

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d)

of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): October 29, 2026

X4 PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

001-38295

(Commission File Number)

27-3181608

(IRS Employer Identification No.)

61 North Beacon Street, 4th Floor

(Address of principal executive offices)

Boston, Massachusetts

02134

(Zip Code)

(857) 529-8300

(Registrant's telephone number, including area code)

Not applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:		
Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value \$0.001 per share	XFOR	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01.

Other Events.

On October 29, 2026, X4 Pharmaceuticals, Inc. (the “Company”) will be posting to its website an investor presentation to be used in the Company’s October 29, 2029 Investor Day event. A copy of the presentation is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein.

To access the presentation, investors should visit the “Investors” section of the Company’s website at www.x4pharma.com.

Item 9.01.

Financial Statements and Exhibits.

(d) *Exhibits.* The following exhibits are being filed herewith:

Exhibit Number	Exhibit Title or Description
99.1	Investor Day Presentation, dated October 29, 2026
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

X4 PHARMACEUTICALS, INC.

By:

/s/ David Kirske
David Kirske
Chief Financial Officer and Treasurer

Date: October 29, 2026



Exhibit 99.1

Nasdaq: XFOR

Virtual Investor Day

October 29, 2026

Forward-Looking Statements

This presentation, including any printed or electronic copy of these slides, the talks given by the presenters, the information communicated during any delivery of the presentation and any question-and-answer sessions and any documents or materials distributed at or in connection with the presentation, contains forward-looking statements within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995, as amended. These statements may be identified by the words "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "project," "potential," "continue," "target," or other similar terms or expressions that concern X4's expectations, strategy, business, plans, or intentions. Forward-looking statements include, without limitation, implied or express statements regarding: X4's ability to advance and commercialize mavorixafor for the treatment of primary chronic neutropenia; the timing of enrollment in, the design of, and the results of and expected timing of top-line data from, the ongoing 4WARD Phase 3 study, and the extent to which results from X4's earlier Phase 2 study may be predictive of results in that study; the timing and prospects for regulatory approval of mavorixafor in the US and in other jurisdictions; the potential clinical benefits of mavorixafor and its expected safety and tolerability profile; the anticipated benefits of X4's organizational restructuring and the expected effect of those measures on the execution of the 4WARD study; the expected scope and duration of patent protection for mavorixafor; the market opportunity for mavorixafor; 4STEPS (timing of initiation, design and results); the need for additional capital; compliance with the K2HV loan covenants; and the sufficiency of X4's cash resources, including expectations regarding X4's cash runway.

Any forward-looking statements in this presentation are based on management's current expectations and beliefs. These forward-looking statements are neither promises nor guarantees of future performance, and are subject to a variety of risks and uncertainties, many of which are beyond X4's control, which could cause actual results to differ materially from those contemplated in these forward-looking statements, including the risks that: X4 may be unable to advance and commercialize mavorixafor to treat chronic neutropenia or to gain ex-U.S. approval for the treatment of WHIM; the expected sufficiency of X4's existing cash resources and runway may not be accurate; the expected availability, content, and timing of clinical data from X4's ongoing clinical trials of mavorixafor may be delayed or unavailable, including the ongoing Phase 3 clinical trial in chronic neutropenia; trials, studies and research programs may not have satisfactory outcomes; earlier trials and studies may not be predictive of later trials and studies; the design and rate of enrollment for clinical trials, including the ongoing Phase 3 clinical trial evaluating mavorixafor in certain chronic neutropenic disorders may not enable successful completion of the trial(s); the commercial opportunity for mavorixafor in chronic neutropenic disorders may be smaller than anticipated; X4 may be unable to obtain and maintain regulatory approvals; adverse safety effects may arise from the testing or use of the company's product and product candidates; and other risks and uncertainties, including those described in the section entitled "Risk Factors" in X4's most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) and in subsequent filings X4 makes with the SEC from time to time. X4 undertakes no obligation to update the information contained in this presentation to reflect new events or circumstances, except as required by law.

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and X4's own internal estimates and research. While X4 believes these third-party sources to be reliable as of the date of this presentation, it has not independently verified such information. Finally, while X4 believes its own internal research is reliable, such research has not been verified or validated by any independent source. X4 is the owner of various trademarks, trade names and service marks. Certain other trademarks, trade names and service marks appearing in this presentation are the property of third parties. Solely for convenience, the trademarks and trade names in this presentation are referred to without the ® and TM symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.



