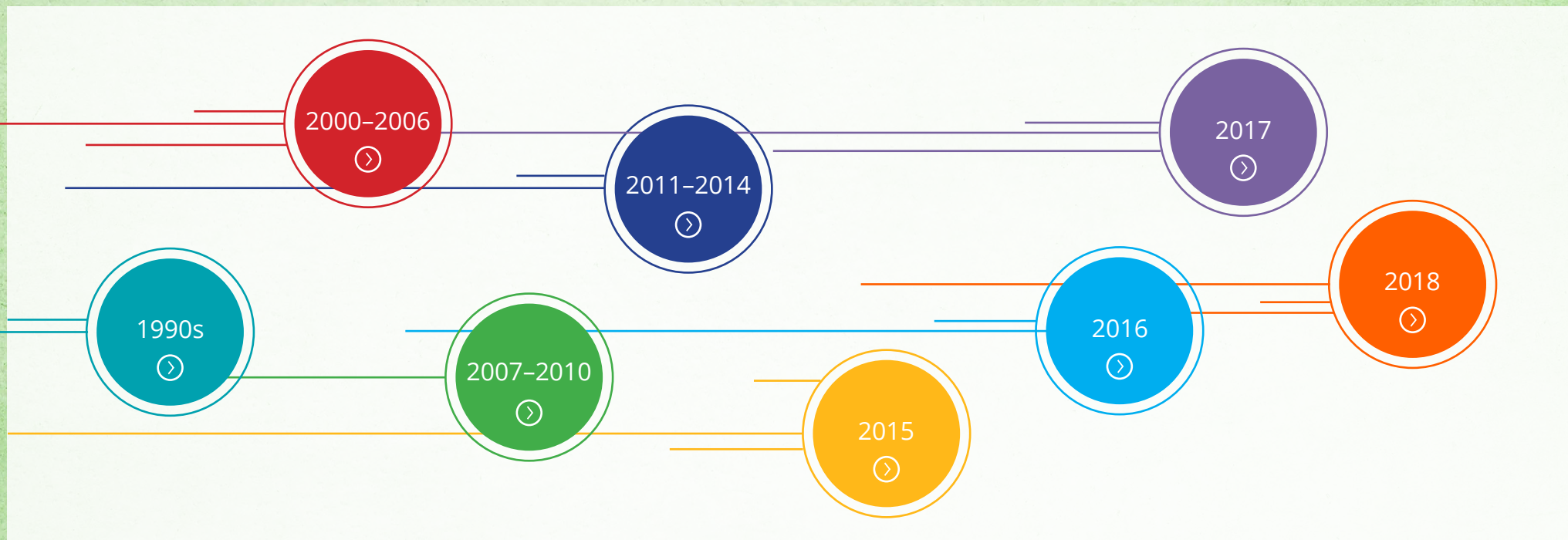


# PFIZER ONCOLOGY: NEARLY TWO DECADES OF TRANSFORMING CANCER CARE

Pfizer's commitment to oncology began nearly two decades ago. Today, our extensive portfolio of cancer therapies continues to break boundaries in cancer care with comprehensive and cutting-edge treatment options that have one clear mission: addressing the diverse needs of people across the cancer care community.

Click on the timeline below to learn more about key Pfizer Oncology milestones. Learn more about Pfizer Oncology at [http://www.pfizer.com/research/therapeutic\\_areas/oncology](http://www.pfizer.com/research/therapeutic_areas/oncology).



# 1990s

1991

Celltech entered into a collaboration with Wyeth for the research, development and commercialization of antibody cytotoxic conjugates as novel oncology treatments. This led to the discovery of new hematology drugs. Pfizer merged with Wyeth in 2009.<sup>1</sup>

1995

Parke-Davis started the project for a new breast cancer drug. Parke-Davis was acquired by Warner Lambert, which was later acquired by Pfizer in 2000. Synthesis of the drug occurred in 2001.<sup>2</sup>

**References:** 1. [Inotuzumab Ozogamicin](#). Pharma Intelligence. Accessed September 7, 2018. 2. [The Palbociclib Saga: Or Why We Need a Lot of Drug Companies](#). Science Magazine. Accessed September 7, 2018.



