

Murakami Y, Kanzawa N, Saito K, Krawitz PM, Mundlos S, Robinson PN, Karadimitris A, Maeda Y, Kinoshita T	Mechanism for release of alkaline phosphatase caused by glycosylphosphatidylinositol deficiency in patients with hyperphosphatasia mental retardation syndrome.	J Biol Chem	287(9)	6318-6325	2012
Hanaoka N, Murakami Y, Nagata M, Nagakura S, Yonemura Y, Sonoki T, Kinoshita T, Nakakuma H.	Persistently high quality of life conferred by coexisting congenital deficiency of terminal complement C9 in a paroxysmal nocturnal hemoglobinuria patient.	Blood	119(16)	3866-3868	2012
Krawitz PM, Murakami Y, Hecht J, Krüger U, Holder SE, Mortier GR, Delle Chiaie B, De Baere E, Thompson MD, Roscioli T, Kielbaso S, Kinoshita T, Mundlos S, Robinson PN, Horn D.	Mutations in PIGO, a member of the GPI-anchor-synthesis pathway, cause hyperphosphatasia with mental retardation.	Am J Hum Genet	91(1)	146-151	2012
Matsuda A, Taniwaki M, Jimmnai I, Harada H, Watanabe M, Suzuki K, Yanagita S, Suzuki T, Yoshida Y, Kimura A, Tsudo M, Tohyama K, Takatoku M, Ozawa K.	Morphologic analysis in myelodysplastic syndromes with del(5q) treated with lenalidomide. A Japanese multiinstitutional study.	Leukemia Res	36(5)	575-580	2012
Okita T, Kitaura J, Watanabe-Okochi N, Nishimura K, Moechihara A, Uchida T, Komoto Y, Nakahara F, Harada Y, Sonoki T, Harada H, Kitamura T.	Aberrant expression of RasGRP1 cooperates with gain-of-function NOTCH1 mutations in T-cell leukemogenesis.	Leukemia	26(5)	1038-1045	2012
Nitta H, Harada Y, Hyodo H, Kimura A, Harada H.	Expansion of CD8 ⁺ /perforin ⁺ T-cells predicts response to ciclosporin A therapy in patients with erythroid hypoplasia/aplasia.	Br J Haematol	157(5)	641-645	2012
Imagawa J, Tanaka H, Matsumoto K, Morita K, Harada Y, Harada H.	A sharp fluctuation in peripheral blood cells shortly after dasatinib administration.	Int J Hematol	96(2)	194-199	2012
Jiang L, Akatsuka S, Nagai H, Chew SH, Ohara H, Okazaki Y, Yamashita Y, Yoshikawa Y, Yasui H, Ikuta K, Sasaki K, Kohgo Y, Hirano S, Shinohara Y, Kohyama N, Takahashi T, Toyokuni S.	Iron overload signature in chrysotile-induced malignant mesothelioma.	J Pathol	228(3)	366-377	2012
Tanaka H, Li Z, Ikuta K, Addo L, Akutsu H, Nakamura M, Sasaki K, Ohtake T, Fujiya M, Torimoto Y, Glasgow J, Kohgo Y.	Iron facilitator LS081 reduces hypoxia-inducible factor-1 α protein and functions as anticancer agent in hepatocellular carcinoma.	Cancer Sci	103(4)	767-774	2012
Kanemitsu N, Isobe Y, Masuda A, Momose S, Higashi M, Tamaru J, Sugimoto K, Komatsu N.	Expression of Epstein-Barr virus-encoded proteins in extranodal NK/T-cell Lymphoma, nasal type (ENKLT): differences in biologic and clinical behaviors of LMP1-positive and -negative ENKL.	Clin Cancer Res	18(8)	2164-2172	2012
Isobe Y, Aritaka N, Setoguchi Y, Ito Y, Kimura H, Hatanaka Y, Sugimoto K, Komatsu N.	T/NK cell type chronic active Epstein-Barr virus disease in adults: an underlying condition for Epstein-Barr virus-associated T/NK-cell lymphoma.	J Clin Pathol	65(3)	278-282	2012
Sakata-Yanagimoto M, Chiba S.	Notch2 and immune function.	Curr Top Microbiol Immunol	360	151-161	2012

