LEUKEMIA & LYMPHOMA SOCIETY®

HEALTHCARE PROFESSIONALS

No. 13 in a series
providing the latest information

Facts About
Chronic Lymphocytic Leukemia (CLL)

Introduction

Chronic lymphocytic leukemia (CLL), or small lymphocytic lymphoma (SLL), is the most common adult leukemia in Western countries. Although CLL remains incurable, the development of highly effective and less toxic targeted therapies in recent years has extended survival beyond what was achievable with traditional chemoimmunotherapy regimens. Consequently, there are now hundreds of thousands of individuals in the United States living with CLL. This Leukemia & Lymphoma Society (LLS) fact sheet provides a practical overview of CLL incidence and survival trends, classification, risk factors, clinical features, diagnosis and workup, treatment, and management of treatment-related side effects. This fact sheet also provides details on long-term and late effects of therapy, as well as an overview of survivorship needs in the years and decades following initial diagnosis and treatment. By using this fact sheet and related resources from The Leukemia & Lymphoma Society, healthcare professionals can help support CLL patients throughout their CLL journey, from diagnosis to survivorship care.

Highlights

- Chronic lymphocytic leukemia (CLL) is a relatively common and generally indolent hematologic malignancy characterized by the proliferation of mature but dysfunctional B lymphocytes.
- In Western countries, CLL is the most common adult leukemia. The American Cancer Society estimated a total of 20,700 new CLL cases in 2024.
- The incidence of CLL varies by race and ethnicity.
- In recent years, CLL-related death rates have been in decline. A major driver of this has been the continued development of new therapeutic regimens that are more effective and less toxic than traditional chemoimmunotherapy regimens.
- CLL has genetic underpinnings and runs in families.
- Despite substantial improvements in overall survival, prognosis varies widely depending on risk factors including prognostic biomarkers.
- Patients with CLL may experience lymphadenopathy (greater than 50% of patients), splenomegaly, and hepatomegaly.
- Patients may report fatigue, fever, night sweats, early satiety, and unintentional weight loss.
- A diagnosis of CLL is determined by complete blood count with peripheral smear, flow cytometry of peripheral blood, and immunophenotyping.
- Distinguishing CLL/SLL from its precursor condition, monoclonal B-cell lymphocytosis (MBL) is important for determining prognosis and establishing a management approach.
- Staging is important for prediction of disease progression and selection of an appropriate treatment plan.
- Not all patients need treatment right away; “watch and wait” is a valid management strategy, particularly for lower-risk disease.
- First-line therapy approaches have shifted from chemoimmunotherapy to targeted therapy approaches that incorporate agents targeting Bruton tyrosine kinase (BTK) and B-cell lymphoma 2 (BCL-2). Treatment in this setting is typically continuous for BTK inhibitor-based approaches and fixed-duration for BCL-2-based approaches.
- Novel therapies in the second line and beyond include approved noncovalent (reversible) BTK inhibitor and chimeric antigen receptor (CAR) T-cell therapy, while numerous drugs and combinations are in clinical trials.
- Newer treatments are generally well tolerated but require careful management due to side effects that can be serious and potentially life-threatening in some cases.
- A wide range of supportive care measures are important in CLL, including growth factors, vaccination, management of autoimmune conditions, and more.
- Over time, patients with CLL are at risk of secondary malignancies such as melanoma and non-melanoma skin cancers, and complications such as Richter’s transformation.
- With hundreds of thousands of patients now living with CLL, survivorship care is more important than ever before. With appropriate medical care, patients can live for many years, enjoying a high quality of life.

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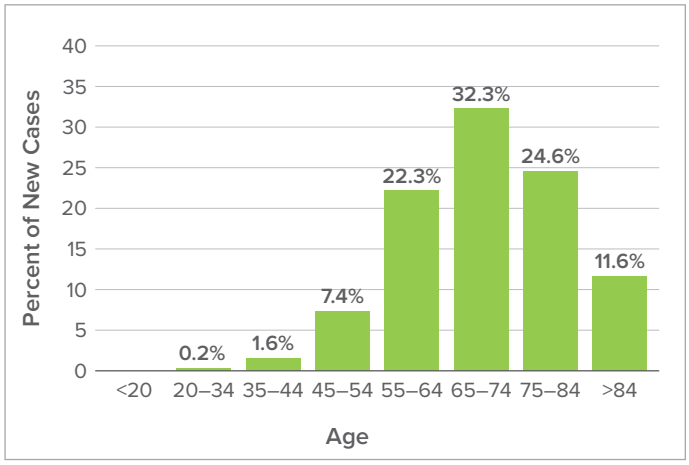
Overview and Epidemiology

Chronic lymphocytic leukemia (CLL) is a relatively common and generally indolent hematologic malignancy characterized by the proliferation of mature but dysfunctional B lymphocytes. The main sites of disease include the bone marrow, peripheral blood, the spleen, and lymph nodes.[1] Some patients are referred to as having small lymphocytic lymphoma (SLL), a condition that is essentially identical to CLL (i.e., they are the same disease pathologically).

