

REFERENCES

- [1] Society AC. Cancer Facts & Figures 2013 [cited 2013 16 June]. Available from: <http://www.Cancer.org/Research/CancerFactsStatistic/2013Cancerfactsandfigures.pdf>americanCancersociety2013factsandfigures.
- [2] Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *Int J cancer*. 2015;136:359-86.
- [3] National Cancer Institute in Thailand G. HOSPITAL BASED CANCER REGISTRY ANNUAL REPORT 2012. *Ann Oncol*. 2014;24:13-7.
- [4] Khuhaprema T, Srivanatanakul P, Sriplung H, Wiangnon S, Attasara P. Cancer in Thailand. Bangkok: Ministry of Public Health, Ministry of education; 2007.
- [5] Wiangnon S, Veerakul G, Nuchprayoon I, Seksarn P, Hongeng S, Krutvecho T, et al. Childhood cancer incidence and survival 2003-2005, Thailand: study from the Thai Pediatric Oncology Group. *APJCP*. 2011;12:2215-20.
- [6] Crans HN, Sakamoto KM. Transcription factors and translocations in lymphoid and myeloid leukemia. *Leukemia*. 2001;15:313-31.
- [7] Yang L, Han Y, Suarez Saiz F, Minden MD. A tumor suppressor and oncogene: the WT1 story. *Leukemia*. 2007;21:868-76.
- [8] Call KM, Glaser T, Ito CY, Buckler AJ, Pelletier J, Haber DA, et al. Isolation and characterization of a zinc finger polypeptide gene at the human chromosome 11 Wilms' tumor locus. *Cell*. 1990;60:509-20.

- [9] Menke AL, van der Eb AJ, Jochemsen AG. The Wilms' tumor 1 gene: oncogene or tumor suppressor gene? *Int Rev Cytol.* 1998;181:151-212.
- [10] Rivera MN, Haber DA. Wilms' tumour: connecting tumorigenesis and organ development in the kidney. *Nature Rev Cancer.* 2005;5:699-712.
- [11] Inoue K, Sugiyama H, Ogawa H, Nakagawa M, Yamagami T, Miwa H, et al. WT1 as a new prognostic factor and a new marker for the detection of minimal residual disease in acute leukemia. *Blood.* 1994;84:3071-9.
- [12] Tamaki H, Ogawa H, Inoue K, Soma T, Yamagami T, Miyake S, et al. Increased expression of the *Wilms tumor gene (WT1)* at relapse in acute leukemia. *Blood.* 1996;88:4396-8.
- [13] Yamagami T, Sugiyama H, Inoue K, Ogawa H, Tatekawa T, Hirata M, et al. Growth inhibition of human leukemic cells by *WT1 (Wilms tumor 1 gene)* antisense oligodeoxynucleotides: implications for the involvement of WT1 in leukemogenesis. *Blood.* 1996;87:2878-84.
- [14] Chen JS, Hsiao CC, Sheen JM, Cheng CN. Comparison of minimal residual disease (MRD) estimated by flow cytometry and by real-time quantitative PCR of *Wilms tumor gene 1 (WT1)* transcript expression in children with acute lymphoblastic leukemia. *Leuk Res.* 2007;31:1351-7.
- [15] Pérez-Caro M, Sánchez-García I. BCR-ABL and Human Cancer. In: Srivastava R, editor. *Apoptosis, Cell Signaling, and Human Diseases: Human a Press; 2007.* p. 3-34.
- [16] Melo JV, Deininger MW. Biology of chronic myelogenous leukemia-signaling pathways of initiation and transformation. *Hematol Oncol Clin North Am.* 2004;18:545-68.
- [17] Andersen MK, Pedersen-Bjergaard J, Kjeldsen L, Dufva IH, Brondum-Nielsen K. Clonal Ph-negative hematopoiesis in CML after therapy with imatinib mesylate is frequently characterized by trisomy 8. *Leukemia.* 2002;16:1390-3.

