THE CHRONIC MYELOGENOUS LEUKEMIA SOCIETY OF CANADA

YOUR CML CARE COMPANION

Treatment Goals • Managing Side Effects • Drug & Food Safety

Essential guidance whether you're newly diagnosed or years into treatment

Understanding Your Treatment Goals

Chronic myeloid leukemia is unusual among cancers: for most patients, it can now be controlled indefinitely with a daily pill. But “controlled” depends on staying on treatment as prescribed and hitting specific, well-defined response targets along the way — targets your hematologist checks at regular blood draws.

These targets come from international expert guidelines — the European LeukemiaNet (ELN) and the U.S. National Comprehensive Cancer Network (NCCN) — and they exist because decades of data show that hitting them early predicts a much better long-term outcome, including the possibility of treatment-free remission (TFR) down the road.

ELN 2020 Response Milestones

Your BCR-ABL1 level is measured by a blood test (PCR) and expressed as a percentage. Lower is better — it means fewer leukemia cells remain.

Timepoint	Optimal Response	Warning — Monitor Closely	Failure — Change Needed
3 months	BCR-ABL1 ≤ 10%	BCR-ABL1 > 10%	Confirmed > 10%
6 months	BCR-ABL1 ≤ 1%	BCR-ABL1 1–10%	BCR-ABL1 > 10%
12 months	BCR-ABL1 ≤ 0.1% (MMR)	BCR-ABL1 0.1–1%	BCR-ABL1 > 1%

NCCN guidelines use closely aligned targets and note that reaching an MMR (BCR-ABL1 ≤ 0.1%) by 12 months is associated with a very low chance of disease progression and a high likelihood of reaching an even deeper response later — the kind of response needed to eventually consider a supervised treatment-free remission attempt. [Ref. 1]

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This guide is for general education only and is not a substitute for individualized medical advice. All scientific and clinical claims above are drawn from peer-reviewed journal articles, official prescribing information, or major guideline bodies (ELN, NCCN). Always consult your hematologist or pharmacist before making any changes to your treatment, diet, or supplements.

Why This Matters for You, Today

- Hitting these milestones is strongly linked to long-term survival that matches the general population.
- Missing a milestone doesn't mean treatment has failed you — it's a signal for your team to look closer, check adherence, rule out interactions, or consider a dose or medication change.
- The single biggest reason patients miss milestones isn't the biology — it's not taking the medication consistently, often because of side effects that were never brought up or addressed.
- That's exactly why the rest of this guide exists: understanding side effects, knowing what's normal, knowing your red flags, and knowing what interacts with your medication all help you stay on treatment long enough to hit these goals — and keep hitting them.

The take-home message: staying on your prescribed treatment, exactly as prescribed, is the single most important thing you can do to reach these milestones. If side effects are making that hard, tell your care team — there is almost always something that can help.

Why Do We Experience Side Effects?

Understanding the Body's Symphony

Imagine your body as the world's most extraordinary symphony orchestra.

Not one with a hundred musicians—but one with approximately 37 trillion performers, each playing a different instrument. Every cell has a role. Some produce energy, others repair tissue, fight infection, carry oxygen, regulate hormones, or communicate with neighboring cells. Together, they perform a masterpiece every second of every day without us even noticing.

When you take a targeted therapy such as imatinib, the goal is to quiet one section of the orchestra—the abnormal BCR::ABL1 protein that drives chronic myeloid leukemia (CML). This is what makes targeted therapy so remarkable. Unlike traditional chemotherapy, it is designed to focus on a specific abnormal signal.

But even the best conductor cannot silence one section of an orchestra without the rest of the musicians making subtle adjustments.

Although imatinib was designed to inhibit BCR::ABL1, it also affects other normal signaling proteins, including KIT and PDGFR, which play important roles in healthy tissues. These proteins help regulate normal processes in muscles, connective tissue, skin, blood vessels, and other organs. As the body adapts, some people experience muscle cramps, fatigue, fluid retention, nausea, skin changes, or other side effects. Others experience very few symptoms at all.

