



# Keratins as Prognostic Markers in Tumor Pathology

Cancer Site	Keratin Expression Pattern	Detection Site	Prognosis
Biliary duct	High K19 fragment (CYFRA21-1)	Serum	Worse
Breast	K5/6, K17	Tumor	Worse
	K19 mRNA	CTCs	Worse
	Reduced K18 mRNA	Tumor	Worse
	Ubiquitinated K8 and K18 fragments	Tumor	Worse
Colon	Reduced K8, K20	Tumor	Worse
	Persistent or higher K18 fragment (M30) after primary tumor resection	Serum	Worse
Kidney	K8, K18	CTCs	Worse
	K7, K19	Tumor	Better
Liver	K10, K19	Tumor	Worse
Lung	High K18 fragment	Serum	Worse
Pancreas	K20	Tumor	Worse
	K20	Serum	Worse
Prostate	K8, K18, K19 before surgery	Bone marrow	Worse
Skin (melanoma)	K18	Tumor	Worse
Stomach	K20	Peritoneal fluid	Worse
Uterus	Loss of K5/K6	Tumor	Worse

## References / suggested reading

- Karantza V., 2011, *Oncogene* 30:127–138
- Coulombe P. A. & Omary M. B., 2002, *Curr. Opin. Cell Biol.* 14:110–22
- Oriolo A. S. et al., 2007, *Exp. Cell Res.* 313:2255–2264
- Herrmann H. et al., 2007, *Nat. Rev. Mol. Cell Biol.* 8:562–573
- Toivola D. M. et al., 2010, *Trends Cell Biol.* 20:79–91
- Ku N.-O. & Omary, M. B., 2006, *J. Cell Biol.* 174:115–125
- Toivola D. M. et al., 2015, *Curr. Opin. Cell Biol.* 32:73–81
- Guldiken N. et al., 2015, *Liver Int.* 35:1203–1212
- Moll R. et al., 2008, *Histochem. Cell Biol.* 129:705–733
- Knösel T. et al., 2006, *Cell. Oncol.* 28:167–175
- Chu Y et al., 1993, *Proc. Natl. Acad. Sci. U.S.A.* 90:4261–4265