- [18] Abu-Duhier FM, Goodeve AC, Wilson GA, Care RS, Peake IR, Reilly JT. Genomic structure of human FLT3: implications for mutational analysis. *Brit J Haematol.* 2001;113:1076-7.
- [19] Kiyoi H. Flt3 Inhibitors: Recent Advances and Problems for Clinical Application. *Nagoya J Med Sci.* 2015;77:7-17.
- [20] Kindler T, Lipka DB, Fischer T. FLT3 as a therapeutic target in AML: still challenging after all these years. *Blood.* 2010;116:5089-102.
- [21] Chu SH, Small D. Mechanisms of resistance to FLT3 inhibitors. *Drug resistance updates: reviews and commentaries in antimicrobial and anticancer chemotherapy.* 2009;12:8-16.
- [22] Grunwald MR, Levis MJ. FLT3 inhibitors for acute myeloid leukemia: a review of their efficacy and mechanisms of resistance. *Int J Hematol.* 2013;97:683-94.
- [23] Poobrasert O, Constant HL, Beecher CW, Farnsworth NR, Kinghorn AD, Pezzuto JM, et al. Xanthones from the twigs of *Mammea siamensis*. *Phytochemistry.* 1998;47:1661-3.
- [24] Kawetripob W, Mahidol C, Prawat H, Ruchirawat S. Chemical investigation of *Mammea siamensis*. *Phar bio.* 2000;38 Suppl 1:55-7.
- [25] Ngo NT, Nguyen VT, Vo HV, Vang O, Duus F, Ho TD, et al. Cytotoxic Coumarins from the Bark of *Mammea siamensis*. *Chem Phar Bull.* 2010;58:1487-91.
- [26] Rungrojsakul M, Saiyai A, Ampasavate C, Anuchapreeda S, Okonogi S. Inhibitory effect of mammea E/BB from *Mammea siamensis* seed extract on Wilms' tumour 1 protein expression in a K562 leukaemic cell line. *Nat Prod Res.* 2015:1-5.
- [27] Tung NH, Uto T, Sakamoto A, Hayashida Y, Hidaka Y, Morinaga O, et al. Antiproliferative and apoptotic effects of compounds from the flower of

Mammea siamensis (Miq.) T. Anders. on human cancer cell lines. *Bioorg Med Chem Lett.* 2013;23:158-62.

- [28] Irigaray P, Newby JA, Clapp R, Hardell L, Howard V, Montagnier L, et al. Lifestyle-related factors and environmental agents causing cancer: an overview. *Biomed Pharmacother.* 2007;61:640-58.
- [29] Tavani A, Pregnolato A, Negri E, La Vecchia C. Alcohol consumption and risk of pancreatic cancer. *Nutr Cancer.* 1997;27:157-61.
- [30] Sasagawa T, Shimakage M, Nakamura M, Sakaike J, Ishikawa H, Inoue M. *Epstein-Barr virus (EBV)* genes expression in cervical intraepithelial neoplasia and invasive cervical cancer: a comparative study with human papillomavirus (HPV) infection. *Hum Pathol.* 2000;31:318-26.
- [31] Jalouli J, Ibrahim SO, Mehrotra R, Jalouli MM, Sapkota D, Larsson PA, et al. Prevalence of viral (HPV, EBV, HSV) infections in oral submucous fibrosis and oral cancer from India. *Acta Otolaryngol.* 2010;130:1306-11.
- [32] Preston RJ. Bystander effects, genomic instability, adaptive response, and cancer risk assessment for radiation and chemical exposures. *Toxicol Appl Pharmacol.* 2005;207:550-6.
- [33] Torry DS, Cooper GM. Proto-oncogenes in development and cancer. *Am J Reprod Immunol.* 1991;25:129-32.
- [34] Green DR. Apoptotic pathways: ten minutes to dead. *Cell.* 2005;121:671-4.
- [35] Dietlein F, Thelen L, Reinhardt HC. Cancer-specific defects in DNA repair pathways as targets for personalized therapeutic approaches. *Trends in genetics : TIG.* 2014;30:326-39.
- [36] Bennett JH. Classics in oncology. Two cases of disease and enlargement of the spleen in which death took place from the purulent matter in the blood. *CA: a cancer journal for clinicians.* 1980;30:59-62.