Tohyama K.	New treatment strategy of the myelodysplastic syndromes.	Curr Pharm De	18(22)	3147-3148	2012
Tohyama K.	Utility of DNA methyltransferase inhibitors for the treatment of myelodysplastic syndromes.	Curr Pharm De	18(22)	3190-3197	2012
Tsujioka T, Matsuoka A, Tohyama Y, Tohyama K.	Approach to new therapeutics: investigation by the use of MDS-derived cell lines.	Curr Pharm De	18(22)	3204-3214	2012
Tanaka C, Kaji H, He J, Hazama R, Yokoyama K, Kinoshita E, Tsujioka T, Tohyama K, Yamamura H, Nishio H, Tohyama Y.	Rab27b regulates c-kit expression by controlling the secretion of stem cell factor.	Biochem Biophys Res Commun	419(2)	368-373	2012
Ogata K, Kakumoto K, Matsuda A, Tohyama K, Tamura H, Ueda Y, Kurokawa M, Takeuchi J, Shibayama H, Emi N, Motoji T, Miyazaki Y, Tamaki H, Mitani K, Naoe T, Sugiyama H, Takaku F.	Differences in blast immunophenotypes among disease types in myelodysplastic syndromes: a multicenter validation study.	Leuk Res	36(10)	1229-1236	2012
Yoshida A, Zokumasu K, Wano Y, Yamauchi T, Imamura S, Takagi K, Kishi S, Urasaki Y, Tohyama K, Ueda T.	Marked upregulation of Survivin and Aurora-B kinase is associated with disease progression in the myelodysplastic syndromes.	Haematologica	97(9)	1372-1379	2012
Ohyashiki K, Katagiri S, Tsuchi T, Ohyashiki JH, Maeda Y, Matsumura I, Kyo T.	Increased natural killer cells and decreased CD3(+)CD8(+)CD62L(+) T cells in CML patients who sustained complete molecular remission after discontinuation of imatinib.	Br J Haematol	157(2)	254-256	2012
Maeda Y, Kawauchi M, Miyatake J, Hirase C, Yamaguchi T, Matsumura I.	Effects of tamibarotene for the treatment of adult T cell leukemia.	Ann Hematol	91(4)	629-631	2012
Yabe M, Shimizu T, Morimoto T, Koike T, Takakura H, Tsukamoto H, Muroi K, Oshima K, Asami K, Takata M, Yamashita T, Kato S, Yabe H.	Matched sibling donor stem cell transplantation for Fanconi anemia patients with T-cell somatic mosaicism.	Pediatr Transplant	16(4)	340-345	2012
Hatanaka K, Fuji S, Ikegami K, Kato R, Wake A, Hidaka M, Ito T, Inoue M, Nagatoshi Y, Takami A, Uike N, Sakamaki H, Yabe H, Morishima Y, Suzuki R, Atsuta Y, Fukuda T.	Low incidences of acute and chronic graft-versus-host disease after unrelated bone marrow transplantation with low-dose anti-T lymphocyte globulin.	Int J Hematol	96(6)	773-780	2012
Tanaka A, Okuyama T, Suzuki Y, Sakai N, Takakura H, Sawada T, Tanaka T, Ohtomo T, Ohashi T, Ishige-Wada M, Yabe H, Ohura T, Suzuki N, Kato K, Adachi S, Kobayashi R, Mugishima H, Kato S.	Long-term efficacy of hematopoietic stem cell transplantation on brain involvement in patients with mucopolysaccharidosis type II: a nationwide survey in Japan.	Mol Genet Metab	107(3)	513-520	2012
Kobayashi R, Fujita N, Mitsui T, Iwasaki F, Suzumiya J, Kuroda H, Nishimura R, Sasahara Y, Takeshita Y, Kato K, Okumura H, Sakamaki H, Yabe H, Kawa K, Kato K, Suzuki R.	Stem cell transplantation for pediatric patients with non-anaplastic peripheral T-cell lymphoma in Japan.	Br J Haematol	159(1)	88-93	2012

Yabe M, Masukawa A, Kato S, Yabe H, Nakamura N, Matsushita H.	Systemic mastocytosis associated with t(8;21) acute myeloid leukemia in a child: detection of the D816A mutation of KIT.	Pediatr Blood Cancer	59(7)	1313-1316	2012
