is 'Abdominal lymphadenopathy'. The main content area displays a safety alert for 'Abdominal lymphadenopathy (Blood and lymphatic system disorders)' with a 'View AE/SOC' dropdown and an 'Expand all' button. The alert details include a date of 'January 10, 2023', a 'Journal' source, and a 'Confirmed/Reported' status. The text of the alert describes a real-world pharmacovigilance study on venetoclax. A 'Causality' button is visible. At the bottom right, there is a 'Safety assistant' chat button and a notification box that says 'Start a new conversation or pick up where you left off, without leaving your record'.

# Safety Assistantユーザーガイド

## 6. 同一チャット内では追加の質問も可能です。

The screenshot shows the OFF-X Safety Assistant interface. At the top, there are navigation links for Home, Analytics, Your saved work, and Safety assistant (with a 'New' badge). A search bar is present with the placeholder text 'Type target or gene or UniProt ID and select'. The main chat area contains the following text:

上記のBCL2阻害剤のDLTについて、具体的にどのような薬剤が含まれますか？

How was this generated? ▾

Intention — You asked which specific BCL-2 inhibitor drugs are included in the dose-limiting toxicity (DLT) reports from OFF-X safety alerts. The search was filtered by:

- **Target:** BCL-2
- **Action:** Inhibitors
- **Alert title:** dose-limiting toxicity

Answer — The following BCL-2 inhibitor drugs have reported dose-limiting toxicities (DLTs) in OFF-X safety alerts:

- **Venetoclax**
- **Sonrotoclax** (BGB-11417)
- **Lisafoclax** (APG-2575)
- **Mesutoclax** (ICP-248)
- **Navitoclax** (ABT-263)
- **LOXO-338**
- **LP-108**
- **Obatoclax**
- **Gossypol** (including AT-101)
- **BCL-201** (S55746)
- **AZD-0466**
- **Pelcitoclax** (APG-1252)

These drugs have been associated with DLTs such as neutropenia, thrombocytopenia, diarrhea, febrile neutropenia, small intestinal obstruction, cardiac events, and others, as detailed in the OFF-X safety alerts. For each drug, the specific DLTs and supporting references can be found in the OFF-X platform.

Table —

Drug Name	Example DLTs Reported
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Ask the safety assistant

AI-generated content: check for accuracy - About

追加の質問に対する回答が表示されます

# Safety Assistantユーザーガイド

※Safety assistantへはターゲット（ドラッグ）レコードからもアクセスが可能です

OFF-X Home Analytics Your saved work Safety assistant

Targets Type target or gene or UniProt ID and select

Target Bcl-2 / Inhibitors Comparative table builder Keep me posted

Snapshot Safety alerts Target safety profile Comparative views Biological context

Blood and lymphatic system d... Gastrointestinal disorders Investigations

Metabolism and nutrition... Nervous syste... Neoplasms b...

Infections and infestations Respiratory... Skin an. injury, ...

General disorders and ad... Musculoskel... Vascul... Psychia...

Cardiac diso... Hepato... Re... C...  
Renal a... Pre... E...

Open heat map

Class Miscellaneous OFF-X target ID 1354

Family Protein phosphatase 1 regulatory subunits

Aliases (5) Apoptosis regulator Bcl-2 | B-cell CLL/lymphoma 2 | BCL2, apoptosis regulator | PPP1R50 | Protein phosphatase 1, regulatory subunit 50

Gene (1) BCL2

UniProt ID (1) P10415

Related drugs

Latest and pinned alerts

Regulatory relevance

Therapeutic applications

Safety assistant

ターゲット（ドラッグレコード）の右下に「Safety assistant」のフローティングアシストボタンが表示されます

# Safety Assistantユーザーガイド

※Safety assistantへはターゲット（ドラッグ）レコードからもアクセスが可能です

新規チャット  
立ち上げ

The screenshot displays the OFF-X Safety Assistant interface. The main content area shows a target record for Bcl-2/Inhibitors, including a heatmap of biological contexts, a class description (Miscellaneous), family (Protein phosphatase 1 regulatory subunits), aliases (Apoptosis regulator Bcl-2, B-cell CLL/lymphoma 2, BCL2, apoptosis regulator, PPP1R50, Protein phosphatase 1, regulatory subunit 5C), gene (BCL2), and UniProt ID (P10415). A chat window is overlaid on the right side, showing a 'New chat' button and a list of chat history items. The chat window includes a search bar, a 'New chat' dropdown, and a menu with options for 'Small floating', 'Large floating', and 'Full screen'. The chat content includes a greeting and several safety-related questions. The interface also features a 'Targets' dropdown and a search bar at the top right.