- [37] Ho PA, Zeng R, Alonzo TA, Gerbing RB, Miller KL, Pollard JA, et al. Prevalence and prognostic implications of *WT1* mutations in pediatric acute myeloid leukemia (AML): a report from the Children's Oncology Group. *Blood*. 2010;116:702-10.
- [38] Jain P, Gulati S, Seth R, Bakhshi S, Toteja GS, Pandey RM. Vincristine-induced neuropathy in childhood ALL (acute lymphoblastic leukemia) survivors: prevalence and electrophysiological characteristics. *J Child neurol*. 2014;29:932-7.
- [39] Cilloni D, Saglio G. Molecular pathways: BCR-ABL. *Clinical cancer research : an official journal of the American Association for Cancer Research*. 2012;18:930-7.
- [40] Tomonaga O. [FAB classification for diagnosis and therapy of leukemia]. *Nihon Naika Gakkai zasshi The Journal of the Japanese Society of Internal Medicine*. 1992;81:991-8.
- [41] Byrd JC, Stilgenbauer S, Flinn IW. Chronic lymphocytic leukemia. *Hematology/the Education Program of the American Society of Hematology American Society of Hematology Education Program*. 2004:163-83.
- [42] Zheng J. Oncogenic chromosomal translocations and human cancer (review). *Oncol Rep*. 2013;30:2011-9.
- [43] Rabbitts TH. Chromosomal translocations in human cancer. *Nature*. 1994;372:143-9.
- [44] Palsson B, Masters J. *Cancer Cell Lines*. Netherlands: Springer; 2002. VI p.
- [45] Plataniias LC. Mechanisms of BCR-ABL leukemogenesis and novel targets for the treatment of chronic myeloid leukemia and Philadelphia chromosome-positive acute lymphoblastic leukemia. *Leuk Lymphoma*. 2011;52 Suppl 1:2-3.

- [46] Lugo TG, Pendergast AM, Muller AJ, Witte ON. Tyrosine kinase activity and transformation potency of *bcr-abl* oncogene products. *Science*. 1990;247:1079-82.
- [47] Rumpold H, Webersinke G. Molecular pathogenesis of Philadelphia-positive chronic myeloid leukemia - is it all BCR-ABL? *Current cancer drug targets*. 2011;11:3-19.
- [48] Zhang X, Xing G, Saunders GF. Proto-oncogene c-myc promoter is down regulated by the *Wilms' tumor 1* suppressor gene (*WT1*). *Anticancer Res*. 1999;19:1641-8.
- [49] Madden SL, Cook DM, Rauscher FJ, 3rd. A structure-function analysis of transcriptional repression mediated by the WT1, Wilms' tumor suppressor protein. *Oncogene*. 1993;8:1713-20.
- [50] Bickmore WA, Oghene K, Little MH, Seawright A, van Heyningen V, Hastie ND. Modulation of DNA binding specificity by alternative splicing of the *Wilms tumor* gene transcript. *Science*. 1992;257:235-7.
- [51] Fanni D, Fanos V, Monga G, Gerosa C, Locci A, Nemolato S, et al. Expression of WT1 during normal human kidney development. *The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstet*. 2011;24 Suppl 2:44-7.
- [52] Chen Z. The possible role and application of WT1 in human leukemia. *IJHOBMT*. 2001;73:39-46.
- [53] Miyagi T, Ahuja H, Kubota T, Kubonishi I, Koeffler HP, Miyoshi I. Expression of the candidate *Wilm's tumor 1* gene in human leukemia cells. *Leukemia*. 1993;7:970-7.
- [54] Choudhary C, Muller-Tidow C, Berdel WE, Serve H. Signal transduction of oncogenic FLT3. *IJHOBMT*. 2005;82:93-9.