Introduction & Corporate Overview

Adam Craig, MD, PhD
Executive Chairman

Meet the Speakers



Adam Craig, MD PHD
Executive Chair



John Volpone
President and COO



David Kirske
Chief Financial Officer



Michael Massello, MBA
SVP Market Strategy and
Development



Shreyans Gandhi,
MBBS, MD, FRCPPath



Julia Warren, MD, PhD



Agenda

Topic	Speaker
Introduction & Corporate Overview	Dr. Adam Craig
Mavorixafor Clinical Program	John Volpone
Market Opportunity in Primary Chronic Neutropenia	Michael Massello
KOL Fireside Chat	Dr. Adam Craig, Dr. Shreyans Gandhi & Dr. Julia Warren
Question & Answer Session	

Delivering on the Promise of CXCR4 Antagonist Mavorixafor

Focused on improving the lives of people with rare hematology diseases

MAXIMIZING THE POTENTIAL OF MAVORIXAFOR IN PRIMARY CHRONIC NEUTROPENIA (PCN)

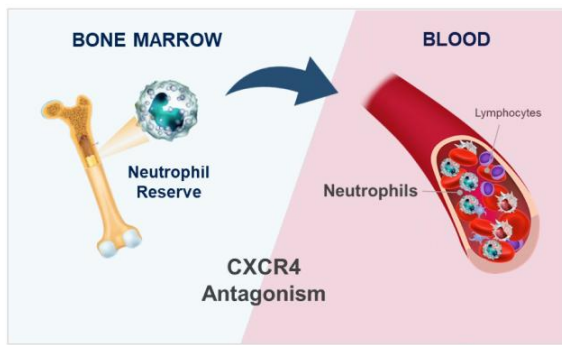
- Underwent corporate transformation in 2025/2026
- Focused on completing the **Pivotal Phase 3 4WARD Primary Chronic Neutropenia** trial
 - Full enrollment (N=126) expected by end of Q4 2026
 - Topline data expected in Q1 2028
 - Potential US FDA approval in late 2028 / early 2029
- Plan to initiate Phase 2b clinical trial to demonstrate how to safely reduce a patient's G-CSF dosage following initiation of treatment with mavorixafor



WHIM (Warts, Hypogammaglobulinemia, Infections, Myelokathexis), a rare primary immunodeficiency and chronic neutropenic disorder.

Mavorixafor: An Oral Agent Designed to Alleviate Neutropenia

Validated mechanism with the potential to increase neutrophil counts and decrease infection rates



Modified figure from reference¹

Targeted Mechanism

- CXCR4 regulates movement of white blood cells throughout the body²
- **CXCR4 antagonism results in the migration of white blood cells from the bone marrow^{3,4}**

Orally active CXCR4 Antagonist

- Mavorixafor raises circulating blood levels of neutrophils and lymphocytes^{4,5,6,7}
- Top-line pivotal Phase 3 study in Primary Chronic Neutropenia data expected in Q1 2028
- U.S. patent protection expected through 2038



1. Bainton DF (1980) The Cell Biology of Inflammation, vol 2, pp 1–25. Amsterdam: Elsevier/North-Holland. 2. Furze RC, et al. Immunology. 2008. 3. Mosi, RM, et al. Biochem Pharmacol. 2012. 4. Stone ND et al. Antimicrob Agents Chemother. 2007. 5. Badvato R, et al. Blood. Published online April 21, 2024;blood.2023022658. 6. Warren, JT et al. Oral Presentation American Society of Hematology 2022. 7. US Product Label XOLREMDI 2024.

Mavorixafor Pipeline



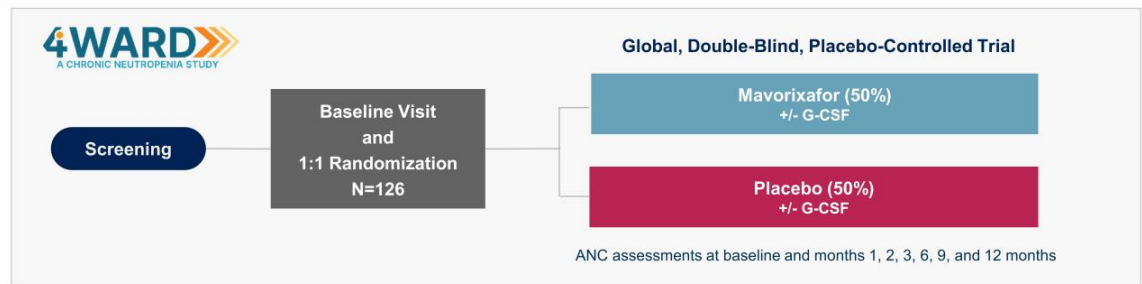


Mavorixafor Clinical Program

John Volpone
President & Chief Operating Officer

Pivotal Phase 3 4WARD Trial in Primary Chronic Neutropenia (PCN)