Shoji T, Bando T, Fujinaga T, Chen F, Kohno M, Yabe M, Yabe H, Date H.	Posterior reversible encephalopathy syndrome due to immunosuppression after living-donor lobar lung transplantation: report of a case.	Gen Thorac Cardiovasc Surg	60(8)	514-517	2012
Fuji S, Nakamura F, Hatana K, Taniguchi S, Sato M, Mori S, Sakamaki H, Yabe H, Miyamoto T, Kanamori H, Ueda Y, Kawa K, Kato K, Suzuki R, Atsuta Y, Tamaki T, Kanda Y.	Peripheral blood as a preferable source of stem cells for salvage transplantation in patients with graft failure after cord blood transplantation: a retrospective analysis of the registry data of the Japanese Society for Hematopoietic Cell Transplantation.	Biol Blood Marrow Transplant	18(9)	1407-1414	2012
Hyodo H, Ishiguro H, Tomita Y, Takakura H, Koike T, Shimizu T, Morimoto T, Yabe H, Yabe M, Kojima S, Shiraishi K, Minemura T, Kato S.	Decreased serum testosterone levels in long-term adult survivors with fatty liver after childhood stem cell transplantation.	Biol Blood Marrow Transplant	18(7)	1119-1127	2012
Koike T, Yanagimachi N, Ishiguro H, Yabe H, Yabe M, Morimoto T, Shimizu T, Takakura H, Kato S.	High incidence of radiation-induced cavernous hemangioma in long-term survivors who underwent hematopoietic stem cell transplantation with radiation therapy during childhood or adolescence.	Biol Blood Marrow Transplant	18(7)	1090-1098	2012
Mynarek M, Tolar J, Albert MH, Escolar ML, Boelens JJ, Cowan MJ, Finnegan N, Glomstein A, Jacobsohn DA, Köhl JS, Yabe H, Kurtzberg J, Malm D, Orchard PJ, Klein C, Lücke T, Sykora KW.	Allogeneic hematopoietic SCT for alpha-mannosidosis: an analysis of 17 patients.	Bone Marrow Transplant	47(3)	352-359	2012
Maekawa K, Yoshimitsu M, Fujiwara H, Matsushita K, Kawada H, Hamada H, Sumizuki S, Uozumi K, Ohtsukani M, Hanada S, Yabe M, Yabe H, Arima N.	Successful allo-HSCT with a minimal myeloablative conditioning regimen in an adult patient with Fanconi's anemia.	Bone Marrow Transplant	47(1)	159-160	2012
Goyama S, Schibler J, Cunningham L, Zhang Y, Rao Y, Nishimoto N, Nakagawa M, Olsson A, Wunderlich M, Link KA, Mizukawa B, Grimes HL, Kurokawa M, Liu PP, Huang G, Mulloy JC.	Transcription factor RUNX1 promotes survival of acute myeloid leukemia cells.	J Clin Invest	123(9)	3876-3888	2013
Ichikawa M, Yoshimi A, Nakagawa M, Nishimoto N, Watanabe-Okochi N, Kurokawa M.	A role for RUNX1 in hematopoiesis and myeloid leukemia.	Int J Hematol	97(6)	726-734	2013
Kumano K, Arai S, Kurokawa M.	Generation of iPS cells from normal and malignant hematopoietic cells.	Int J Hematol	98(2)	145-152	2013
Shinohara A, Yoshiki Y, Masamoto Y, Hangaishi A, Nannya Y, Kurokawa M.	Moxifloxacin is more effective than tosufloxacin in reducing chemotherapy-induced febrile neutropenia in patients with hematological malignancies.	Leuk Lymphoma	54(4)	794-798	2013

Watanabe-Okochi N, Yoshi mi A, Sato T, Ikeda T, Ku mano K, Taoka K, Satoh Y, Shinohara A, Tsuruta T, Masuda A, Yokota H, Yat omi Y, Takahashi K, Kitaur a J, Kitamura T, Kurokawa M.	The shortest isoform of C/EBP β , li ver inhibitory protein (LIP), collabo rates with Ev1l to induce AML in a mouse BMT model.	Blood	121(20)	4142-4155	2013