チャット履歴

チャット画面の大きさを  
変更できます

「Safety assistant」のフローティングアシストボタンをクリックすることで  
レコード内にチャット画面が表示されます

# 回答が期待される質問の一例

# 質問例：IRAK4の主な臓器毒性はどれですか？知見を要約した表を作成してください。

Wednesday, Jun 10

IRAK4の主な臓器毒性はどれですか？知見を要約した表を作成してください。

How was this generated? ·

### Intention —

You asked about the main organ toxicities (System Organ Class, SOC) associated with IRAK4 inhibitors. The search was filtered by:

- **Target:** IRAK4
- **Action:** Inhibitors

### Answer —

The main organ-system toxicities reported for IRAK4 inhibitors are summarized below. The highest evidence and alert counts are for infections and infestations (high evidence), followed by investigations (very low evidence), gastrointestinal disorders (medium evidence), and nervous system disorders (medium evidence). Other organ systems such as musculoskeletal, general disorders, blood/lymphatic, respiratory, skin, metabolism, cardiac, and immune system disorders are also reported, but with lower evidence scores and fewer alerts.

A high evidence score for infections and infestations indicates a strong association of IRAK4 inhibition with increased risk of infections, which is consistent across multiple alerts and references. Other organ toxicities are less strongly associated, with medium to low evidence scores.

Showing all 20 main SOC categories with associated alert counts and evidence scores.

### Table —

System Organ Class (SOC)	Target Score	Alert Count
Infections and infestations	High Evidence	62
Investigations	Very Low Evidence	55
Gastrointestinal disorders	Medium Evidence	52
Nervous system disorders	Medium Evidence	43
Musculoskeletal and connective tissue disorders	Low Evidence	32

# 質問例：BCL-2阻害剤の第I相臨床試験で報告された用量制限毒性を情報源へのリンクと共にリストしてください

Answer — Below is a summary table of DLTs reported in phase I trials with BCL-2 inhibitors. Each entry includes the adverse event, a brief description, and a direct link to the original source or publication. Showing the top results; for a complete list, see the provided source link.

Table —

Dose-Limiting Toxicity (DLT)	Description / Study Context	Source Link
Thrombocytopenia	Phase I study of LP-108 in relapsed/refractory B-cell NHL. Common DLT.	<a href="#">EHA 2023 Abstract P635</a>
Small intestinal obstruction	Phase I trial of AT-101 in advanced cancers. DLT in 3 patients.	<a href="#">JCO 2009 Abstract e14537</a>
Anaemia	Phase I studies of LP-108 and lisaftoclax (APG-2575) in relapsed/refractory B-cell NHL.	<a href="#">EHA 2022 Poster P684</a> / <a href="#">EHA 2022 Poster P1106</a>
Febrile neutropenia	Phase I study of LP-108 (alone/with azacitidine) in MDS, CMML, or AML; also BGB-11417 and sonrotoclax studies.	<a href="#">EHA 2023 Abstract P492</a> / <a href="#">ASH 2023 Poster SUN-3032</a>
Bone pain	Phase I study of BGB-11417 in mature B-cell malignancies. Grade 3 DLT.	<a href="#">ASH 2022 Abstract 2989</a>
Transaminases increased	Phase I trial of AT-101 in CLL; also reported for APG-1252 and pelcitoclax.	<a href="#">JCO 2006 Abstract 6605-6605</a> / <a href="#">ASCO 2018 Abstract 2594</a> / <a href="#">Clin Cancer Res. 2023</a>
Fatigue	S55746/BCL201 phase I study in CLL; also reported in other BCL-2 inhibitor trials.	<a href="#">EHA 2017 Poster E1018</a>
Diarrhoea	Multiple phase I studies including BGB-146/venetoclax/rituximab and	<a href="#">ICML 2019 Abstract 125</a> /