Full enrollment (N-126) expected Q4 2026 with top-line data expected Q1 2028



Key Inclusion Criteria for **congenital, autoimmune, or idiopathic chronic neutropenia**

- Absolute Neutrophil Count (ANC): <1,000 cells/ μ L (moderate and severe disease)
- Infection History: 2 or more infections requiring intervention within last 12 months

Primary Endpoints: **ANC response (>500 cells/ μ L)** and **annualized infection rate (AIR)**

- Endpoints powered to 93% and 89%, respectively, for the ITT population

Secondary Endpoints: Severity and duration of infection, antibiotic use, fatigue, QoL, and safety

DISEASE SEVERITY

Evenly divided between moderate and severe disease

G-CSF USE

37%

on concurrent G-CSF

AGE

36 years

Median age

SEX

70%

Female

BASELINE ANC

483 cells/ μ L

Median ANC

INFECTION HISTORY

68%

of patients with 3+
infections at baseline

4STEPS: A Phase 2b G-CSF Dose Reduction Trial with Mavorixafor

DESIGN

Phase 2b

Single-arm, open-label,
multicenter study

ENROLLMENT CRITERIA

≥ 1000 cells/ μ L

Baseline ANC

ESTIMATED ENROLLMENT

~25 patients

On stable G-CSF therapy at
study entry

TOTAL SITES

~25

In the U.S. and UK

OBJECTIVE

To investigate the safety and tolerability of G-CSF dosage reduction in mavorixafor-treated participants with acquired primary autoimmune and idiopathic chronic neutropenia disorders

PRIMARY SAFETY ENDPOINT

Safety and tolerability of
mavorixafor

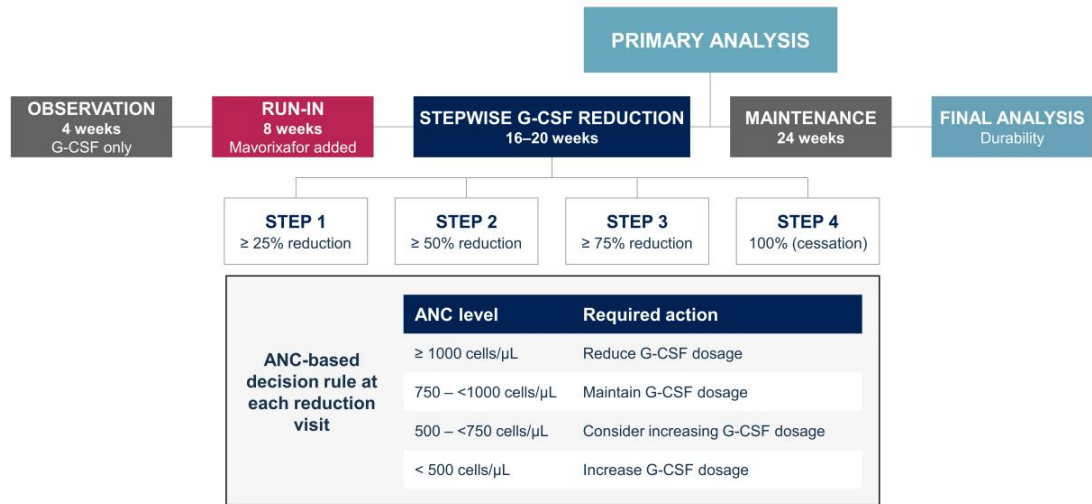
PRIMARY EFFICACY ENDPOINTS

- % participants achieving G-CSF cessation at 6 months*
- % reduction in average daily G-CSF dosage at 6 months*
- % participants achieving G-CSF dosage reduction $\geq 75\%$ at 6 months*



*W24 to W28 after starting study, depending on the timing of stepwise dose reductions.