The American Cancer Society estimated a total of 20,700 new CLL cases and 4,440 CLL-related deaths in the United States in 2024.[2] In the larger context of cancer in the US, CLL represents about 1% of all cancer cases and 0.7% of cancer-related deaths.[3] CLL most often occurs in older adults, with a median age of 70 at diagnosis; about one-third of new diagnoses are in the 65-74 age range **(Figure 1)**.

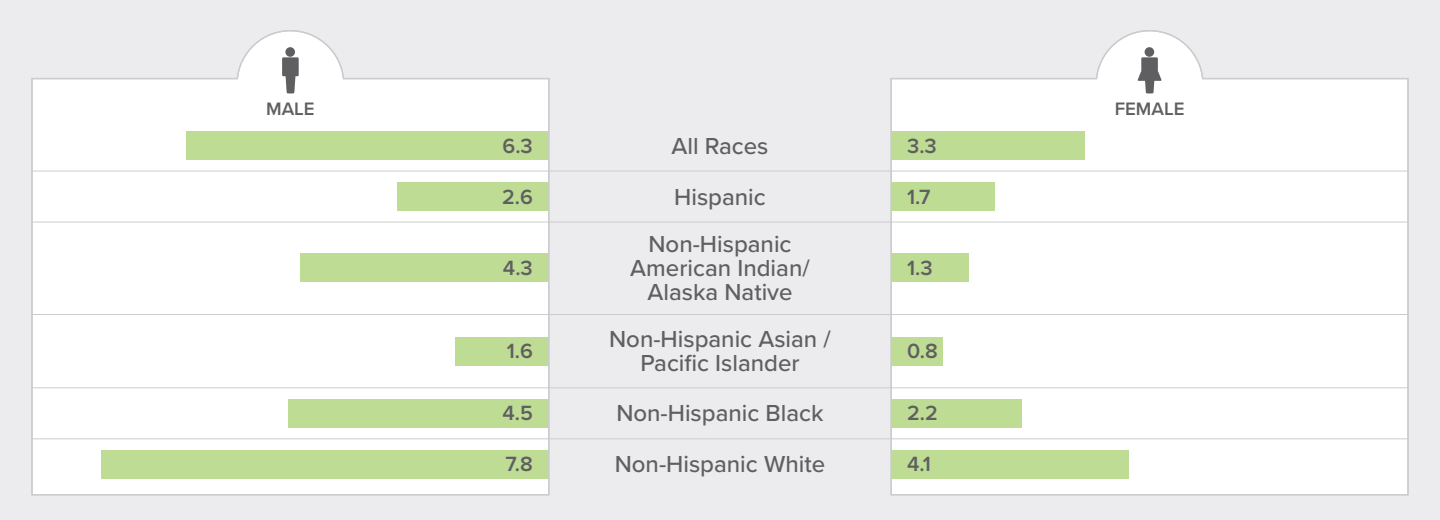
Figure 1.
CLL Diagnoses by Age Group, United States



Note: Based on SEER 22 registry grouping. Data from 2017-2021 including both sexes and all races/ethnicities.
Source: National Cancer Institute[3]

Overall, the rate of new CLL cases in the United States is 4.6 per 100,000 persons per year. However, CLL incidence varies by sex and race/ethnicity; CLL is more common in men than in women, with the highest case rates seen among non-Hispanic White males **(Figure 2)**.[3]