Hangai S, Nakamura F, Ka mikubo Y, Honda A, Arai S, Nakagawa M, Ichikawa M, Kurokawa M.	Erythroleukemia showing early eryt hroid and cytogenetic responses to azacitidine therapy.	Ann Hematol	92(5)	707-709	2013
Kobayashi T, Ichikawa M, Kamikubo Y, Kurokawa M.	Acute myeloid leukemia with cryptic CBFB-MYH11 type D.	Int J Clin Exp Pathol	6(1)	110-112	2013
Kobayashi T, Ichikawa M, Nannya Y, Kurokawa M.	The effect of decreased-dose idarub icin for elderly patients with acute myeloid leukemia.	Jpn J Clin On col.	43(10)	1047-1051	2013
Yoshizato T, Watanabe-Ok ochi N, Nannya Y, Ichikawa M, Takahashi T, Sato T, Masuda A, Yatomi Y, Tsun o NH, Kurokawa M, Takah ashi K.	Prediction model for CD34 positive cell yield in peripheral blood stem cell collection on the fourth day a fter G-CSF administration in health y donors.	Int J Hematol	98(1)	56-65	2013
Yasumoto A, Madoiwa S, K ashiwakura Y, Ishiwata A, Ohmori T, Mizukami H, Oz awa K, Sakata Y, Mimuro J.	Overexpression of factor VII amelior ates bleedingdiathesis of factor VII I-deficient mice with inhibitors.	Thromb Res.	131(5)	444-9	2013
Kobayashi H, Nagai T, Omi ne K, Sato K, Ozaki K, Su zuki T, Mori M, Muroi K, Yano T, Yamamoto H, Oza wa K.	Clinical outcome of non-surgical tre atment for primary small intestinal l ymphoma diagnosed with double-bal loon endoscopy.	Leuk. Lympho ma	54(4)	731-6	2013
Uesawa M, Muroi K, Ozawa K.	Plasmapheresis-refractory transplant ion- associated thrombotic microang iopathy successfully treated with pra vastatin and limaprost alfadex.	Am. J. Hematol.	17(4)	462-5	2013
Muroi K, Miyamura K, Oha shi K, Murata M, Eto T, K obayashi N, Taniguchi S, I mamura M, Ando K, Kato S, Mori T, Teshima T, Mori M, Ozawa K.	Unrelated allogeneic bone marrow-d erived mesenchymal stem cells for steroid-refractory acute graft-versus- host disease: a phase I/II study.	Int. J. Hematol.	98(2)	206-13	2013
Uchibori R, Tsukahara T, Mizuguchi H, Saga Y, Urab e M, Mizukami H, Kume A, Ozawa K	NF- κ B activity regulates mesenchy mal stem cell accumulation at tumor sites.	Cancer Res.	73(1)	364-72	2013
Ohba R, Furuyama K, Yosh ida K, Fujiwara T, Fukuhara N, Onishi Y, Manabe A, It o E, Ozawa K, Kojima S, Ogawa S, Harigae H.	Clinical and genetic characteristics of congenital sideroblastic anemia: c omparison with myelodysplastic syn drome with ring sideroblast (MDS- RS).	Ann. Hematol.	92(1)	1-9	2013
Mimuro J, Mizukami H, His hikawa S, Ikemoto T, Ishiw ata A, Sakata A, Ohmori T, Madoiwa S, Ono F, Ozawa K, Sakata Y.	Minimizing the inhibitory effect of neutralizing antibody for efficient g ene expression in the liver with ade no-associated virus 8 vectors.	Mol. Ther.	21(2)	318-23	2013
Fujiwara S-I, Muroi K, Hira ta Y, Sato K, Matsuyama T, Ohmine K, Suzuki T, Ozak i K, Mori M, Nagai T, Tan aka A, Ozawa K.	Clinical features of de novo CD25 (+) diffuse large B-cell lymphoma.	Hematology	18(1)	14-9	2013

Kobayashi H, Nagai T, Omine K, Sato K, Ozaki K, Suzuki T, Mori M, Muroi K, Yano T, Yamamoto H, Ozawa K.	Clinical outcome of non-surgical treatment for primary small intestinal lymphoma diagnosed with double-balloon endoscopy.	Leuk. Lymphoma	54(4)	731-6	2013