4STEPS Trial Designed to Evaluate G-CSF Dose Reduction When Treating with Mavorixafor



Primary Chronic Neutropenia (PCN) - Development Timelines





Mavorixafor Commercial Opportunity

Michael Massello
SVP Market Strategy and Development

High Disease Impact & Limited Treatment Options in Primary Chronic Neutropenia (PCN)

Rare, chronic blood disorder

- Neutrophil counts <1,500 cells/ μ L for >3 months
- Idiopathic, congenital, cyclic and autoimmune

Heterogeneous disease with a large underserved market that is often underdiagnosed and misdiagnosed

Limited treatment options via G-CSF injections or antibiotics

Significant unmet need remains despite available therapies

Recent market research indicates that mavorixafor may capture a significant share of the PCN market



No approved oral product indicated for PCN

Patients are left with limited treatments from an existing assortment of off label, unproven, or difficult to use treatment options

Market Research Establishing the PCN Commercial Opportunity

 Claims Analysis	 Physicians	 Patients
<p>Veeva claims analysis 2023-2025 Identified the symptomatic PCN population</p> <p>Komodo claims analysis 2023-2025 Independently confirmed the symptomatic PCN population</p> <p>Longitudinal claims analysis Mapped the Patient Journey from diagnosis to treatment</p>	<p>Quantitative demand study (n=100)</p> <p>Qualitative disease state messaging (n=50)</p> <p>Patient Journey qualitative research (n=30)</p> <p>Advisory Boards</p>	<p>CONNECT PCN Patient Burden of Illness/Burden of Treatment Survey (n=110)</p> <p>Assess the impact of PCN on patient quality of life</p> <p>Advisory Boards</p>

PCN Drives Substantial Healthcare Utilization and Cost

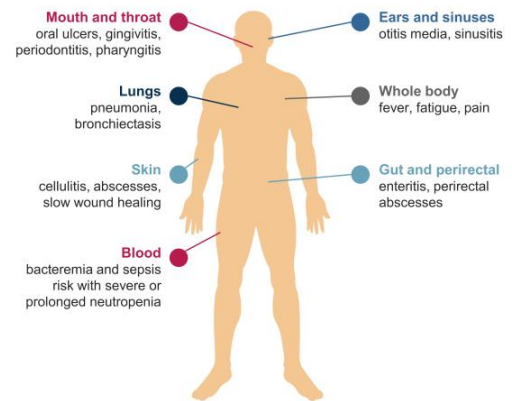
Recurrent and serious infections can lead to serious complications and hospitalization

- Pneumonia, bronchiectasis and sepsis, often result in ER visits and hospitalization

U.S. Hospitalizations in 2025

- ~6,300 primary CN patients were hospitalized with mean stay of ~4 days per infection¹

PCN Disease Burden: Infections & Symptoms²



1. Komodo Claims Analysis, 2026 (based on 2025 data). 2. Infection sites per Donadieu J, et al. Expert Rev Hematol. 2021; Newburger PE, et al. Semin Hematol. 2013; Dale DC, SCNIR publications.

PCN is a High-Burden Disease with Significant Patient Desire for Better Treatment Options



Profound emotional impact

Social withdrawal and feelings of isolation from fear of the next infection



High motivation to manage disease

Patients want to control their disease given challenges with injections and antibiotics



High unmet need

Serious infections and hospitalizations are common in moderate-to-severe patients



Significant desire for oral option

An oral therapy that is simple, safe and effective with sustained disease control

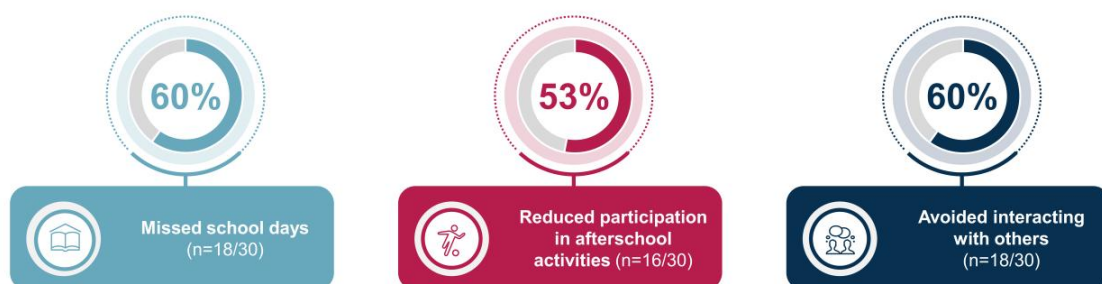
Adults Living with PCN Restrict Everyday Life to Avoid Infection

