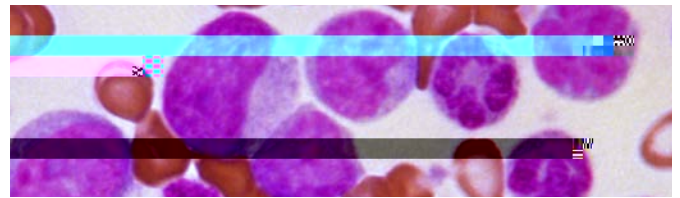
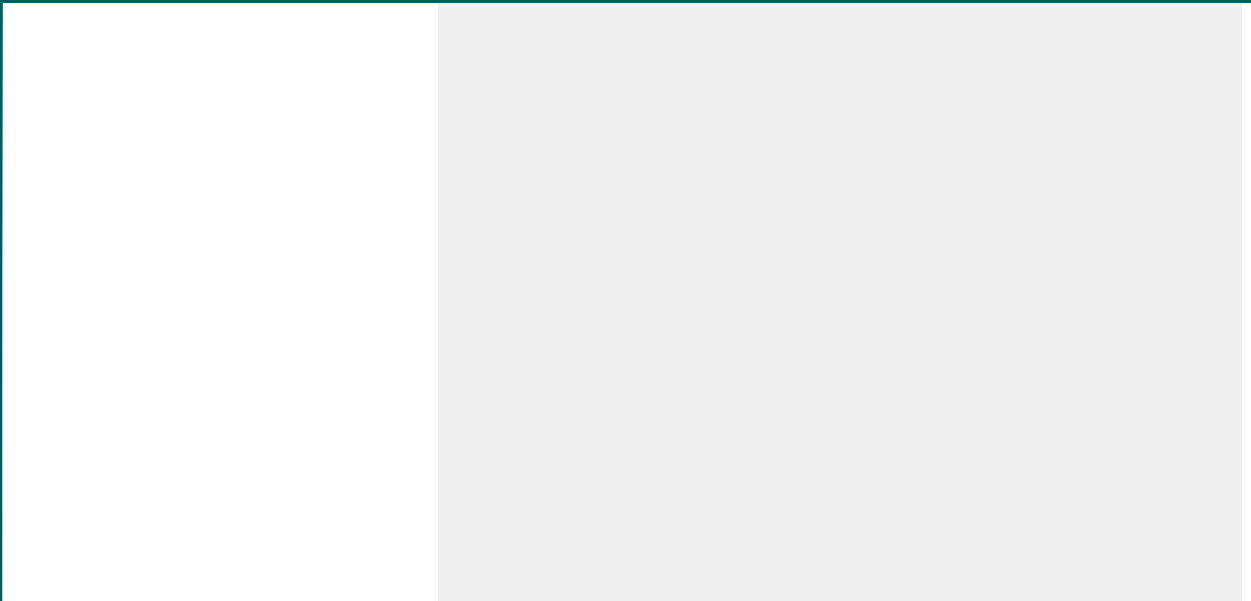




1



## THEN

- In the 1950s, new techniques to study cells and the chromosomes within them were just starting to be developed; researchers began linking

30%.<sup>1</sup>

# RESEARCH-TO-PRACTICE MILESTONES FOR GLEEVEC®

For more information on the supporting evidence and research sponsors for the following milestones, see the Web appendix table.



1914-1915: The first clinical trial of Gleevec in patients with chronic myeloid leukemia (CML) was conducted by Dr. Brian Goldstein at the National Cancer Institute (NCI). This trial established the safety and efficacy of Gleevec in CML patients.



# IMPACTS OF GLEEVEC®

Gleevec® is a “first-in-class” drug that many consider to be a forerunner of molecular medicines. Its success was proof that knowledge about the underlying biological mechanism of a disease could help scientists design powerful, targeted strategies to kill cancer cells without harming healthy cells.

## KNOWLEDGE

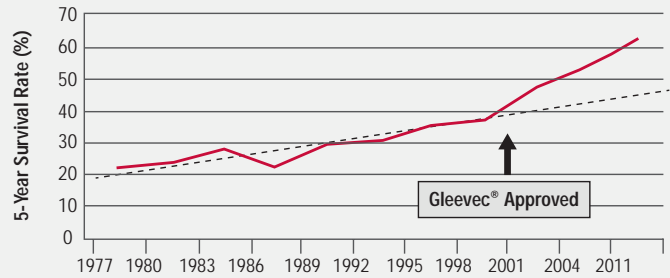
- Gleevec® was the first cancer drug approved by the FDA that directly targeted a signaling molecule inside the cell.<sup>25</sup>
- The dramatic effectiveness of Gleevec® stimulated an ongoing surge of new research into the treatment potential of kinase inhibitors. For imatinib alone, more than 12,000 scientific articles have been published in the last 15 years.<sup>26</sup>
- The success of Gleevec® spurred the development of other kinase inhibitors for CML and for other types of cancer. These newer kinase inhibitors, many based on the structure of Gleevec®, are improving survival rates for patients with CML and other diseases.<sup>27</sup>

## HEALTH

- Patients with a new diagnosis of CML are now expected to live 30 years post-diagnosis, essentially a normal lifespan.<sup>29</sup>
- Worldwide, more than 600 clinical trials have been undertaken on Gleevec® for new disease indications and drug formulations.<sup>30</sup>
- Gleevec® is now approved to treat multiple cancers, including gastrointestinal stromal tumors (GIST), in adults and children.<sup>31</sup>

**Five-year survival rates for CML patients treated with Gleevec® currently top 89%.<sup>28</sup>**

### CML Survival Rates Increased Dramatically after the Introduction of Gleevec®



Above: Five-year survival rates for patients with CML (including some patients not treated with Gleevec®) have doubled since Gleevec® was introduced, from about 30% in the early 1990s to over 60% today. The dotted line indicates the expected survival rate without Gleevec®. Source: NCI's Surveillance,