Tsukahara T, Ohmine K, Yamamoto C, Uchibori R, Ido H, Teruya T, Urabe M, Mizukami H, Kume A, Nakamura M, Mineno J, Takesako K, Riviere I, Sadelain M.	Brentjens R, Ozawa K. CD19 target-engineered T-cells accumulate at tumor lesions in human B-cell lymphoma xenograft mouse models.	Biochem. Biophys. Res. Commun.	438(1)	84-9	2013
Tatara R, Nagai T, Suzuki M, Oh I, Fujiwara S-I, Norizuki M, Muroi K, Ozawa K.	Sepsis and meningoenophalitis caused by bacillus cereus in a patient with myelodysplastic syndrome.	Int. Med.	52(17)	1987-90	2013
Nagai T, Karakawa M, Komine M, Muroi K, Ohtsuki M, Ozawa K.	Development of psoriasis in a patient with chronic myelogenous leukemia during nilotinib treatment.	Eur. J. Haematol.	91(3)	270-2	2013
Sugimoto M, Fujiwara S, Hasonuma R, Matsu H, Uehara E, Yamamoto C, Kobayashi H, Hatano K, Meguro A, Tatara R, Okabe H, Oh I, Matsuyama T, Ohmine K, Suzuki T, Mori M, Nagai T, Ozawa K, Muroi K.	Analysis of hemolysis in collected bone marrow for bone marrow transplantation.	Transfus. Apher. Sci.	49(1)	95-6	2013
Kanakura Y, Ohyashiki K, Shichishima T, Okamoto S, Ando K, Ninomiya H, Kawaguchi T, Nakao S, Nakakuma H, Nishimura J, Kinoshita T, Bedrosian C.L, Ozawa K, Omine M.	Long-term efficacy and safety of eculizumab in Japanese patients with PNH: AEGIS trial.	Int. J. Hematol.	98(4)	406-16	2013
Noguchi S, Takahashi N, Ito M, Teshima K, Yamashita T, Michishita Y, Ohyagi H, Shida S, Nagao T, Fujishima M, Ikeda S, Ito I, Fujishima N, Kameoka Y, Saitoh H, Tagawa H, Hirokawa M, Sawada K.	Safety and efficacy of low-dose liposomal amphotericin B as empirical antifungal therapy for patients with prolonged neutropenia.	Int J Clin Oncol	18(6)	983-987	2013
Seiki Y, Sasaki Y, Hosokawa K, Saito C, Sugimori N, Yamazaki H, Takami A, Nakao S.	Increased plasma thrombopoietin levels in patients with myelodysplastic syndrome: a reliable marker for a benign subset of bone marrow failure.	Haematologica	98(6)	901-907	2013
Quoc Trung L, Espinoza JL, Takami A, Nakao S.	Resveratrol induces cell cycle arrest and apoptosis in malignant NK cells via JAK2/STAT3 pathway inhibition.	PLoS One	8(1)	e55183	2013
Katagiri T, Kawamoto H, Nakakuki T, Ishiyama K, Okada-Hatakeyama M, Ohtake S, Seiki Y, Hosokawa K, Nakao S.	Individual hematopoietic stem cells in human bone marrow of patients with aplastic anemia or myelodysplastic syndrome stably give rise to limited cell lineages.	Stem Cells	31(3)	536-546	2013
Sugiyama D, Nishikawa H, Maeda Y, Nishioka M, Tanemura A, Katayama I, Ezoe S, Kanakura Y, Sato E, Fukumori Y, Karbach J, Jäger E, Sakaguchi S.	Anti-CCR4 mAb selectively depletes effector-type FoxP3+CD4+ regulatory T cells, evoking antitumor immune responses in humans.	Proc Natl Acad Sci U S A	110(44)	17945-17950	2013

Yokota T, Sudo T, Ishibashi T, Doi Y, Ichii M, Orirani K, Kanakura Y.	Complementary regulation of early B-lymphoid differentiation by genetic and epigenetic mechanisms.	Int J Hematol	98(4)	382-389	2013
Kanakura Y, Ohyashiki K, Shichishima T, Okamoto S, Ando K, Ninomiya H, Kawaguchi T, Nakao S, Nakakuma H, Nishimura J, Kinoshita T, Bedrosian CL, Ozawa K, Omine M.	Long-term efficacy and safety of eculizumab in Japanese patients with PNH: AEGIS trial.	Int J Hematol	98(4)	406-416	2013