Every person's orchestra is different. Age, genetics, liver function, kidney function, other medications, nutrition, stress, sleep quality, physical activity, and other medical conditions all influence how the body responds to treatment. This is why two people taking the same dose of imatinib may have completely different experiences.

When side effects develop, it is important not to assume they are caused solely by the medication. Fatigue, muscle weakness, numbness, poor concentration, or worsening cramps may also reflect treatable conditions such as vitamin B12 deficiency, iron deficiency, vitamin D deficiency, thyroid disorders, dehydration, or electrolyte imbalances. Identifying and correcting these problems may improve quality of life without changing effective leukemia treatment.

It is also understandable that many patients look for supplements in the hope of feeling better. However, supplements are biologically active and can change how your medication is absorbed or metabolized. “Natural” does not always mean “safe.” The full Drug & Food Interaction Chart later in this guide covers this in detail — always check it, or ask your care team, before starting anything new.

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The strongest foundation for supporting your body's orchestra remains surprisingly simple:

- Eat a varied, balanced diet.
- Stay physically active within your abilities.
- Prioritize good-quality sleep and adequate rest.
- Manage stress through mindfulness, meditation, or relaxation techniques.
- Stay well hydrated.
- Have recommended blood work performed to identify treatable problems.

These habits cannot replace your CML treatment—but they help your body perform at its best while receiving it.

Your healthcare team conducts the treatment. You help create the conditions that allow your orchestra to play its very best.

It is also worth knowing that for many patients, side effects are not necessarily a lifelong feature of treatment. As more patients become eligible for a monitored treatment-free remission (TFR) attempt, many find that side effects diminish or resolve entirely once treatment is safely stopped — one more reason that managing side effects well now matters for your options later.

When to Contact Your Care Team Right Away

Whatever medication you are taking, certain symptoms should never wait for your next scheduled appointment:

- New or worsening shortness of breath, cough, or chest discomfort
- Sudden chest pain, one-sided weakness, vision changes, or difficulty speaking — treat as a medical emergency
- New leg pain, cramping, numbness, coldness, or a slow-healing sore, especially on nilotinib or ponatinib
- Severe or persistent abdominal pain, particularly on asciminib
- A racing, irregular, or skipped heartbeat, or unexplained fainting, particularly on nilotinib
- Any symptom that feels sudden, severe, or simply not like your usual side effects

When in doubt, call. It is always reasonable to check in between appointments.

A Closer Look: Side Effects by Treatment

While the ideas above apply to every BCR::ABL1 inhibitor, each individual TKI also affects a slightly different combination of "off-target" proteins, so their side effect profiles differ meaningfully from one another. Below is a brief overview of the most common and most clinically important effects associated with each approved TKI. This is not a complete list, and your hematologist is best positioned to explain what to watch for with the specific medication and dose you take.

Imatinib (Gleevec®)

As the original BCR::ABL1 inhibitor, imatinib has the longest track record of any TKI. The most frequently reported effects include mild fluid retention (particularly around the eyes), muscle cramps, nausea, diarrhea, mild skin rash, and fatigue. Most of these improve over time or respond well to supportive management.

Often eases with: staying well hydrated, magnesium-rich foods, taking your dose with food if stomach upset occurs, and leg elevation for fluid retention. Ask your team before adding any supplement for cramps.

Dasatinib (Sprycel®)

Dasatinib's most distinctive effect involves the lungs and the lining around them. Pleural effusion—fluid buildup around the lungs—has been reported in roughly 14% to 60% of patients depending on dose and duration, with most cases developing within the first year of treatment. A rarer but more serious effect, pulmonary arterial hypertension, has also been associated with dasatinib; it is uncommon but can be serious, and is usually at least partially reversible after stopping the medication. New or worsening shortness of breath, cough, or chest discomfort should always be reported promptly.