Because of worry about infection, adults with primary CN...	...at least some of the time
Avoided crowded places such as restaurants or large events	88%
Felt especially alert or on guard around others	81%
Avoided public transportation	78%
Avoided social gatherings	74%
Avoided traveling or vacations	69%

Adults with PCN Report a Significant Impact on Work

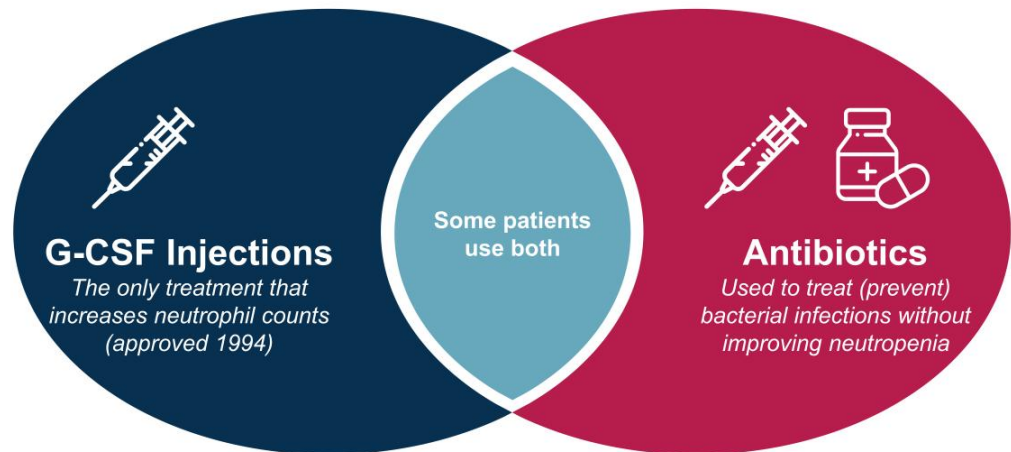


PCN has Profound Emotional Impact on Adolescents and Children



Management of Symptomatic PCN

Two main therapeutic options exist today with no new therapies in 30 years



G-CSF Injections Carry Significant Burden

The Burden of G-CSF injections



Injection burden

- Frequent, painful
- 66% of G-CSF patients have injection fatigue¹

Peaks and troughs: gaps in protection

Neutrophil counts rise and fall between doses²

Long-term safety

20%+ of secondary malignancies with high dose G-CSF³

Bone pain and quality-of-life impact

- 57% have Bone Pain¹
- 61% have Fatigue¹



1. X4 Burden of Illness survey in primary CN, 2026 (n=110; 97 receiving G-CSF): 66% (62/94) tired of injections; bone pain 57% (42/74); fatigue 61% (45/74); 20% took G-CSF less often than prescribed. 2. TLG CN positioning research, Mar 2025 (n=20 hematologists): most use G-CSF intermittently or prophylactically. 3. Severe Chronic Neutropenia International Registry (SONIR): ~21% cumulative MDS/AML at 10 years in congenital neutropenia on long-term high-dose G-CSF.

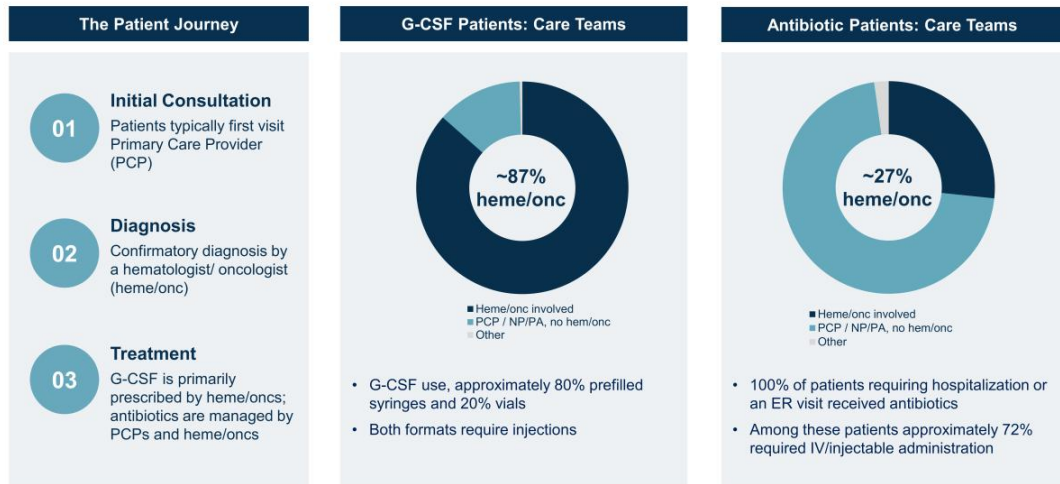
Antibiotics Can Treat Infections But Do Not Address the Underlying Neutropenia