Katsutani S, Tomiyama Y, Kimura A, Miyakawa Y, Okamoto S, Okoshi Y, Ninomiya H, Kosugi H, Ishii K, Ikeda Y, Hattori T, Katsura K, Kanakura Y.	Oral eltrombopag for up to three years is safe and well-tolerated in Japanese patients with previously treated chronic immune thrombocytopenia: an open-label, extension study.	Int J Hematol	98(3)	323-330	2013
Satoh Y, Yokota T, Sudo T, Kondo M, Lai A, Kincaid PW, Kouro T, Iida R, Kikame K, Miyata T, Habuchi Y, Matsui K, Tanaka H, Matsumura I, Oritani K, Kohwi-Shigematsu T, Kanakura Y.	The Satb1 protein directs hematopoietic stem cell differentiation toward lymphoid lineages.	Immunity	38(6)	1105-1115	2013
Morita Y, Nishimura J, Shimada T, Tanaka H, Serizawa K, Taniguchi Y, Tsuritani M, Kanakura Y, Matsumura I.	Successful anticoagulant therapy for two pregnant PNH patients, and prospects for the eculizumab era.	Int J Hematol	97(4)	491-497	2013
Okamoto S, Miyakawa Y, Smith J, Hodgson I, Abhyankar B, Troy S, Kanakura Y.	Open-label, dose-titration and continuation study to assess efficacy, safety, and pharmacokinetics of anagrelide in treatment-naïve Japanese patients with essential thrombocythemia.	Int J Hematol	97(3)	360-368	2013
Nakazawa T, Tadokoro S, Kamae T, Kiyomizu K, Kasahiwagi H, Honda S, Kanakura Y, Tomiyama Y.	Agonist stimulation, talin-1, and kindlin-3 are crucial for $\alpha(\text{IIb})\beta(3)$ activation in a human megakaryoblastic cell line, CMK.	Exp Hematol	41(1)	79-90	2013
Matsui T, Kinugasa Y, Tahara H, Kanakura Y, Takakura N.	Possible role of mural cell-covered mature blood vessels in inducing drug resistance in cancer-initiating cells.	Am J Pathol	182(5)	1790-1799	2013
Nara M, Teshima K, Watanabe A, Ito M, Iwamoto K, Kitabayashi A, Kume M, Hatanano Y, Takahashi N, Iida S, Sawada K, Tagawa H.	Bortezomib reduces the tumorigenicity of multiple myeloma via downregulation of upregulated targets in clonogenic side population cells.	PLoS One	8(3)	e56954	2013
Michishita Y, Hirokawa M, Fujishima N, Abe Y, Fujishima M, Guo YM, Ubukawa K, Liu J, Yoshioka T, Kametaka Y, Saitoh H, Tagawa H, Takahashi N, Sawada K.	CDR3-independent expansion of V δ 1 T lymphocytes in acquired chronic pure red cell aplasia.	Immunol Lett	150(1-2)	23-29	2013

Ohyagi H, Onai N, Sato T, Yotsumoto S, Liu J, Akiba H, Yagita H, Atarashi K, Honda K, Roers A, Müller W, Kurabayashi K, Hosoi-Amaike M, Takahashi N, Hirokawa M, Matsushima K, Sawada K, Ohteki T.	Monocyte-derived dendritic cells perform hemophagocytosis to fine-tune excessive immune responses.	Immunity	39(3)	584-598	2013
Saitoh H, Takahashi N, Nanjo H, Kawabata Y, Hirokawa M, Sawada K.	Varicella-zoster virus-associated fulminant hepatitis following allogeneic hematopoietic stem cell transplantation for multiple myeloma.	Intern Med	52(15)	1727-1730	2013
Shinohara Y, Takahashi N, Nishiwaki K, Hino M, Kashimura M, Wakita H, Hatano Y, Hirasawa A, Nakagawa Y, Itoh K, Masuoka H, Aotsuka N, Matsuura Y, Takahara S, Sano K, Kuroki J, Hata T, Nakamae H, Mugitani A, Nakane T, Miyazaki Y, Niioka T, Miura M, Sawada K.	A multicenter clinical study evaluating the confirmed complete molecular response rate in imatinib-treated patients with chronic phase chronic myeloid leukemia by using the international scale of real-time quantitative polymerase chain reaction.	Haematologica	98(9)	1407-1413	2013