Figure 2. Rates of New CLL Cases by Sex and Race/Ethnicity, United States

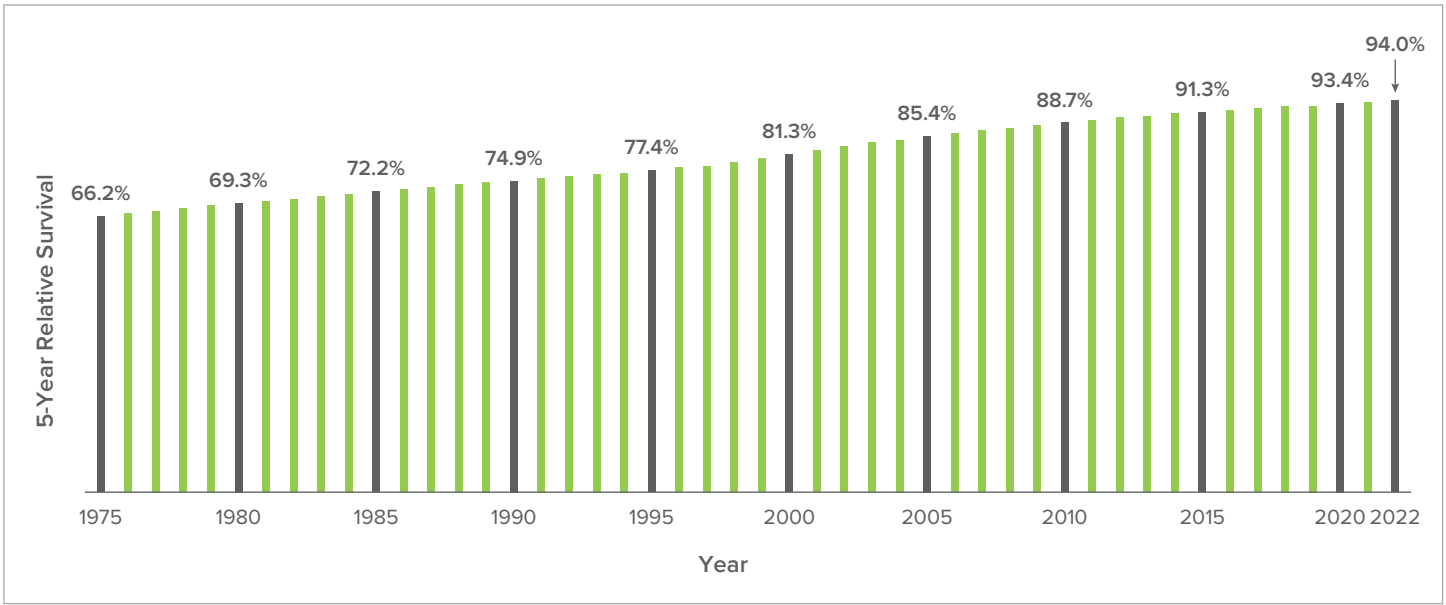


Note: Rates are age-adjusted per 100,000 persons per year. Based on 2017-2021 data.
Source: National Cancer Institute[3]

In recent years, both the incidence of CLL and death rates have been declining. The observed rate of CLL cases in the US has declined from 5.4 per 100,000 persons in 2010 to 4.3 per 100,000 persons in 2021.[3] On average, age-adjusted rates for new CLL cases have been falling by 1.5% per year, while age-adjusted death rates are falling by 2.3% per year.[3]

One major driver of declining death rates is the continual development of highly effective, less toxic therapies. Today, 5-year relative survival for individuals with CLL is now estimated at 94%, up from just 66% four decades ago **(Figure 3)**.[3] As a result of this dramatic prolongation of survival, the number of people living with CLL today is higher than ever before. Today, CLL is the most prevalent leukemia, with an estimated 215,107 people living with CLL in the United States in 2021.[3]

Figure 3. CLL 5-Year Relative Survival Percentages, United States, 1975-2022



Note: 5-year relative survival based on SEER 8 (modeled trend).
Adapted from source: National Cancer Institute[3]

Furthermore, CLL has genetic underpinnings and is known to run in families. The relative risk of CLL among first-degree family members of a CLL patient is significant, though the absolute risk increase is relatively small due to the low lifetime risk of the disease (see related discussion in *Long-Term and Late Effects* section). Among second-generation offspring with CLL, the age at diagnosis is almost 2 decades earlier than in the parent. About 1 in 5 first-degree relatives of patients with CLL have the CLL precursor condition MBL, though only a minor proportion of patients with will go on to develop CLL.

Prognosis and Risk Factors

Despite dramatic improvements in survival for CLL patients overall, the natural history of CLL remains highly variable from patient to patient. The median overall survival is approximately 10 years, but the range is from a low of 2 years to 20 years or more. Of note, patients diagnosed with low-risk CLL (see *Staging Systems* below) may survive decades with no therapy, but instead, can be managed with a "watch and wait" approach (i.e., active surveillance to monitor for any evidence of disease progression).[4]

Several genetic biomarkers provide important prognostic information for patients with CLL. Some are cytogenetic variables, such as del(17p) and del(11q), both of which indicate unfavorable risk; and aberrations such as *TP53* mutation (unfavorable) and IGHV gene somatic hypermutation status (less than or equal to 2% mutation is unfavorable, while greater than 2% is favorable).[5] However, an important caveat is that much of the evidence for their prognostic value was from the era when chemoimmunotherapy was the standard of care for most patients; according to the National Comprehensive Cancer Network (NCCN), the significance of these variables is less well-defined in patients who receive targeted therapy today.[5]

Some of these biomarkers have had implications for treatment decision-making. In particular, analysis of del(17p) and *TP53* mutations has been a central part of treatment selection algorithms.[5] However, with the advent of highly effective targeted therapies approved regardless of genetic risk biomarkers, the differences in treatment recommendations based on the presence or absence of del(17p)/*TP53* mutations have become less pronounced (see *Treatment of CLL* section below).