The Burden of Antibiotics



1. TLG CN positioning research, Mar 2025 (n=20 hematologists); X4 Unbranded DSE messaging research, Aug 2026 (n=29 hematologist-oncologists). 2. X4 Burden of Illness survey in primary CN, 2026 (n=110); 3. Mavoxiafor CN U.S. Opportunity Assessment, Nov 2025 (n=100 hematologists).

The PCN Patient Journey and Where Care is Delivered



Hematologists and Patients are Aligned on the Key Drivers for a New Treatment

Health Care Provider (HCP) Treatment Goals

Fewer and less severe infections & hospitalizations

Increase and stabilize neutrophil counts

A safe and tolerable treatment option

Patient Treatment Goals

To stay injection-free and out of the hospital

Relief from fatigue, pain and constant vigilance

A treatment that fits daily life for the long term



"We are so frustrated for patients who have no other treatments than just a few modalities...ready to embrace anything new to treat this disease."

"Oral would be a game-changer in PCN"

– Hematologist,
Advisory Board, Sept 2026¹



"I'm scared to go out of my house and scared to go on vacations and won't leave the house without 3 antibiotics. I want control of my life back and to focus on the moments that matter!"

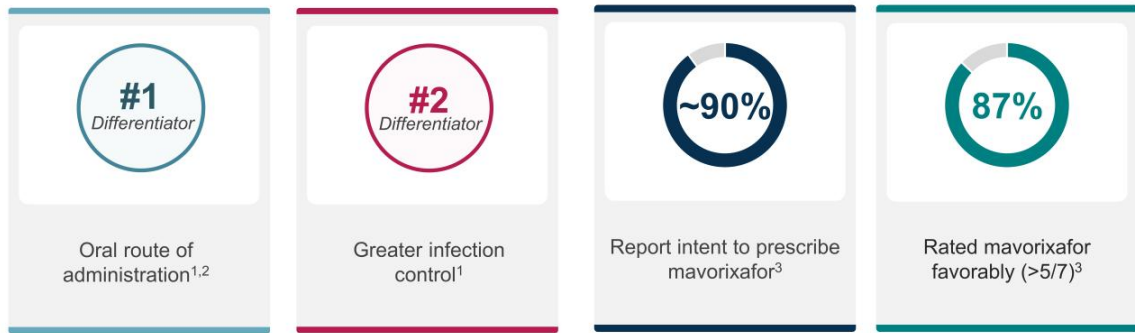
– Patient,
Advisory Board, Sept 2026²

Mavorixafor is a Highly Differentiated Therapy in Development for PCN



1. Open-label, single-arm Phase 2 study in chronic neutropenia (N=23; 10 monotherapy, 13 mavorixafor + G-CSF); most frequent treatment-related adverse events were nausea and diarrhea, all mild to moderate; no drug-related serious adverse events; safety profile consistent with prior mavorixafor studies. Mavorixafor is an investigational therapy in primary chronic neutropenia; its safety and efficacy in this indication have not been established.