Teshima K, Nara M, Watanabe A, Ito M, Ikeda S, Hatano Y, Oshima K, Seto M, Sawada K, Tagawa H.	Dysregulation of BMI1 and microRNA-16 collaborate to enhance an anti-apoptotic potential in the side population of refractory mantle cell lymphoma.	Oncogene	177	doi: 10.1038/onc.2013.177.	2013
Hirokawa M, Fukuda T, Ohashi K, Hidaka M, Ichinohe T, Iwato K, Kanamori H, Murata M, Sakura T, Imamura M, Adachi S, Suzuki R, Morishima Y, Sakamaki H; PRCA Collaborative Study Group.	Efficacy and long-term outcome of treatment for pure red cell aplasia after allogeneic stem cell transplantation from major ABO-incompatible donors.	Biol Blood Marrow Transplant	19(7)	1026-1032	2013
Tagawa H, Ikeda S, Sawada K.	Role of microRNA in the pathogenesis of malignant lymphoma.	Cancer Sci	104(7)	801-809	2013
Nara M, Takahashi N, Miura M, Niioka T, Kagaya H, Fujishima N, Saitoh H, Kamemoko Y, Tagawa H, Hirokawa M, Sawada K.	Effect of itraconazole on the concentrations of tacrolimus and cyclosporine in the blood of patients receiving allogeneic hematopoietic stem cell transplants.	Eur J Clin Pharmacol	69(6)	1321-1329	2013
Shima T, Miyamoto T, Kikushige Y, Mori Y, Kamezaki K, Takase K, Henzan H, Numata A, Ito Y, Takenaka K, Iwasaki H, Kamimura T, Eto T, Nagafuji K, Teshima T, Kato K, Akashi K.	Quantitation of hematogones at the time of engraftment is a useful prognostic indicator in allogeneic hematopoietic stem cell transplantation.	Blood	121(5)	840-848	2013
Yamauchi T, Takenaka K, Urata S, Shima T, Kikushige Y, Tokuyama T, Iwamoto C, Nishihara M, Iwasaki H, Miyamoto T, Honma N, Nakao M, Matozaki T, Akashi K.	Polymorphic Sirpa is the genetic determinant for NOD-based mouse lines to achieve efficient human cell engraftment.	Blood	121(8)	1316-1325	2013
Chong Y, Shimoda S, Yakuhashiji H, Ito Y, Miyamoto T, Kamimura T, Shimono N, Akashi K.	Antibiotic rotation for febrile neutropenic patients with hematological malignancies: clinical significance of antibiotic heterogeneity.	PLoS One	8(1)	e54190	2013

Nagafuji K, Miyamoto T, Eto T, Kamimura T, Taniguchi S, Okamura T, Ohtsuka E, Yoshida T, Higuchi M, Yoshimoto G, Fujisaki T, Abe Y, Takamatsu Y, Yokota S, Akashi K, Harada M.	Monitoring of minimal residual disease (MRD) is useful to predict prognosis of adult patients with Philadelphia-negative ALL: results of a prospective study (ALL MRD2002 Study).	J Hematol Oncol	6	14	2013
Fukata M, Ishikawa F, Najiima Y, Yamauchi T, Saito Y, Takenaka K, Miyawaki K, Shimazu H, Shimoda K, Kanemaru T, Nakamura K, Odashiro K, Nagafuji K, Harada M, Akashi K.	Contribution of bone marrow-derived hematopoietic stem/progenitor cells to the generation of donor-marker ⁺ cardiomyocytes in vivo.	PLoS One	8(5)	e62506	2013
Shimoji S, Kato K, Eriguchi Y, Takenaka K, Iwasaki H, Miyamoto T, Oda Y, Akashi K, Teshima T.	Evaluating the association between histological manifestations of cord colitis syndrome with GVHD.	Bone Marrow Transplant	48(9)	1249-1252	2013