Several other factors have been associated with CLL prognosis, such as vitamin D deficiency. In particular, low levels of vitamin D have been linked to inferior overall survival and a shorter time to first treatment.[6] More recent evidence from a retrospective study suggests that vitamin D supplementation may prolong time to treatment in CLL patients managed according to a watch-and-wait strategy; however, prospective studies are needed to confirm the findings.[7]

Diagnosis and Workup

Patients with CLL may experience lymphadenopathy (greater than 50% of patients), splenomegaly, and hepatomegaly, and they may report fatigue, fever, night sweats, early satiety, and unintentional weight loss.[4] Patients may also experience infections of the skin, lungs, kidneys, or other sites as a result of low immunoglobulin levels and decreased neutrophil counts.[8] Of note, however, patients may be entirely asymptomatic at the time CLL is identified (e.g., due to an unexplained high lymphocyte count detected during an annual physical or examination for an unrelated condition).[8]

A diagnosis of CLL is determined by complete blood count with peripheral smear, flow cytometry of peripheral blood, and immunophenotyping.[4] The CLL diagnosis is based on an absolute peripheral lymphocytosis > 5000/mcL (5×10^9/L) or higher that is sustained for at least 3 months, while clonality in circulating B cells can be confirmed by peripheral blood flow cytometry.[9] Expression of CD5, CD19, CD20, CD23, and kappa or lambda light chains should be identified in circulating lymphocytes. Other diagnostic findings may include hypogammaglobulinemia as well as elevated lactate dehydrogenase, uric acid, or hepatic enzymes, while hypercalcemia is a rare finding. As noted in the *Prognosis and Risk Factors* section of this fact sheet, cytogenetic and molecular studies performed on peripheral blood samples at the time of diagnosis can provide useful prognostic information.[4]

Some patients are referred to as having small lymphocytic lymphoma (SLL), a condition that is essentially identical to CLL (i.e., they are the same disease pathologically). However, "CLL" typically refers to the leukemic phase of the disease, where diseased cells are present mostly in the blood and bone marrow. By contrast, "SLL" is usually used in patients with disease primarily in the lymph nodes.[10] A related condition is monoclonal B-cell lymphocytosis (MBL). Considered a precursor of CLL, MBL has the same immunophenotype but does not fully meet CLL diagnostic criteria.[11]

Distinguishing CLL/SLL from the precursor condition MBL is important for determining prognosis and establishing a management approach. The definition of MBL is an absolute monoclonal B-lymphocyte count that does not exceed 5,000 per μL for at least 3 months, but no other evidence of a lymphoproliferative disorder (e.g., lymphadenopathy, cytopenias, or constitutional symptoms).[12] Patients with MBL tend to have favorable molecular characteristics, such as wild-type *TP53*, mutated IGHV, and lower prevalence of del(17p). The NCCN recommends observation for all patients in whom MBL is identified.[5]

Staging of CLL

Staging is important for predicting disease progression and selecting an appropriate treatment plan. For patients with CLL, the Rai and Binet staging systems are routinely used.[13,14] For SLL, staging can be done using the Lugano classification, a modified version of the older Ann Arbor staging system for lymphomas;[15] however, most specialists today use the Rai system, which may provide more clinically helpful prognostic and therapeutic information for patients with SLL.[16]

The Rai and Binet staging systems for CLL both take into account clinical factors including lymphocytosis, enlargement of lymph nodes, enlargement of spleen or liver, as well as hematologic factors including presence of anemia or thrombocytopenia. The Rai stratifies patients into low risk (Stage 0), intermediate risk (Stage I-II), or high risk (Stage III-IV) categories **(Table 1)**, while Binet classifies patients in three stages (A-C) **(Table 2)**.[13,14] Generally speaking, earlier stages correlate with longer survival times.[17]

Table 1. Rai Staging System

Stage	Characteristics
Low Risk (Stage 0)	• Abnormal increase in the number of lymphocytes in the blood and marrow
Intermediate Risk (Stages I & II)	• Abnormal increase in the number of lymphocytes in the circulating blood and the marrow • Enlarged lymph nodes OR • Abnormal increase in the number of lymphocytes in the circulating blood and the marrow • Enlarged spleen and/or liver
High Risk (Stages III & IV)	• Abnormal increase in the number of lymphocytes in the circulating blood and the marrow • Anemia (hemoglobin <11g/dL) OR • Abnormal increase in the number of lymphocytes in the circulating blood and the marrow • Thrombocytopenia (platelet counts < 00,000/uL)

Source: The Leukemia & Lymphoma Society. www.LLS.org/leukemia/chronic-lymphocytic-leukemia/diagnosis/cll-staging