# 2000-2006

2000

Pfizer acquired Warner-Davis/Parke-Lambert and its research into the development of a selective cyclin-dependent kinases 4 and 6 (CDK 4/6) inhibitor.<sup>3</sup>

2005

Pfizer grew its investments in oncology, dedicating almost \$1 billion to the development of new cancer medicines.

2006

The FDA approved Pfizer's treatment for advanced renal cell carcinoma and gastrointestinal stromal tumors under priority review, marking the first time the FDA approved a new oncology product for two indications simultaneously.<sup>6</sup>

2003

Pfizer finalized a deal to merge with Pharmacia Corporation, expanding Pfizer's product portfolio into oncology with medicines for colorectal, and breast cancers as well as the transfer of an investigational tyrosine kinase inhibitor (TKI).<sup>4,5</sup>

2006

Pfizer acquired Rinat Neuroscience Corp, which currently serves as Pfizer's primary immuno-oncology research facility due to its strength in biotherapeutics and expertise in immuno-biology.<sup>7</sup>

**References:** 3. McCain J. *Pharmacy and Therapeutics*. 2015;40(8):511-520. 4. 2003: Pfizer and Pharmacia Merger. Pfizer. [http://www.pfizer.com/about/history/pfizer\\_pharmacia](http://www.pfizer.com/about/history/pfizer_pharmacia). Accessed November 28, 2016. 5. [Pfizer Drug Targets Gene Flaw to Shrink Lung Tumors \(Update1\)](#). Bloomberg Businessweek. Accessed November 28, 2016. 6. [Pfizer Press Release](#). Issued January 26, 2006. Accessed October 16, 2017. 7. [Pfizer Press Release](#). Issued April 7, 2016. Accessed May 7, 2018.



# 2007-2010

2007

Pfizer has 15 oncology compounds in clinical development, and conducted over 200 oncology studies.

2008

Pfizer announced the establishment of a new Business Unit focused solely on oncology in its Worldwide Pharmaceutical Group.<sup>9</sup>

2009

Pfizer completed the acquisition of Wyeth, which included the transfer of approved and investigational medicines in hematology.<sup>11</sup>

2007

The FDA approved Pfizer's second compound for the treatment of advanced renal cell carcinoma.<sup>8</sup>

2008

FivePrime and Pfizer entered an oncology and diabetes collaboration.<sup>10</sup>

2010

The European Commission approved Pfizer's treatment for unresectable or metastatic, well-differentiated pancreatic neuroendocrine tumors (NET) following disease progression in adults, representing the first treatment to be approved for patients with pancreatic NET in 25 years.<sup>12</sup>

2007

Pfizer launched its Global Health Partnerships (GHP) program, a comprehensive approach to help tackle the global cancer epidemic, and committed to investing approximately \$47 million over four years (2008-2011) in 32 promising cancer and tobacco control organizations in 46 countries.

**References:** **8.** [FDA Press Release](#). Issued May 30, 2007. Accessed May 9, 2018. **9.** [Pfizer Press Release](#). Issued May 14, 2008. Accessed November 28, 2016. **10.** [Pfizer Press Release](#). Issued May 20, 2008. Accessed May 7, 2018. **11.** Pfizer Completes Acquisition Of Wyeth. [Pfizer Press Release](#). Issued October 15, 2009. Accessed November 28, 2016. **12.** [Pfizer Press Release](#). Issued December 2, 2010. Accessed October 16, 2017.



# 2011-2014

2012

The FDA approved an additional Pfizer treatment for patients with previously treated advanced renal cell carcinoma.<sup>14</sup>

2014

Pfizer collaborated with Cellectis to develop chimeric antigen receptor T-cell (CAR-T) immunotherapies.<sup>17</sup>

2011

The FDA approved Pfizer's treatment for ALK-positive metastatic non-small cell lung cancer, representing a new chapter in biomarker-driven therapy for lung cancer.<sup>13</sup>

2013

Pfizer's cyclin-dependent kinases 4 and 6 (CDK 4/6) inhibitor received Breakthrough Therapy designation by the FDA.<sup>16</sup>

2012

The FDA approved Pfizer's treatment for patients with previously treated chronic myelogenous leukemia. This approval marked the third new Pfizer Oncology medicine to be approved by the FDA in a 13-month span.<sup>15</sup>