Often managed by: routine chest imaging as your team recommends, prompt reporting of breathing changes, and sometimes a temporary dose pause or diuretic if fluid develops.

Nilotinib (Tasigna®)

Nilotinib carries a distinctive metabolic and vascular profile. It can raise blood glucose and cholesterol levels, and it must be taken on an empty stomach because food significantly increases absorption and, with it, the risk of QT prolongation (a heart rhythm change). Importantly, nilotinib has also been associated with an increased risk of peripheral arterial occlusive disease—see the dedicated section below.

Often managed by: taking nilotinib strictly on an empty stomach as prescribed, routine blood glucose/lipid and ECG monitoring, and avoiding grapefruit juice, which can raise nilotinib levels.

- Remember the Drug & Food Interaction Chart earlier in this guide before changing your diet significantly or adding supplements.

Small, sustainable changes tend to stick better than big ones. Pick one thing from this page to try this week rather than all of them at once.

Tips for Living Well

None of the habits below replace your CML treatment — but there is solid evidence that they help your body and mind handle it better, especially fatigue, which is one of the most common and persistent symptoms patients report. [Ref. 39]

Movement and Exercise

Exercise has the strongest evidence base of any non-drug approach to cancer-related fatigue — stronger than rest. [Ref. 39, 40] International exercise-oncology guidelines, developed specifically for people living with and beyond cancer (including blood cancers), recommend:

- 150 minutes per week of moderate-intensity aerobic activity (brisk walking, cycling, swimming) — or 75 minutes of vigorous activity — done in sessions of at least 10 minutes. [Ref. 40]
- Resistance/strength training at least 2 days per week.
- Starting low and progressing gradually if you're currently inactive, fatigued, or newly diagnosed — any amount of movement is better than none.
- Checking with your care team before starting a new exercise program, especially if you're on nilotinib or ponatinib given the cardiovascular considerations discussed earlier in this guide.

Rest and Sleep

Sleep disturbance, fatigue, and emotional distress often travel together — improving one tends to improve the others. [Ref. 41] Evidence-based approaches include:

- Keeping a consistent sleep and wake time, even on weekends.
- Limiting screens, caffeine, and heavy meals close to bedtime.
- Short daytime naps (20–30 minutes) rather than long ones, which can interfere with nighttime sleep.
- Asking your care team about cognitive behavioral therapy for insomnia (CBT-I) if poor sleep persists — it's a recommended, effective option, not just medication.

Eating Well

There's no single “CML diet,” but nutrition consultation is a standard part of managing cancer-related fatigue and side effects when they arise. [Ref. 39]

- Aim for a varied, balanced diet with adequate protein, especially if you're dealing with fatigue or muscle cramps.
- Stay well hydrated — this alone can meaningfully ease fatigue and some medication side effects.
- Ask for a referral to an oncology dietitian if nausea, diarrhea, or appetite loss are making it hard to eat well — this is a normal, appropriate request, not a last resort.

Bosutinib (Bosulif®)

Bosutinib is most notable for gastrointestinal effects. Diarrhea occurs in the large majority of patients—around 70% in clinical trials—usually beginning within the first few days of treatment. It is typically mild to moderate and rarely leads to stopping the medication, though it is managed proactively with antidiarrheal medication and fluids. Elevated liver enzymes are also common with bosutinib and are monitored closely, especially during the first weeks of treatment.

Often managed by: taking bosutinib with food to reduce stomach upset, staying hydrated, and having antidiarrheal medication on hand as directed by your care team.

Ponatinib (Iclusig®)

As the most potent BCR::ABL1 inhibitor available—active even against the hard-to-treat T315I mutation—ponatinib carries the highest recognized risk of arterial occlusive events among approved TKIs. See the dedicated section below for details on risk and monitoring.

Often managed by: active control of blood pressure, cholesterol, and blood sugar, and the lower, response-adjusted dosing strategies now commonly used to reduce cardiovascular risk.