Table 2. Binet Staging System

Stage	Characteristics
A Stage	• No anemia (hemoglobin ≥ 10g/dL) • No thrombocytopenia (platelets ≥ 100,000/mm3) • Less than 3 areas of lymphoid tissue enlargement
B Stage	• No anemia (hemoglobin ≥ 10g/dL) • No thrombocytopenia (platelets ≥ 100,000/mm3) • 3 or more areas of lymphoid tissue enlargement
C Stage	• Anemia (hemoglobin <10g/dL) • Thrombocytopenia (platelets <100,000/mm3) • Any number of areas of lymphoid tissue enlargement

Source: The Leukemia & Lymphoma Society. www.LLS.org/leukemia/chronic-lymphocytic-leukemia/diagnosis/cll-staging

Treatment of CLL

Today, there are multiple effective treatment options available for patients with CLL; however, not all patients diagnosed with CLL have an immediate need for treatment. The decision to initiate therapy in CLL is driven by consideration of the impact of the condition on quality of life, morbidity, or mortality. For patients with early-stage CLL and no evidence of disease progression, watch-and-wait (i.e., active surveillance) may be an appropriate treatment approach. According to consensus guidelines from the International Workshop on Chronic Lymphocytic Leukemia (iwCLL), therapy should not be started unless there is documentation of active disease, such as progressive marrow failure (as indicated by development or worsening of anemia or thrombocytopenia), splenomegaly or lymphadenopathy that is large, progressive, or symptomatic, rapidly progressive lymphocytosis, presence of autoimmune complications, symptomatic extranodal involvement, or significant disease-related symptoms such as weight loss, fatigue, fever, night sweats **(see Table 3)**.[9]

Table 3. Updated 2018 iwCLL Guidelines to Initiate CLL Therapy

Any one of the following criteria should be met to initiate CLL therapy:
Progressive marrow failure, hemoglobin <10 gm/d? or platelet count of <100 x 10^9/L
Massive (≥ 6 cm below the left costal margin) or progressive or symptomatic splenomegaly
Massive (≥ 10 cm in the longest diameter) or progressive or symptomatic lymphadenopathy
Progressive lymphocytosis with an increase of ≥ 50% over a 2-month period or lymphocyte doubling time < 6 months
Autoimmune complications of CLL that are poorly responsive to corticosteroids
Symptomatic extranodal involvement (e.g. skin, kidney, lung, spine)
Disease-related symptoms, including: • Unintentional weight loss of ≥ 10% within the previous 6 months • Significant fatigue • Fever ≥ 38 degrees C for 2 or more weeks without evidence of infection • Night sweats for ≥ 1 month without evidence of infection

Abbreviations: CLL = chronic lymphocytic leukemia; iwCLL = International Workshop on CLL.

Source: The Leukemia & Lymphoma Society. Chronic Lymphocytic Leukemia [booklet]. 2023. www.LLS.org/sites/default/files/2023-07/PS34_CLL_Booklet_2023.pdf

When treatment is indicated, therapies that target Bruton tyrosine kinase (BTK) or B-cell lymphoma 2 (BCL-2) are often part of the preferred approach. Since 2013, the U.S. Food and Drug Administration (FDA) has approved multiple BTK inhibitors for use in patients with CLL. These include ibrutinib, acalabrutinib, zanubrutinib, and most recently pirtobrutinib, which in 2023 became the first non-covalent (i.e., reversible) BTK inhibitor to receive FDA approval. In addition, the BCL-2 inhibitor venetoclax has received multiple indications for use in adult patients with CLL.

Over the past decade, these targeted therapies have become standard of care for CLL treatment. Depending on the drug, patient, and clinical situation, these targeted agents may be given alone (i.e., as monotherapy), in combination with CD20-directed monoclonal antibodies obinutuzumab or rituximab, or in some cases in combination with one another.[18] On the basis of improved efficacy and reduced toxicity, these agents have largely replaced traditional chemoimmunotherapy regimens such as fludarabine, cyclophosphamide, and rituximab (FCR), bendamustine and rituximab, and obinutuzumab plus chlorambucil.[19]

First-Line Therapy

These targeted therapy-based treatment approaches are reflected in recommendations for first-line therapy of CLL. In clinical practice guidelines from the NCCN, preferred first-line regimens for patients without del(17p)/*TP53* mutation include acalabrutinib (with or without obinutuzumab), venetoclax (with obinutuzumab), or zanubrutinib (as monotherapy). Other recommended regimens include ibrutinib, alone or in combination with anti-CD20 agent (obinutuzumab or rituximab) or venetoclax. However, chemoimmunotherapy combinations may be useful in certain circumstances, according to NCCN guidelines, including the use of FCR for younger patients with IGHV-mutated CLL and no significant comorbidities. First-line recommendations are similar for patients with del(17p)/*TP53* mutation, though chemoimmunotherapy regimens are not recommended due to low response rates in these patients.[5]

The duration of first-line therapy usually depends on the type of treatment selected. Typically, BTK inhibitor-based regimens are continued until disease progression or treatment intolerance.[20] By contrast, venetoclax-based therapy and chemoimmunotherapy regimens are given for a fixed duration, followed by observation for disease progression.[21]

For individual patients, selecting an appropriate first-line therapy is challenging. Ideally, treatment decision-making should be based on individualized discussions between patients and healthcare professionals, taking into account the patient's treatment goals and preferences (e.g., regarding duration of therapy), anticipated side effects of available treatments, and comorbidities that may inform treatment choice, such as preexisting cardiovascular conditions (see *Side Effect Management* section).[22] Some of the considerations for patient-clinician discussion are listed in **Table 4**.