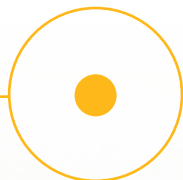
2014

Pfizer entered into an alliance with Merck KGaA to jointly develop and commercialize an investigational anti-PD-L1 IgG1 monoclonal antibody.<sup>18</sup>

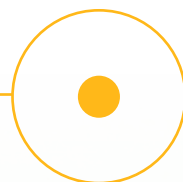
**References:** **13.** [Pfizer Press Release](#). Issued August 26, 2011. Accessed November 28, 2016. **14.** [Pfizer Press Release](#). Issued January 27, 2012. Accessed on October 16, 2017. **15.** [Pfizer Press Release](#). Issued September 4, 2012. Accessed November 28, 2016. **16.** [Pfizer Press Release](#). Issued April 10, 2013. Access November 28, 2016. **17.** [Pfizer Press Release](#). Issued June 18, 2014. Accessed December 15, 2016. **18.** [Pfizer Press Release](#). Issued November 17, 2014. Accessed November 28, 2016.



# 2015



Pfizer and Servier entered into a collaboration agreement to co-develop and commercialize an allogeneic chimeric antigen receptor T-cell (CAR-T) immunotherapy asset developed through Collectis's TALEN® gene-editing technology.<sup>19</sup>



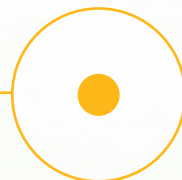
Pfizer and Merck KGaA's investigational compound is granted Breakthrough Therapy designation in metastatic Merkel cell carcinoma.<sup>24</sup>



The FDA approved Pfizer's CDK 4/6 inhibitor, making it the first CDK 4/6 inhibitor to be approved in the U.S.<sup>20</sup>



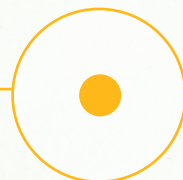
Pfizer and Hospira entered into a definitive merger agreement under which Pfizer will acquire Hospira, the world's leading provider of injectable oncology drugs and infusion technologies and a global leader in biosimilars.<sup>21</sup>



Pfizer entered into a long-term agreement with Thermo Fisher Scientific to develop and commercialize a multi-marker, universal next-generation sequencing (NGS) oncology test that will serve as a companion diagnostic (CDx) for non-small cell lung cancer across multiple drug development programs.<sup>25</sup>



The FDA granted Breakthrough Therapy designation for Pfizer's ALK inhibitor in a second rare form of non-small cell lung cancer.<sup>22</sup>

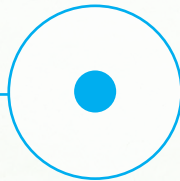


Pfizer's investigational compound for acute lymphoblastic leukemia is granted Breakthrough Therapy designation.<sup>23</sup>

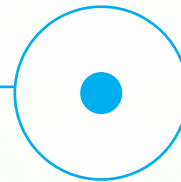
**References:** 19. [Collectis, Servier and Pfizer Press Release](#). Issued November 19, 2015. Accessed January 4, 2017. 20. [Pfizer Press Release](#). Issued February 3, 2015. Accessed November 28, 2016. 21. [Pfizer Press Release](#). Issued February 5, 2015. Accessed November 28, 2016. 22. [Pfizer Press Release](#). Issued April 21, 2015. Accessed December 12, 2016. 23. [Pfizer Press Release](#). Issued October 19, 2015. Accessed November 28, 2016. 24. [Pfizer and Merck Press Release](#). Issued November 18, 2015. Accessed December 12, 2016. 25. [Thermo Fisher Scientific Press Release](#). Issued November 18, 2015. Accessed 29, 2017.



# 2016



Pfizer completed the acquisition of Medivation, expanding Pfizer's oncology product portfolio to include an approved product in prostate cancer and two investigational medicines.<sup>26</sup>

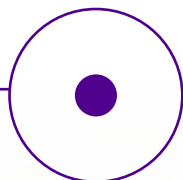


The FDA approved Pfizer's treatment for an additional indication in ROS1-positive advanced non-small cell lung cancer.<sup>27</sup>

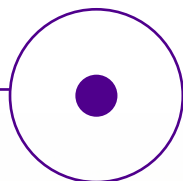
References: 26. [Pfizer Press Release](#). Issued September 28, 2016. Accessed November 28, 2016. 27. [Pfizer Press Release](#). Issued March 11, 2016. Accessed March 24, 2017.