# 質問例：c-MET阻害剤について、マウス、ラット、イヌ、およびサルを用いた前臨床試験で報告されている主な知見は何ですか？

c-MET阻害剤について、マウス、ラット、イヌ、およびサルを用いた前臨床試験で報告されている主な知見は何ですか？それぞれの動物種ごとに列を分けて表形式でまとめてください。また知見は箇条書きで記載し、関連のある文献情報を含めてください。

How was this generated? \*

Intention — This query searched for the main adverse events and safety findings reported for c-MET inhibitors in preclinical studies, with results organized in a table by species (mouse, rat, dog, monkey). Each cell contains bullet-pointed findings and relevant reference information where available. The search was filtered by:

- **Target:** c-MET
- **Action:** Inhibitors
- **Species:** Mouse, rat, dog, monkey
- **Evidence phase:** Preclinical

Answer — Below is a summary table of the main findings for c-MET inhibitors in preclinical studies, organized by species. Each cell lists key findings (adverse events, safety signals) and includes representative references or regulatory documents where available.

Mouse	Rat	Dog	Monkey
<p><b>Hepatotoxicity</b> (Medium Evidence):</p> <ul style="list-style-type: none"> <li>• Liver injury, increased ALT/AST/ALP, hepatocyte apoptosis (e.g., crizotinib, ensartinib)</li> <li>• [Eur J Pharmacol. 2025 Nov 5;1006:178096]</li> <li>• [Cell Biol Toxicol. 2024 May 24;40(1):38]</li> <li>• [WCLC2019 Abstract P1.14-51]</li> <li>• [PMDA Review Report for Xalkori]</li> </ul> <p><b>Nephropathy toxic</b> (Low Evidence):</p> <ul style="list-style-type: none"> <li>• Renal toxicity in humanized-liver mice (SGX-523)</li> <li>• [Toxicol Lett. 2023 Oct 1;388:48-55]</li> </ul> <p><b>Weight abnormal/decreased:</b></p> <ul style="list-style-type: none"> <li>• Some studies: no significant change; others: decreased weight</li> <li>• [Front Immunol. 2022 Oct 20;13:1024755]</li> <li>• [Acta Pharmacol Sin. 2025 Jan 21]</li> </ul> <p><b>Genotoxicity:</b></p> <ul style="list-style-type: none"> <li>• Most agents not genotoxic; some positive in micronucleus test</li> <li>• [NMPA Drug Approval Document for Anluoqing]</li> <li>• [NMPA Drug Approval Document for Wanbirui]</li> </ul> <p><b>Cardiotoxicity:</b></p> <ul style="list-style-type: none"> <li>• Cardiac findings (e.g., increased BP, QT prolongation, myocardial infarction) (SGX-523)</li> </ul>	<p><b>Reproductive toxicity/Infertility:</b></p> <ul style="list-style-type: none"> <li>• Testicular degeneration, ovarian necrosis, decreased fertility (crizotinib, cabozantinib, telisotuzumab vedotin, tepotinib)</li> <li>• [FDA report for Xalkori]</li> <li>• [PMDA package insert for Cabometyx]</li> <li>• [FDA report for Ensacove]</li> <li>• [FDA report for Tepmetko]</li> </ul> <p><b>Teratogenicity/Fetal effects:</b></p> <ul style="list-style-type: none"> <li>• Decreased fetal weight, malformations, growth retardation (capmatinib, cabozantinib, vebreltinib, gumarontinib)</li> <li>• [PMDA package insert for Tabrecta]</li> <li>• [NMPA Drug Approval Document for Wanbirui]</li> </ul> <p><b>Genotoxicity/Mutagenicity:</b></p> <ul style="list-style-type: none"> <li>• Most agents not genotoxic; some positive in micronucleus test</li> <li>• [FDA report for Xalkori]</li> <li>• [NMPA Drug Approval Document for Anbaini]</li> <li>• [FDA report for Tepmetko]</li> </ul> <p><b>Hepatotoxicity:</b></p> <ul style="list-style-type: none"> <li>• Increased ALT/AST, liver injury (crizotinib, CXI-7)</li> <li>• [PMDA Review Report for Xalkori]</li> </ul> <p><b>Nervous system/CNS effects:</b></p>	<p><b>Reproductive toxicity/Infertility:</b></p> <ul style="list-style-type: none"> <li>• No morphological changes in reproductive organs (tepotinib, ensartinib)</li> <li>• [FDA report for Tepmetko]</li> <li>• [FDA report for Ensacove]</li> <li>• Adverse effects on genital tissues (cabozantinib)</li> <li>• [PMDA package insert for Cabometyx]</li> </ul> <p><b>Thymus/liver toxicity:</b></p> <ul style="list-style-type: none"> <li>• Thymus and liver toxicities (vebreltinib)</li> <li>• [NMPA Drug Approval Document for Wanbirui]</li> </ul> <p><b>Cardiovascular:</b></p> <ul style="list-style-type: none"> <li>• No effects on BP, heart rate, ECG (tepotinib)</li> <li>• [PMDA Report for Tepmetko]</li> <li>• Hypotension, increased heart rate (AMG 337)</li> <li>• [Study reporting off-target adenosine transporter inhibition]</li> </ul> <p><b>Nephropathy:</b></p>	<p><b>Reproductive toxicity/Infertility:</b></p> <ul style="list-style-type: none"> <li>• Degeneration of granulosa cells, decreased ovarian follicles, endometrial gland necrosis (telisotuzumab vedotin)</li> <li>• [FDA report for Emrelis]</li> <li>• No significant effects on reproductive organs (amivantamab, capmatinib)</li> <li>• [FDA report for Rybrevant]</li> <li>• [FDA report for Tabrecta]</li> </ul> <p><b>Hematological/GI toxicity:</b></p> <ul style="list-style-type: none"> <li>• Bone marrow suppression, neutropenia, GI tract toxicity (ABBV-400, MYTX-011, EM28)</li> <li>• [Preclinical studies]</li> </ul> <p><b>Liver/kidney toxicity:</b></p> <ul style="list-style-type: none"> <li>• Increased liver enzymes, nephropathy (SGX-523)</li> <li>• [Clin Cancer Res. 2015 May 15;21(10):2297-2304]</li> </ul> <p><b>Weight abnormal:</b></p> <ul style="list-style-type: none"> <li>• No significant changes in body weight (KY-0301, hOA-DN30)</li> <li>• [Preclinical studies]</li> </ul> <p><b>Skin toxicity:</b></p>