Asciminib (Scemblix®)

Asciminib works differently from the other TKIs described above. Rather than blocking the same binding pocket, it attaches to a separate site on the BCR::ABL1 protein (an approach known as STAMP, for Specifically Targeting the ABL Myristoyl Pocket), which contributes to a generally more favorable side effect profile in clinical trials. The most common effects are musculoskeletal pain, mild reductions in blood counts, and elevated pancreatic enzymes; clinical pancreatitis is uncommon but is monitored for. New or worsening high blood pressure has also been reported, and arterial occlusive events occur in a small minority of patients—less often than with nilotinib or ponatinib, but still monitored for, particularly in patients with existing cardiovascular risk factors.

Often managed by: routine lipase monitoring, taking asciminib on an empty stomach as prescribed, and prompt reporting of severe abdominal pain.

Peripheral Arterial Disease: Special Attention for Nilotinib and Ponatinib

Peripheral arterial disease (PAD) occurs when the arteries that carry blood to the arms and legs—most often the legs—become narrowed or blocked. Because nilotinib and ponatinib have each been specifically linked to an increased risk of PAD, both the European LeukemiaNet and independent research groups recommend closer, more deliberate monitoring for patients taking these two medications.

The risk is real but should be kept in perspective. Studies have found nilotinib increases the risk of PAD substantially compared with imatinib, with problems typically developing an average of about two years after starting treatment, and risk rising further in patients who are older or who already have cardiovascular risk factors such as diabetes, high cholesterol, high blood pressure, or a history of smoking. With ponatinib, careful independent review of long-term trial data found that roughly 1 in 6 patients experienced some form of arterial occlusive event over five years of follow-up, most commonly related to the heart, brain, or peripheral circulation, with peripheral arterial disease specifically affecting about 4% of patients. Importantly, dose adjustments and closer monitoring introduced after these risks were identified have helped reduce the rate of new events over time.

What you and your care team can do:

- Ask about a baseline ankle-brachial index (ABI) test—a simple, painless comparison of blood pressure in the ankle and arm—before or shortly after starting nilotinib or ponatinib.
- Repeat ABI testing or vascular ultrasound every 6 to 12 months while on either medication, as recommended by the European LeukemiaNet, or more often if you have additional risk factors.
- Work with your care team to actively manage blood pressure, cholesterol, and blood sugar—these are the same modifiable factors that influence PAD risk in the general population.
- If you smoke, ask your care team about support to quit. Smoking significantly increases vascular risk on top of any risk from the medication itself.
- Report new leg pain, cramping, numbness, coldness, or slow-healing sores promptly, even between scheduled appointments.
- Treat sudden chest pain, one-sided weakness, vision changes, or difficulty speaking as a medical emergency and seek immediate care—these can be signs of a heart attack or stroke.

These risks do not mean nilotinib or ponatinib are the wrong choice for you. For many patients, one of these medications is the most effective option for controlling their CML, including after other treatments have not worked well enough. This information is meant to support—not replace—close partnership with your

Understanding Your Emotions

A CML diagnosis changes more than your medical chart. Research on CML patients consistently finds that the emotional side of this disease is real, common, and worth talking about — not a sign that you're handling things wrong.

You Are Not Alone in This

Studies of CML patients on long-term TKI therapy have found meaningfully higher rates of anxiety and depression compared with people who have never had cancer — in one controlled comparison, CML patients reported significantly more depression and anxiety alongside their physical symptoms. [Ref. 35] A large multi-national survey found that roughly 1 in 5 patients reported clinically significant anxiety and over a third reported depressive symptoms. [Ref. 36]

A recent nationwide survey described the emotional burden of CML as encompassing distress about the illness itself, the ongoing need for daily medication, uncertainty about the future, fear of the disease progressing, and the ripple effects on family — with women and patients on later lines of therapy reporting the heaviest burden. [Ref. 34]

