Table S3. Dates of translational milestones for cancer genomic tests

Cancer Type(s)	Test	Purpose(s)	Discovery	First Human Study	First Demonstration of Test (by purpose)	First Recommendation Statement (by purpose)[a]	FDA Approval/Clearance
Acute lymphocytic leukemia	TPMT	Pharmacogenomic	September 1980 [22]	September 1980 [22]	June 1999 [33]	March 2011	--
Acute myeloid leukemia	CEBPA	Prognostic	January 1997 [34]	March 2001 [35]	October 2002 [36]	November 2011	--
	FLT3-ITD	Prognostic	December 1996 [37]	December 1996 [37]	May 1999 [38]	November 2011	--
	FLT3-TKD	Prognostic	April 2001 [39]	April 2001 [39]	April 2001 [39]	November 2011	--
	IDH1	Prognostic	September 2009 [40]	September 2009 [40]	May 2010 [41]	November 2011	--
	IDH2 c.515G>A p.R172K	Prognostic	May 2010 [41]	May 2010 [41]	May 2010 [41]	November 2011	--
	IDH2 (codon 140)	Prognostic	March 2010 [42]	March 2010 [42]	May 2010 [41]	November 2011	--
	KIT	Prognostic	October 1989 [43]	December 1991 [44]	August 2006 [45]	November 2011	--
	MLL-PTD	Prognostic	December 1991 [46]	May 1996 [47]	May 2000 [48]	November 2011	--
	NPM1	Prognostic	January 1996 [49]	January 1996 [49]	December 2005 [50]	November 2011	--
	RUNX1	Prognostic	December 1991 [51]	December 1991 [51]	November 1996 [52]	November 2011	--
	WT1	Prognostic	May 1992 [53]	May 1992 [53]	November 1994 [54]	November 2011	--
Breast cancer	H:I ratio (HOXB13:IL17BR)	Prognostic	June 2004 [55]	June 2004 [55]	October 2006 [56]	January 2009	--
	CYP2D6	Pharmacogenomic	January 1990 [57]	January 1990 [57]	January 2005 [58]	January 2005	Cleared December 2004
	MammaPrint	Prognostic	January 2002 [23]	January 2002 [23]	December 2002 [59]	January 2009	Cleared February 2007
	Oncotype DX	Prognostic; Pharmacogenomic	December 2005 [60]	December 2005 [60]	December 2004 [61]; August 2006 [62]	November 2007; November 2007	--

Breast and Ovarian cancer	BRCA	Screening	December 1990 [63]	December 1990 [63]	May 1997 [64]	May 2004	--
Chronic lymphocytic leukemia	TP53	Pharmacogenomic	September 1989 [65]	June 1991 [66]	December 1993 [67]	May 2004	Cleared August 2011
Colon cancer	BRAF	Screening; Prognostic; Pharmacogenomic	June 2002 [68]	June 2002 [68]	January 2004 [69]; July 2005 [70]; December 2008 [71]	January 2009; November 2011; November 2011	--
	ColoPrint	Prognostic	January 2011 [72]	January 2011 [72]	January 2011 [72]	November 2011	--
	Oncotype DX Colon	Prognostic	August 2007 [73]	August 2007 [73]	November 2011 [74]	November 2011	--
Colorectal cancer	18q LOH/DCC	Prognostic; Pharmacogenomic	January 1990 [75]	January 1990 [75]	December 1996 [76]; July 2004 [77]	February 2006; February 2006	--
	KRAS (except c.38G>A (p.G13D))	Pharmacogenomic	March 1983 [78]	June 1984 [79]	April 2006 [80]	February 2009	Approved July 2012
	Lynch syndrome testing, MMR/MSI	Screening; Diagnostic; Prognostic; Pharmacogenomic	May 1993 [81]	May 1993 [81]	April 1996 [82]; April 1996 [82]; June 1996 [83]; August 2001 [84]	January 2009; January 2009; November 2006; November 2006	--
	NRAS	Pharmacogenomic	September 1988 [85]	September 1988 [85]	August 2010 [86]	February 2013	--
	PIK3CA	Pharmacogenomic	April 2004 [87]	April 2004 [87]	March 2008 [88]	February 2013	
	PTEN	Pharmacogenomic	January 2000 [89]	January 2000 [89]	October 2007 [90]	February 2013	--
	TP53	Prognostic; Pharmacogenomic	August 1984 [91]	August 1984 [91]	September 1992 [92]; June 1996 [93]	November 2006; November 2006	Cleared April 2012
	UGT1A1	Pharmacogenomic	October 1997 [94]	October 1997 [94]	December 2000 [95]	January 2010	Cleared August 2005
Glioma	1p/19q	Diagnostic; Prognostic	April 1994 [96]	April 1994 [96]	July 1999 [97]; October 1998 [98]	November 2011; November 2011	--
	G-CIMP	Prognostic	February 2000 [99]	February 2000 [99]	May 2010 [100]	November 2011	--
	IDH (IDH1) c. 395	Diagnostic; Prognostic	September 2008 [101]	September 2008 [101]	December 2009 [102]; February 2009 [103]	November 2011; November 2011	--

	G>A p.R132H (IDH2)						
Glioma (Glioblastoma)	MGMT	Prognostic; Pharmacogenomic	September 1991 [104]	September 1991 [104]	October 1998 [105]; November 2000 [106]	February 2010; November 2011	--
Glioma (Pilocytic astrocytoma)	BRAF fusion	Diagnostic	November 2008 [107]	November 2008 [107]	August 2010 [108]	November 2011	--
Melanoma	BRAF	Pharmacogenomic	June 2002 [68]	June 2002 [68]	September 2010 [109]	November 2011	Approved August 2011
Non-small cell lung cancer	ALK	Pharmacogenomic	August 2007 [110]	August 2007 [110]	October 2010 [111]	November 2011	Approved August 2011
	EGFR	Pharmacogenomic	August 1985 [112]	August 1985 [112]	May 2004 [113]	July 2010	Approved May 2013
	ERCC1	Prognostic; Pharmacogenomic	July 2002 [114]	July 2002 [114]	July 2002 [114]; September 2006 [115]	November 2013; November 2013	--
	KRAS	Prognostic; Pharmacogenomic	June 1982 [116]	February 1984 [117]	August 1990 [118]; September 2005 [119]	November 2011; October 2013	--
	ROS1	Pharmacogenomic	September 1984 [120]	September 1984 [120]	September 2012 [121]	September 2013	--
	RRM1	Prognostic; Pharmacogenomic	November 1997 [122]	September 1999 [123]	May 2004 [124]; June 2003 [125]	July 2010; July 2010	--
Prostate cancer	PCA3 (DD3)	Diagnostic	December 1999 [126]	December 1999 [126]	May 2002 [127]	November 2011	Approved February 2012
Thyroid cancer (medullary)	RET	Screening; Diagnostic	October 1990 [128]	October 1990 [128]	September 1994 [129]; September 1994 [129]	June 2009; June 2009	--
Various[b]	DPYD	Pharmacogenomic	September 1994 [130]	August 1996 [131]	September 2001 [132]	August 2010	--
	TYMS	Pharmacogenomic	May 1984 [133]	March 1987 [134]	January 2001 [135]	August 2010	--

[a] earliest recommendation statement of the same recommendation type (e.g. positive or negative) as the most recent recommendation statement

[b] includes colorectal cancer, other gastrointestinal cancer, head and neck, and breast cancer

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