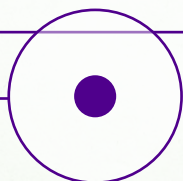
# 2017



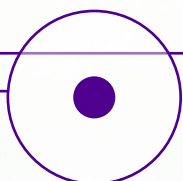
Pfizer joined the Cancer Moonshot initiative to accelerate cancer research.



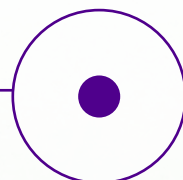
The FDA approved Pfizer's treatment for adults with newly diagnosed CD33-positive acute myeloid leukemia (AML), and adults and children two years and older with relapsed or refractory CD33-positive AML. This treatment is the first therapy with an indication that includes pediatric AML.<sup>32</sup>



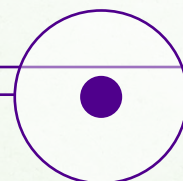
Pfizer launched novel patient assistance programs, *This is Living with Cancer™* and *Pfizer Oncology Together™*, to help patients manage life with cancer.<sup>28</sup>



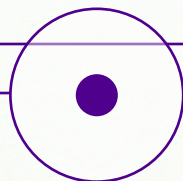
The FDA approved Pfizer's treatment for adults with relapsed or refractory B-cell precursor acute lymphoblastic leukemia.<sup>31</sup>



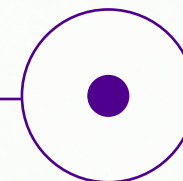
The FDA expanded the indication for Pfizer's chronic myeloid leukemia treatment to include newly diagnosed patients, marking the third U.S. hematology approval for Pfizer in the span of five months.<sup>34</sup> This indication was later approved by the European Commission in April 2018.<sup>35</sup>



The FDA approved Pfizer and Merck KGaA's treatment for metastatic Merkel cell carcinoma, making it the only FDA-approved treatment for this patient population and Pfizer's first approved immunotherapy.<sup>29</sup> This product was later approved for a second indication in locally advanced or metastatic urothelial carcinoma.<sup>30</sup>



The FDA approved a new indication expanding the use of Pfizer's treatment to include the adjuvant treatment of adult patients at high risk of recurrent renal cell carcinoma following nephrectomy (surgical removal of the cancerous kidney). This is the first FDA-approved adjuvant treatment for renal cell carcinoma.<sup>33</sup>



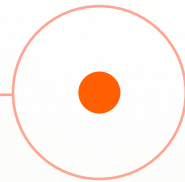
The FDA granted Breakthrough Therapy designation to Pfizer and Merck KGaA's combination treatment in advanced renal cell carcinoma.<sup>36</sup>

**References:** 28. [Pfizer Press Release](#). Issued October 5, 2017. Accessed May 7, 2018. 29. [Pfizer Press Release](#). Issued March 23, 2017. Accessed on March 24, 2017. 30. [Pfizer Press Release](#). Issued May 9, 2017. Accessed on May 7, 2018. 31. [Pfizer Press Release](#). Issued August 17, 2017. Accessed on September 29, 2017. 32. [Pfizer Press Release](#). Issued September 1, 2017. Accessed on September 29, 2017. 33. [Pfizer Press Release](#). Issued November 17, 2017. Accessed on April 19, 2018. 34. [Pfizer Press Release](#). Issued December 19, 2017. Accessed on April 20, 2017. 35. [Pfizer Press Release](#). Issued April 23, 2018. Accessed on May 7, 2018. 36. [Pfizer Press Release](#). Issued December 21, 2017. Accessed on April 20, 2018.





# 2018



Pfizer and Allogene announced that the two companies have entered into an asset contribution agreement for Pfizer's portfolio of assets related to allogeneic chimeric antigen receptor T-cell (CAR T) therapy.<sup>37</sup>

## WITH MORE TO COME....

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Reference: 37. [Pfizer Press Release](#). Issued April 3, 2018. Accessed on April 20, 2018.