Even reaching a major goal like treatment-free remission can bring its own emotional complexity: many patients describe new anxiety around each PCR test during the transition off treatment — a heightened watchfulness around lab results, even as physical side effects improve. [Ref. 37]

What Seems to Help

- Talking to your care team about how you're coping, not just your bloodwork — many clinics can refer you to psycho-oncology or counseling support.
- Mindfulness-based approaches: a program developed specifically for CML patients on TKIs (“Being Present—CML”) found meditation-based practice was feasible and acceptable, with promising early effects on distress. [Ref. 38]
- Connecting with other CML patients — through CMLSC or similar organizations — to share what you're experiencing with people who understand it directly.
- Naming the specific worry out loud, whether it's fear of progression, PCR-test anxiety, or the burden of a daily pill — vague dread is harder to act on than a specific, nameable concern.

If you're finding it hard to cope, or these feelings are affecting your daily life, please talk to your care team — they can connect you with the right support. This is a routine, expected part of good CML care, not an extra ask.

Fertility and Family Planning

TKIs, including imatinib and other approved agents, are generally not recommended during pregnancy. Preclinical studies show imatinib is teratogenic in animals, and outcome data collected from patients exposed during pregnancy show a meaningfully higher rate of pregnancy loss and birth defects compared with the general population, particularly with exposure during the first trimester.

This does not mean parenthood is off the table. Many CML patients go on to have healthy pregnancies and children — it simply requires planning with your care team well in advance, including reliable contraception while on treatment, and a discussion of options such as a supervised treatment pause timed around conception, or alternative therapies during pregnancy, depending on individual disease status.

If you are considering pregnancy, or become pregnant unexpectedly while on treatment, contact your hematologist promptly rather than stopping or continuing your medication on your own — the right next step depends heavily on your individual molecular response history.

hematologist, who weighs your full cardiovascular risk profile in choosing and monitoring your treatment.

Quick Reference: Side Effects by TKI

TKI	Most Common Effects	Notable Risk to Watch
Imatinib (Gleevec®)	Fluid retention, muscle cramps, nausea, mild rash, fatigue	Generally the best-tolerated long-term profile
Dasatinib (Sprycel®)	Fatigue, low blood counts, headache	Pleural effusion; rare pulmonary arterial hypertension
Nilotinib (Tasigna®)	Elevated glucose/cholesterol, rash, headache	Peripheral arterial disease; QT prolongation
Bosutinib (Bosulif®)	Diarrhea (~70%), nausea, elevated liver enzymes	GI side effects; liver enzyme monitoring
Ponatinib (Iclusig®)	Rash, hypertension, fatigue, pancreatitis risk	Highest arterial occlusive event risk (~1 in 6 at 5 yrs)
Asciminib (Scemblix®)	Musculoskeletal pain, mild cytopenias, elevated pancreatic enzymes	Generally favorable profile; rare pancreatitis, hypertension

	retaining drugs	

PONATINIB	ASCIMINIB
Avoid antacids / gastric pH-raising drugs Strong CYP3A4 inhibitors: reduce dose to 30mg Strong CYP3A4 inducers: avoid Significant arterial occlusion risk	Administer fasted; high-fat meals reduce absorption Itraconazole oral solution ↓~40% — avoid Inhibits CYP3A4/2C9/2C8 — monitor warfarin, midazolam, atorvastatin No clinically significant QT prolongation

This chart was compiled by the CML Society of Canada (CMLSC) for patient education purposes and reviewed against peer-reviewed literature as of 2026. It does not replace individualized medical advice. Drug interaction profiles evolve — always consult your hematologist or pharmacist before adding any new medication, supplement, herbal product, or making changes to your diet. Patients in Quebec are encouraged to discuss medication management under Bill 31 pharmacist services.

