

# Recognition of latest CLL therapies highlights new options for other cancers

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Last month, the American Society of Clinical Oncology (ASCO) designated the transformation of treatment for chronic lymphocytic leukemia (CLL) as the cancer Advance of Year.<sup>1</sup> The recognition came after the US Food and Drug Administration approved 4 drugs during 2014 for the treatment of CLL: obinutuzumab and ofatumumab, 2 immunotherapeutic drugs for previously untreated CLL; and ibrutinib and idelalisib, molecularly targeted therapies for treatment-resistant or relapsed CLL. The approvals significantly expand the choice of therapies for patients with the disease, which is the most common form of leukemia in adults, and in doing so, they also stand to improve patient survival and quality of life.

As many as 120,000 Americans are living with CLL, of whom more than 90% are older than 55 years. That percentage will likely increase as the population ages. Of course, not all CLL patients require therapy, and we have prognostic molecular parameters to determine who is more or less likely to need therapy in the early or late stages; however, many patients do need therapy, which is why these approvals are so welcome. At the 2014 annual meeting of the American Society of Hematology in December, the educational sessions on CLL suggested that for patients younger than 60 years, we should consider using the FCR (fludarabine, cyclophosphamide, and rituximab) regimen; for those aged 60-80, bendamustine and rituximab should be considered; and for patients older than 80 who require therapy, obinutuzumab and chlorambucil should be considered. But what about patients who fail those first-line therapies? Well, we now have the oral oncolytics, ibrutinib (a Bruton's tyrosine kinase inhibitor) and idelalisib (a PI3 kinase inhibitor). And moreover, for the rare patient with deletion 17-p and who does very poorly, ibrutinib has even been approved as a first-line therapy. What an encouraging and exciting landscape for treating symptomatic CLL patients.

Although ASCO highlighted the immunotherapeutic drugs obinutuzumab and ofatumumab for CLL in naming the year's most exciting therapeutic advance, I would argue that all of oncology has been well served by the

development of the immunotherapy, and especially the programmed death-1 (PD-1) inhibitors. Cancer immunologists have finally confirmed what we all suspected – cancer cells get going and thrive in many patients because they are able to turn off the body's natural cellular and humoral defense against a “nonself” invader-like cancer. Some cancers do this by reaching out and punching the

“off” button on the host effector cells that were just about to recognize, attack, and kill the cancer. This then is the program death receptor or PD-1 story and the molecules that work against PD-1 receptors or PD-1 ligand interfere with the tumor's ability to hit the “off” switch and allow the effector cells to recognize and destroy the cancer. For CLL, that is how obinutuzumab and ofatumumab work at the cellular level in patients with previously treated CLL. But the immunotherapies are making inroads among the treatments for other cancers as well: pembrolizumab was approved last year for advanced melanoma, and trials are

underway for immunotherapies for lung and bladder and renal cancers. In addition, encouraging positive results for immunotherapies for breast cancer were reported at the 2014 San Antonio Breast Cancer Symposium.

Let's hope that 2015 will be as exciting as 2014 when it comes to the approval of more therapeutic options that will improve patient survival and quality of life. We plan to continue bringing you reports of such developments in both the therapeutic and supportive care spheres, often emphasizing the supportive care approach to treating cancer as these new therapies may come with off-target effects that need quick attention to ensure that the treatment is not worse than the disease. And on that note, let's not forget our dedicated nurse practitioners and physician assistants and their invaluable contributions in supporting our patients from diagnosis onward.

## References

1. Masters GA, Krilov L, Bailey HH, et al. Clinical cancer advances: ASCO's annual report on progress against cancer. [http://cancerprogress.net/sites/cancerprogress.net/files/cca2015\\_fnl\\_web\\_012515.pdf](http://cancerprogress.net/sites/cancerprogress.net/files/cca2015_fnl_web_012515.pdf). Published January 20, 2015. Accessed January 28, 2015.