- [55] Choudhary C, Schwable J, Brandts C, Tickenbrock L, Sargin B, Kindler T, et al. AML-associated FLT3 kinase domain mutations show signal transduction differences compared with FLT3 ITD mutations. *Blood*. 2005;106:265-73.
- [56] Morikawa T, Sueyoshi M, Chaipech S, Matsuda H, Nomura Y, Yabe M, et al. Suppressive effects of coumarins from *Mammea siamensis* on inducible nitric oxide synthase expression in RAW264.7 cells. *Bioorg Med Chem*. 2012;20:4968-77.
- [57] Mahidol C, Kaweetripob W, Prawat H, Ruchirawat S. *Mammea* coumarins from the flowers of *Mammea siamensis*. *Nat Prod Rep*. 2002;65:757-60.
- [58] Noysang C, Mahringer A, Zeino M, Saeed M, Luanratana O, Fricker G, et al. Cytotoxicity and inhibition of P-glycoprotein by selected medicinal plants from Thailand. *J Ethnopharmacol*. 2014;155:633-41.
- [59] Lowry OH, Rosebrough NJ, Farr AL, Randall RJ. Protein measurement with the Folin phenol reagent. *Biol Chem*. 1951;193:265-75.
- [60] Rerkamnuaychoke B, Kangwanpong D, Jootar S, Puranakanitstha C. Detection of *BCR/ABL* fusion gene in CML: a preliminary report. *The Southeast Asian journal of tropical medicine and public health*. 1995;26 Suppl 1:197-200.
- [61] Danisz K, Blasiak J. Role of anti-apoptotic pathways activated by *BCR/ABL* in the resistance of chronic myeloid leukemia cells to tyrosine kinase inhibitors. *Acta Biochem Pol*. 2013;60:503-14.
- [62] Hantschel O, Superti-Furga G. Regulation of the c-Abl and Bcr-Abl tyrosine kinases. *Nature reviews Molecular cell biology*. 2004;5:33-44.
- [63] Kurosu T, Nagao T, Wu N, Oshikawa G, Miura O. Inhibition of the PI3K/Akt/GSK3 pathway downstream of *BCR/ABL*, *Jak2-V617F*, or *FLT3-ITD* downregulates DNA damage-induced Chk1 activation as well as G2/M

arrest and prominently enhances induction of apoptosis. PloS one. 2013;8:79478.

- [64] Hoelbl A, Schuster C, Kovacic B, Zhu B, Wickre M, Hoelzl MA, et al. Stat5 is indispensable for the maintenance of bcr/abl-positive leukaemia. Mol Med. 2010;2:98-110.
- [65] Fredericks J, Ren R. The role of RAS effectors in BCR/ABL induced chronic myelogenous leukemia. Front Med. 2013;7:452-61.
- [66] Anuchapreeda S, Tima S, Duangrat C, Limtrakul P. Effect of pure curcumin, demethoxycurcumin, and bisdemethoxycurcumin on *WT1* gene expression in leukemic cell lines. Cancer Chemother Pharmacol. 2008;62:585-94.
- [67] Gilliland DG, Griffin JD. The roles of FLT3 in hematopoiesis and leukemia. Blood. 2002;100:1532-42.
- [68] Yang H, Protiva P, Gil RR, Jiang B, Baggett S, Basile MJ, et al. Antioxidant and cytotoxic isoprenylated coumarins from *Mammea americana*. Planta Med. 2005;71:852-60.
- [69] Deng Y, Nicholson RA. Antifungal properties of surangin B, a coumarin from *Mammea longifolia*. Planta med. 2005;71:364-5.
- [70] Middleton E, Jr., Kandaswami C, Theoharides TC. The effects of plant flavonoids on mammalian cells: implications for inflammation, heart disease, and cancer. Pharmacol Rev. 2000;52:673-751.
- [71] Prachyawarakorn V, Mahidol C, Ruchirawat S. Pyranocoumarins from the twigs of *Mammea siamensis*. Phytochemistry. 2006;67:924-8.
- [72] Win NN, Awale S, Esumi H, Tezuka Y, Kadota S. Novel anticancer agents, kayeassamins A and B from the flower of *Kayea assamica* of Myanmar. Bioorganic & medicinal chemistry letters. 2008;18:4688-91.