Panax ginseng	Resveratrol	uncertain)

11 Foods That May Increase ▲ TKI Plasma Levels — Avoid or Limit

Citrus (furanocoumarins)	Other foods	Concentrated spices/supplements
Grapefruit & grapefruit juice (all TKIs) Pomelo Seville oranges Blood oranges	Star fruit — CYP3A4 inhibitor Pomegranate juice — weak inhibitor Unfiltered coffee (cafestol) High-fat meals — reduce asciminib absorption	Turmeric (curcumin) — culinary amounts likely safe Black pepper (piperine) — culinary amounts likely safe

12 Foods That May Decrease ▼ TKI Plasma Levels

Asciminib	Nilotinib	Bosutinib	Cruciferous vegetables
Always take fasted — high-fat meals significantly decrease absorption	Always take fasted — food increases exposure and QT risk	Always take with food — fasting reduces absorption	Very high quantities — theoretical CYP3A4 induction; normal amounts safe

13 Drug-Specific Highlights — Refer to Your Prescribing Information for a Complete List

NILOTINIB	DASATINIB	BOSUTINIB
Strong QT risk — ECG monitoring required Avoid all food 2h before / 1h after dose Contains lactose	Contains lactose PPIs significantly reduce absorption — avoid H2 blockers: 10h after or 2h before Pleural effusion risk worsened by fluid-	Must be taken with food Ketoconazole raises levels >5-fold — avoid PPIs decrease levels — use antacids instead Moderate QT risk

Before Your Next Appointment: A Symptom Self-Check

Research on CML patients has found that roughly 30% experience symptoms significant enough to interfere with daily life — and that patients and care teams often focus on different things during a short appointment. Rating your symptoms beforehand, in your own words and numbers, helps make sure nothing important gets missed. [Ref. 33]

This checklist is an informal tool inspired by validated CML symptom research (not a substitute for your care team's official assessment). For each symptom, circle a number from 0 (not present) to 10 (as bad as you can imagine) based on how it's been over the last week. Bring this page to your appointment.

General Symptoms

Tiredness / fatigue	0	1	2	3	4	5	6	7	8	9	10
Trouble sleeping	0	1	2	3	4	5	6	7	8	9	10
Pain	0	1	2	3	4	5	6	7	8	9	10
Feeling sad or low	0	1	2	3	4	5	6	7	8	9	10
Difficulty remembering things	0	1	2	3	4	5	6	7	8	9	10
Shortness of breath	0	1	2	3	4	5	6	7	8	9	10
Lack of appetite	0	1	2	3	4	5	6	7	8	9	10
Feeling drowsy	0	1	2	3	4	5	6	7	8	9	10
Dry mouth	0	1	2	3	4	5	6	7	8	9	10
Nausea	0	1	2	3	4	5	6	7	8	9	10
Vomiting	0	1	2	3	4	5	6	7	8	9	10
Numbness or tingling	0	1	2	3	4	5	6	7	8	9	10
General distress or worry	0	1	2	3	4	5	6	7	8	9	10

CML / TKI-Specific Symptoms

Diarrhea	0	1	2	3	4	5	6	7	8	9	10
Swelling or fluid retention	0	1	2	3	4	5	6	7	8	9	10
Rash or skin changes	0	1	2	3	4	5	6	7	8	9	10
Muscle soreness or cramping	0	1	2	3	4	5	6	7	8	9	10
Easy bruising or bleeding	0	1	2	3	4	5	6	7	8	9	10
General feeling of being unwell (malaise)	0	1	2	3	4	5	6	7	8	9	10
Headache	0	1	2	3	4	5	6	7	8	9	10

If any symptom scores 7 or higher, or is new and sudden, don't wait for this appointment — contact your care team now (see the red flags list earlier in this guide).

MMR, varicella, zoster-live, yellow fever must not be given during TKI therapy.	response may be diminished during TKI therapy. Asciminib maintains antibody-dependent cellular cytotoxicity (ADCC) activity.

8 Herbal Products — Known to Decrease ▼ TKI Levels (Avoid)

St. John's Wort (Hypericum perforatum) — strong CYP3A4 inducer, all TKIs. Avoid entirely. Can reduce TKI plasma concentrations by up to 50% via CYP3A4 and P-gp induction, potentially causing treatment failure.