Ask the safety assistant

# 質問例：BTK阻害剤で報告されている前臨床での知見のうち、どれが臨床有害事象と関連していますか？

Clarivate OFF-X

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Targets Type target or gene or UniProt ID and select

Target BTK / Inhibitors

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Class: Enzymes (OFF-X target ID: 494)

Superfamily: Transferases (Family: Transferring phosphorus-containing groups, Subfamily: Protein-tyrosine kinases, Type: Non-specific protein-tyrosine kinase)

Aliases (9): Agammaglobulinemia tyrosine kinase | AGMX1 | ATK | B-cell progenitor kinase | BPK | ...

Gene (1): BTK

UniProt ID (1): Q06187

Related drugs: Latest and pinned alerts

Safety assistant



What preclinical findings...

Answer — The table below lists the main adverse events for BTK inhibitors, along with the evidence score for the BTK inhibitor class (target-action score), the highest drug-level evidence score for each event, and the number of alerts. Adverse events with a high or very high target-action score are considered likely class effects (shared across BTK inhibitors). If the target-action score is lower but drug scores are high, the effect may be more drug-specific.

Showing the top 50 results by alert count. If you need a different breakdown, please specify.

Table —

Adverse Event	Target Score (Class Effect)	Drug Score (High)
Atrial fibrillation	High Evidence	Very High Evidence
Diarrhoea	High Evidence	Very High Evidence
Haemorrhage	Very High Evidence	Very High Evidence
Neutropenia	High Evidence	Very High Evidence
Hypertension	Very High Evidence	Very High Evidence
Pneumonia	High Evidence	Very High Evidence

Ask a question about this drug

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# Think forward

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