Table 4. Selecting Initial Novel Therapy in CLL: Treatment Considerations for BTK Inhibitors and Venetoclax-based Therapy

	BTK inhibitor-based therapy	Venetoclax-based therapy
Treatment Duration	Continuous until intolerance or disease progression	Fixed duration followed by observation
Potential Advantages	• No need for dose titration • No need for intensive initial monitoring	• Potential for treatment-free remissions • Minimization of accrued toxicity
Potential Drawbacks	• Perceived "pill burden" • Cumulative toxicity may lead to treatment discontinuation • Selection of resistant clones due to continuous selection pressure • AE concerns in patients with CV comorbidities	• Weekly dose escalation • Frequent venipuncture • Potential need for inpatient observation • Requires IV administration of anti-CD20 mAB • Not appropriate in patients with severe renal dysfunction

Abbreviations: AE = adverse event; CV = cardiovascular; IV = intravenous; mAb = monoclonal antibody

Source: Bennett and Seymour, *Blood Cancer Journal*[22]

Novel Therapies for Second-Line Therapy and Beyond

For patients with CLL who relapse or are refractory to first-line therapy, subsequent treatments are considered based on indications, guideline recommendations, and individualized factors such as the type of previous therapy and the duration of remission.[22] In NCCN guidelines, preferred second- and third-line therapy choices include acalabrutinib monotherapy, venetoclax with rituximab (or as monotherapy in patients with del(17p)/*TP53* mutation), and zanubrutinib monotherapy. Ibrutinib and venetoclax (given as monotherapy or in combination with one another) are other recommended regimens. Of note, venetoclax plus an anti-CD20 monoclonal antibody (ideally obinutuzumab) may be useful for relapse after a period of remission, if previously used. Pirtobrutinib, FDA approved in 2023 for patients who have received at least two prior lines of therapy, is recommended for patients with resistance or intolerance to a prior covalent BTK inhibitor.[5]

For patients with relapsed or refractory disease after prior BTK inhibitor and venetoclax-based regimens, recommended treatments include some of the aforementioned chemoimmunotherapy and targeted therapy options, the phosphoinositide 3-kinase inhibitors (PI3K) idelalisib (with or without rituximab) and duvelisib, and lisocabtagene maraleucel, a CD19-directed chimeric antigen receptor (CAR) T-cell therapy.[5] Numerous novel therapies are in clinical trials, particularly in patients with previously treated CLL. These include small molecule degraders of the BTK protein (such as NX-2127 and BGB-16673), monoclonal antibodies targeting ROR1 (cirmtuzumab) and BAFF (lanalumab), and T-cell directing therapies including bispecific antibodies, among other novel approaches.[22] Accordingly, all patients with CLL should be encouraged to participate in clinical trials.[5]

Side Effect Management and Supportive Care

The two major classes of targeted therapies now used extensively in CLL (i.e., BTK inhibitors and the BCL-2 inhibitor venetoclax) are generally well tolerated, particularly in comparison to PI3K inhibitors; however, both BTK inhibitors and venetoclax have characteristic side effects that are important for patient education, treatment decision-making, and ongoing management. The BTK inhibitors have a side effect profile that includes cardiovascular adverse events. The incidence of hypertension and bleeding are similar between BTK inhibitors. However, the first-generation agent, ibrutinib, is associated with a higher incidence of both atrial fibrillation and ventricular arrythmia as compared to the second-generation agents acalabrutinib and zanubrutinib, both of which are preferred over ibrutinib in clinical practice guidelines.[23] Venetoclax-based regimens are generally well tolerated, and are given as a fixed-duration therapy, which minimizes cumulative side effects; however, a notable risk is tumor lysis syndrome (TLS), a potentially life-threatening condition. To reduce risk of TLS, healthcare professionals should carefully follow guidelines for close monitoring during initiation and dose ramp up.[24] By contrast, the PI3K inhibitors idelalisib and duvelisib are associated with side effects such as infections, immune-mediated colitis, pneumonitis, and hepatitis, and in clinical trials, high rates of treatment discontinuation due to adverse events were reported. Thus, PI3K inhibitors are generally considered to be less preferable to BTK and BCL2 inhibition due to safety profile, along with direct and indirect evidence of inferior efficacy.[22]