Also avoid — possible CYP3A4 induction

Valerian root (Valeriana officinalis)
Echinacea (Echinacea purpurea)
Ashwagandha (Withania somnifera) — emerging evidence

9 Herbal Products — Known to Increase ▲ TKI Levels (Risk of Toxicity)

Kava-kava — CYP3A4 inhibitor Goldenseal — CYP3A4 inhibitor Cat's claw — CYP3A4 inhibitor Black cohosh Milk thistle (Silymarin) — may alter CYP3A4/2C9	Turmeric / Curcumin — CYP3A4 & P-gp inhibitor at supplement doses Grapefruit seed extract Pomegranate seed extract Piperine / black pepper extract (concentrated) Berberine — limited TKI-specific data

10 Herbal Products — Uncertain or Bidirectional Effects ▲▼

Avoid large quantities; discuss with your team.

Ginkgo biloba Garlic Saw palmetto Siberian ginseng	Dong quai Glucosamine / chondroitin Genistein (isoflavonoid) Green tea (extract form)	Dandelion tea Peppermint tea Chamomile tea (all: large quantities

Verapamil Clopidogrel Sildenafil / Tadalafil	substrate)		Trazodone Tamoxifen Paclitaxel Vincristine / Irinotecan Dextromethorphan

5 Drugs Whose Plasma Concentrations May Be Decreased ▼ by TKIs

Levothyroxine (imatinib) Monitor thyroid function regularly when co-prescribed with imatinib. Dose adjustments may be needed.	**Oral contraceptives (all TKIs)** Effectiveness may be reduced. Use additional non-hormonal contraception. All TKIs are teratogenic — do not become pregnant while on treatment.

6 Acid-Reducing Agents — May Alter TKI Absorption

Proton pump inhibitors (PPIs) Omeprazole — avoid with dasatinib Lansoprazole/pantoprazole/esomeprazole — reduce dasatinib & nilotinib absorption; avoid May decrease bosutinib — use short-acting antacids instead Asciminib & imatinib minimally affected	**H2 receptor antagonists** Ranitidine, famotidine, cimetidine — use with caution Take H2 blockers 10h before or 2h after dasatinib Minimal effect on asciminib	**Antacids** Calcium carbonate — decreases ponatinib Aluminum/magnesium hydroxide — avoid with ponatinib Space ≥2 hours from TKI dose Imatinib & asciminib unaffected

7 Vaccines — Special Considerations During TKI Therapy

Live virus vaccines — contraindicated (all TKIs)	**Inactivated vaccines** Generally acceptable, though antibody

Questions to Ponder Before Your Visit

A nationwide survey of CML patients found that the most common unmet needs weren't about the cancer itself — they were about information: supportive services, long-term disease management, and topics like fertility that patients often felt they had to raise themselves. [Ref. 34] These questions are designed to help you raise them.

About Your Treatment and Response

- What was my BCR-ABL1 level at my last test, and how does it compare to the 3/6/12-month milestones?
- Am I on track, in a warning zone, or should we be considering a change?
- Is my current medication and dose still the best fit for me, given my side effects and response?
- What would make me a candidate for a treatment-free remission (TFR) attempt down the road?

About Side Effects and Daily Life

- Which of my current symptoms are expected with my medication, and which should I flag as unusual?
- Are there specific interactions I should know about with my other medications, supplements, or diet?
- Is there anything we can adjust — timing, dose, supportive medication — to make side effects more manageable?

About Support and Long-Term Planning

- Are there supportive services — counseling, dietitian, physiotherapy — available to me through this clinic or CMLSC?
- If fertility or family planning is relevant to me, what should we discuss now rather than later?
- Who do I contact between appointments if something comes up, and how quickly should I expect a response?
- Is there anything about my day-to-day routine — work, exercise, travel — that I should plan around my treatment?