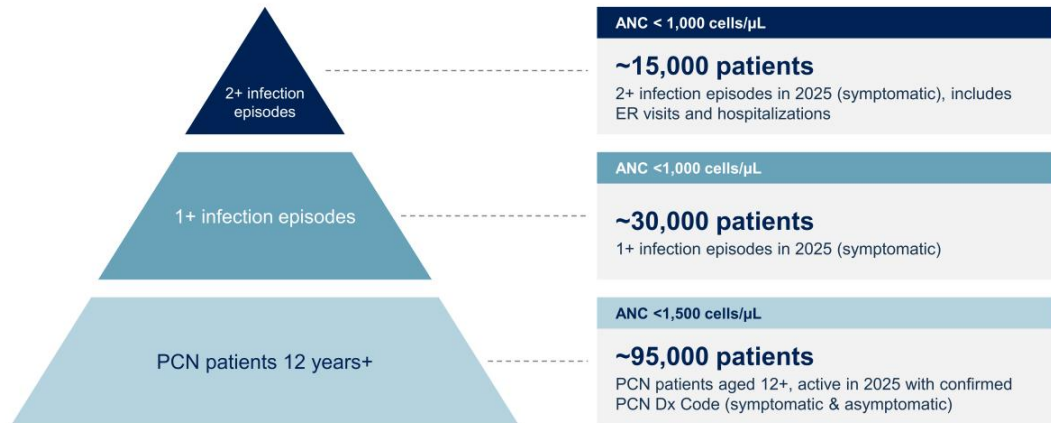
Hematologists View Mavorixafor as Differentiated From Current Standard of Care and Intend to Use It as the Dominant Agent for PCN



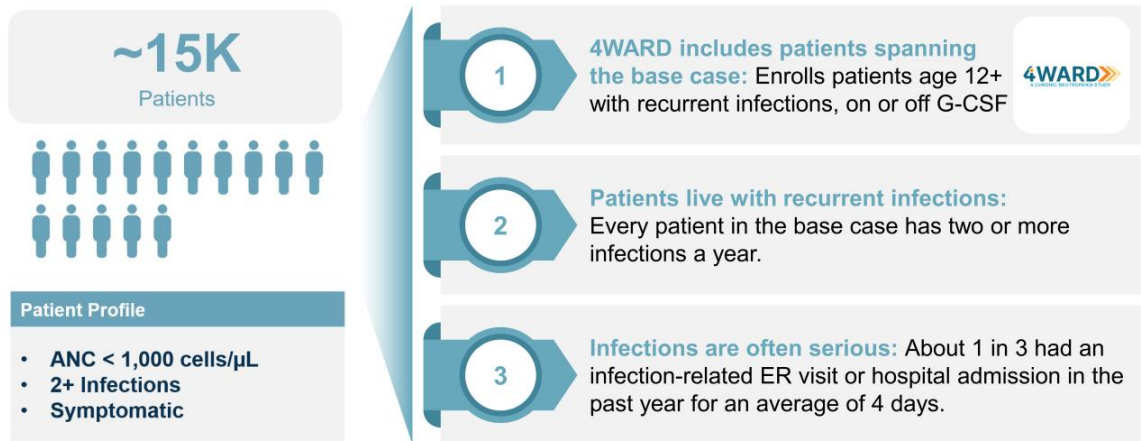
1. Clarivate qualitative market research 2026 n=20 60-minute interviews (n=3 PCP; n=6 community hematologist; n=11 academic hematologist/oncologist). 2. US hematology survey, 2024 (n=95). 3. X4 quantitative survey, 2025 (n=100).

U.S. Prevalence of PCN

Consistent and validated across multiple platforms



X4 is Well Positioned to Capture the ~15,000 Patient Base Case



Mavorixafor Represents a Significant Initial Market Opportunity with Potential Upside

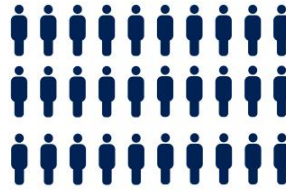
~15K
Patients



Patient Profile

- ANC < 1,000 cells/ μ L
- 2+ Infections
- Symptomatic

~30K
Patients



Patient Profile

- ANC < 1,000 cells/ μ L
- 1+ Infections
- Symptomatic



Fireside Chat

Dr. Adam Craig
Dr. Shreyans Gandhi
Dr. Julia Warren

X4 on Track to Deliver Pivotal Phase 3 Data in 2028

Potential FDA approval late 2028/early 2029



- C-Suite team experienced in hematology drug approvals and product launches
- Blue chip investor base established after PIPE/CMPO
- Cash runway expected into 2029



- Proof of concept for mavorixafor in PCN from Phase 2 study
- Topline 4WARD Phase 3 data expected in Q1 2028; approval anticipated late 2028/early 2029
- Phase 2 4STEPS G-CSF dose reduction data expected in 1H 2028



- Large market opportunity for mavorixafor in PCN in the US
- Approximately 15,000 patients with moderate and severe disease
- Clear medical need for well tolerated oral agent - monotherapy or in combination with G-CSF