Lisocabtagene maraleucel (or liso-cel) is the first CAR T-cell therapy to be approved for relapsed/refractory CLL. While liso-cel has a generally manageable safety profile, it is associated with adverse events that can be serious. In particular, liso-cel is associated with cytokine release syndrome (CRS) that in some cases can be severe or life threatening. In the study that led to the FDA approval of liso-cel, more than 80% of patients experienced CRS, including 9% for whom CRS was grade 3, indicating a more severe reaction (no grade 4 or 5 events were observed).[25]

Clinicians who provide care for patients with CLL should be familiar with a wide range of supportive care measures including growth factor administration, vaccination, and management of autoimmune conditions, among other considerations.[9] Some patients may benefit from use of granulocyte colony-stimulating factor (G-CSF) or erythropoiesis-stimulating agents given according to clinical practice guidelines.[26,27] Recommended vaccines (such as influenza and COVID-19) are safe and reasonably effective in patients with CLL. However, live vaccines are contraindicated due to the potential for severe complications; for example, CLL patients should not receive Zostavax, a live shingles vaccine, but they can receive the inactivated shingles vaccine Shingrix.[28] Up to 10% of CLL patients develop autoimmune cytopenias such as autoimmune hemolytic anemia (AIHA) and immune thrombocytopenia (ITP). These conditions can be managed initially with corticosteroids, followed by treatments such as rituximab for non-responders, and ultimately CLL-specific drugs for refractory patients.[9,29]

Long-Term and Late Effects

Patients with CLL are at higher risk of secondary malignancies including melanoma and non-melanoma skin cancers, laryngeal cancer, lung cancer, colon cancer, Kaposi sarcoma, and soft tissue sarcoma.[30] Thus, patient education on secondary malignancies is important to ensure that age-specific cancer screening guidelines are followed (e.g., for colonoscopy).[31] Patients should also be aware of the established but limited familial risk associated with CLL: first-degree relatives of patients with CLL are approximately 5 to 8 times more likely to develop CLL than people who do not have first-degree relatives with the disease. However, patients and their family members should be informed that the absolute risk increase is very small, since the overall lifetime risk of CLL is low (about 0.5%).[32]

Richter's transformation (or Richter's syndrome) is an important complication affecting up to 10% of patients with CLL. In these patients, CLL develops into a more aggressive disease, most often diffuse large B-cell lymphoma (or rarely, Hodgkin lymphoma). This complication typically occurs within 2 to 6 years of the CLL diagnosis, most commonly in patients with high-risk factors.[28] The prognosis of Richter's transformation is poor, with reported median overall survival times of 6 to 12 months.[33] The most common treatment approach for Richter's transformation is chemo-immunotherapy. For patients in remission following initial therapy, hematopoietic cell transplantation is associated with encouraging survival outcomes reported in small, retrospective studies. Although no breakthrough therapies have yet emerged, clinical trials of BTK inhibitors, venetoclax, CAR T-cell therapy, and others in various combinations may hold promise for the future.[33]

Survivorship Care

With the development of highly effective treatments, CLL-related mortality has declined substantially in recent years. As a result, more than 215,000 people are living with this disease in the US alone.[3] Today, only about one-third of patients die from the disease itself, while the rest die from infection, second malignancies, and a variety of unrelated conditions including cardiovascular disease and stroke, lung disease, renal disease, and dementia.[34]

With proper medical care, many patients today can live for many years with a high quality of life. Yet despite this shift, CLL is still often regarded simply as a malignancy that needs targeted treatment. Many healthcare professionals do not appreciate that, for the great majority of patients (i.e., survivors), CLL is a chronic, incurable multisystem inflammatory condition with multiple physical complications and psychosocial impacts such as anxiety and depression.[35] In addition, many patients with CLL will go on to experience distressing problems such as poor sleep, fatigue, and cognitive difficulties that can have substantial negative impact on function and quality of life.[36]

By identifying and managing these survivorship issues, patients with CLL may be better able to participate in the roles, jobs, and activities that give their lives meaning, purpose, and joy. Toward that end, healthcare professionals should familiarize themselves with the NCCN Guidelines for Survivorship, which provide recommendations for screening, evaluation, and treatment of physical and psychosocial issues associated with cancer and its treatment.[36]

Survivorship models of care have the potential to optimize outcomes for patients with CLL. In this model, clinicians work in a multidisciplinary fashion to provide care for CLL survivors, collaboratively addressing causes of morbidity and mortality, including many that could be prevented or mitigated through routine screening, medical management, and lifestyle changes.[35] In addition, clinicians should consider developing survivorship care plans for their patients with CLL. Survivorship care plans can help patients keep up with follow-up examinations, tests, appointment reminders, recommendations for diet and physical activity, and other health milestones such as recommended cancer screenings.[37]