You don't need to ask all of these at once. Pick the ones that matter most to you right now — there will be other appointments for the rest.

CML Drug & Food Interaction Reference Chart

Updated 2026 — A comprehensive, peer-reviewed reference for known interactions between all approved CML tyrosine kinase inhibitors (TKIs) and co-medications, food, spices, herbs, and natural products.

Always review this chart with your healthcare team before making any changes to your medications or supplements.

1 Drugs With Potential to Prolong the QT Interval

Use with extreme caution with nilotinib, dasatinib, bosutinib & ponatinib.

Anti-arrhythmic drugs	Fluoroquinolone antibiotics	Other drugs	Oncologics & other
Amiodarone Disopyramide Procainamide Quinidine Sotalol Dofetilide Dronedarone	Moxifloxacin — highest QT risk Ciprofloxacin — moderate + CYP3A4 (dual risk) Norfloxacin — moderate + CYP3A4 Levofloxacin — lower risk; caution	Chloroquine / Hydroxychloroquine Halofantrine Clarithromycin Haloperidol Methadone Domperidone Ondansetron (high dose) Antipsychotics (ziprasidone, quetiapine)	Anthracyclines (cumulative high-dose) Vandetanib Vemurafenib Ribociclib

Dual-risk alert — Nilotinib patients: Ciprofloxacin and norfloxacin both prolong the QT interval and inhibit CYP3A4, which can increase nilotinib plasma concentrations — compounding QT prolongation risk. The FDA nilotinib prescribing information (black box warning) explicitly advises avoiding concomitant use of QT-prolonging drugs and CYP3A4 inhibitors. ECG and electrolyte monitoring required.

Asciminib: No clinically relevant QT prolongation effect based on Phase I data.

2 CYP3A4 Inhibitors — May Increase TKI Plasma Concentrations ▲

Antifungals	Antibiotics	Antivirals (HIV/HCV)	Other
Ketoconazole (all TKIs) Itraconazole	Erythromycin Clarithromycin (+35% AUC)	Atazanavir Indinavir	Diltiazem Verapamil Amiodarone

Fluconazole Voriconazole Posaconazole Terbinafine	Troleandomycin Telithromycin Ciprofloxacin Norfloxacin	Nelfinavir Ritonavir Saquinavir Delavirdine Cobicistat Telaprevir	Nefazodone Fluvoxamine Mifepristone Cimetidine Aprepitant Isoniazid

Asciminib-specific: Also a substrate of UGT2B7/UGT2B17 and BCRP transporter. Itraconazole oral solution (cyclodextrin excipient) unexpectedly decreases asciminib exposure ~40%; capsule form has minimal effect. Clarithromycin increased asciminib AUC ~35%. Asciminib itself is a moderate inhibitor of CYP3A4, CYP2C9, and CYP2C8 — it can increase levels of co-administered substrates (warfarin, midazolam, repaglinide, atorvastatin).

3 CYP3A4 Inducers — May Decrease TKI Plasma Concentrations ▼

Antibiotics / antifungals	Antivirals	Anticonvulsants	Other inducers
Rifampin (rifampicin) — all TKIs Rifabutin Griseofulvin	Efavirenz Nevirapine Etravirine Lopinavir/ritonavir	Carbamazepine Phenytoin Fosphenytoin Phenobarbital Primidone Oxcarbazepine	Dexamethasone (high dose) Pioglitazone Troglitazone Modafinil Apalutamide (ponatinib) Bosentan (ponatinib)

4 Drugs Whose Plasma Concentrations May Be Increased ▲ by TKIs

Cardiovascular	Statins	Immunosuppressants	Other substrates
Warfarin (all TKIs) Amlodipine Diltiazem Felodipine Nifedipine	Atorvastatin (+24% Cmax) Lovastatin Simvastatin Rosuvastatin (OATP1B	Cyclosporine Tacrolimus Sirolimus	Midazolam (+28%) Codeine Acetaminophen Methadone Quetiapine