Further LLS Resources

Facts About Blood Cancer Survivorship (an LLS resource for healthcare professionals)

- www.LLS.org/booklet/facts-about-blood-cancer-survivorship-treatment-and-ongoing-patient-care
- www.LLS.org/booklet/facts-about-facilitating-optimal-survivorship-care-blood-cancer-survivors

Patient Webcasts Covering CLL

www.LLS.org/patient-education-webcasts/leukemia

Shared Decision Making in Chronic Leukemias (patient education video)

www.LLS.org/patient-education-videos/shared-decision-making-chronic-leukemias

Chronic Lymphocytic Leukemia (patient-level overview of the disease and its treatment)

www.LLS.org/leukemia/chronic-lymphocytic-leukemia

Chronic Lymphocytic Leukemia (guides for patients and caregivers)

- www.LLS.org/booklet/chronic-lymphocytic-leukemia
- www.LLS.org/booklet/cll-guide-information-patients-and-caregivers

Living with CLL (LLS chat)

www.LLS.org/support-resources/online-chats#Chronic Lymphocytic Leukemia

Beyond Your Diagnosis (Patient Q&As with health experts on CLL and other topics)

www.beyondyourdiagnosis.org

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We're Here to Help

LLS is the world's largest voluntary health organization dedicated to funding blood cancer research, education and patient services. LLS has regions throughout the United States and Canada. To find the region nearest to you, visit our website at www.LLS.org/ChapterFind or contact

The Leukemia & Lymphoma Society

3 International Drive, Suite 200 Rye Brook, NY 10573
Phone Number: (800) 955-4572
(M-F, 9 a.m. to 9 p.m. ET)
Website: www.LLS.org

LLS offers free information and services for patients and families touched by blood cancers as well as for healthcare professionals. The resources listed below are available to you and your patients and are meant to be a compliment to the HCP team and an additional source of support.

Consult with an Information Specialist. Information Specialists are highly trained social workers and nurses who assist through treatment, financial, and social challenges. They offer up-to-date disease and treatment information. Language services are available. For more information, please:

- Call: (800) 955-4572 (M-F, 9 a.m. to 9 p.m. ET)
- Visit: www.LLS.org/IRC
- Email or Live chat: www.LLS.org/InformationSpecialists

Clinical Trials Support Center (CTSC). Work one-on-one with an LLS clinical trial nurse navigator who will personally assist throughout the entire clinical trial process. A nurse navigator will help identify potential clinical trials and overcome the barriers to enrollment (navigators help HCPs and patients). For more information about this free service, please:

- Call an Information Specialist: (800) 955-4572 to be referred to the CTSC
- Visit: www.LLS.org/CTSC
- Complete a referral form for your patient at: www.LLS.org/CTSCreferral

Nutrition Consultations. Nutrition Education Services Center (NESC) provides one-on-one *free* nutrition education and consultations to patients and caregivers of all cancer types with registered dietitians who have expertise in oncology nutrition.

- Visit: www.LLSnutrition.org

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Información en Español. (LLS information in Spanish) Para mayor información por favor:

- Visite: www.LLS.org/espanol.

LLS Community. LLS Community is an online social network and registry for patients, caregivers, and healthcare professionals. It is a place to ask questions, get informed, share your experience, and connect with others. To join:

- Visit: www.LLS.org/community

LLS Regions. LLS offers community support and services in the United States and Canada including the *Patti Robinson Kaufmann First Connection Program* (a peer-to-peer support program), in-person support groups, and other great resources. For more information about these programs or to contact your region, please:

- Call: (800) 955-4572
- Visit: www.LLS.org/ChapterFind

Patti Robinson Kaufmann First Connection® Program. A free peer-to-peer support program that connects patients and their loved ones to a trained peer volunteer who has gone through a similar experience.

- www.LLS.org/FirstConnection

LLS Disease Information for Patients and Caregivers: Lymphoma

- www.LLS.org/leukemia/chronic-lymphocytic-leukemia

Resources for Healthcare Professionals: Webinars, Podcasts, In-person Education Programs, Videos, and Fact Sheets:

- www.LLS.org/CE (free accreditation)
- www.LLS.org/HCPpodcast
- www.LLS.org/HCPvideos
- www.LLS.org/HCPbooklets

Resources for your Patients:

- www.LLS.org/programs
- www.LLS.org/EducationVideos
- www.LLS.org/podcast

Additional Resources

The National Cancer Institute (NCI)

www.cancer.gov
(800) 422-6237

The National Cancer Institute, part of the National Institutes of Health, is a national resource center for information and education about all forms of cancer. The NCI also provides a clinical trial search feature, the PDQ® Cancer Clinical Trials Registry, at www.cancer.gov/clinicaltrials, where healthcare professionals and patients can look for clinical trials.

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