Eto T, Takase K, Miyamoto T, Ohno Y, Kamimura T, Nagafuji K, Takamatsu Y, Teshima T, Gondo H, Taniguchi S, Akashi K, Harada M.	Autologous peripheral blood stem cell transplantation with granulocyte colony-stimulating factor combined conditioning regimen as a postremission therapy for acute myelogenous leukemia in first complete remission.	Int J Hematol	98(2)	186-196	2013
Miyamoto T, Yoshimoto G, Kamimura T, Muta T, Takashima S, Ito Y, Shiratsuchi M, Choi I, Kato K, Takenaka K, Iwasaki H, Takamatsu Y, Teshima T, Akashi K.	Combination of high-dose melphalan and bortezomib as conditioning regimen for autologous peripheral blood stem cell transplantation in multiple myeloma.	Int J Hematol	98(3)	337-345	2013
Eriguchi Y, Uryu H, Nakamura K, Shimoji S, Takashima S, Iwasaki H, Miyamoto T, Shimono N, Hashimoto D, Akashi K, Ayabe T, Teshima T.	Reciprocal expression of enteric antimicrobial proteins in intestinal graft-versus-host disease.	Biol Blood Marrow Transplant	19(10)	1525-1529	2013
Ueda Y, Mizutani C, Nannya Y, Kurokawa M, Kobayashi S, Takeuchi J, Tamura H, Ogata K, Dan K, Shibayama H, Kanakura Y, Niimi K, Sasaki K, Watanabe M, Emi N, Teramura M, Motoji T, Kida M, Usuki K, Takada S, Sakura T, Ito Y, Ohyashiki K, Ogawa H, Suzuki T, Ozawa K, Imai K, Kasai M, Hata T, Miyazaki Y, Morita Y, Kanamaru A, Matsuda A, Tohyama K, Koga D, Tamaki H, Mitani K, Naoe T, Sugiyama H, Takaku F.	Clinical evaluation of WT1 mRNA expression levels in peripheral blood and bone marrow in patients with myelodysplastic syndromes.	Leuk Lymphoma	54(7)	1450-1458	2013
Matsuda A, Jinnai I, Iwanaga M, Okamura D, Ishikawa M, Maeda T, Hata T, Kawawai N, Miyazaki Y, Bessho M, Tomonaga M.	Correlation between dysplastic lineage and type of cytopenia in myelodysplastic syndromes with refractory anemia according to the FAB classification.	Am J Clin Pathol	140(2)	253-257	2013

Hata T, Tsushima H, Baba M, Imaizumi Y, Taguchi J, Imanishi D, Nagai K, Tomonaga M, Miyazaki Y.	Long-term outcome of immunosuppressive therapy for Japanese patients with lower-risk myelodysplastic syndromes.	Int J Hematol	98(6)	687-693	2013
Sakamoto S, Kawabata H, Kanda J, Uchiyama T, Mizumoto C, Kondo T, Yamashita K, Ichinohe T, Ishikawa T, Kadowaki N, Takaori-Kondo A.	Differing impacts of pretransplant serum ferritin and C-reactive protein levels on the incidence of chronic graft-versus-host disease after allogeneic hematopoietic stem cell transplantation.	Int J Hematol	97(1)	109-116	2013
Miura Y, Yoshioka S, Yao H, Takaori-Kondo A, Maekawa T, Ichinohe T.	Chimerism of bone marrow mesenchymal stem/stromal cells in allogeneic hematopoietic cell transplantation: is it clinically relevant?	Chimerism	4(3)	78-83	2013
Chonabayashi K, Hishizawa M, Kawamata S, Nagai Y, Ohno T, Ishikawa T, Uchiyama T, Takaori-Kondo A.	Direct binding of Grb2 has an important role in the development of myeloproliferative disease induced by ETV6/FLT3.	Leukemia	27(6)	1433-1436	2013
Arai Y, Yamashita K, Mizugishi K, Watanabe T, Sakamoto S, Kitano T, Kondo T, Kawabata H, Kadowaki N, Takaori-Kondo A.	Serum neutrophil extracellular trap levels predict thrombotic microangiopathy after allogeneic stem cell transplantation.	Biol Blood Marrow Transplant	19(12)	1683-1689	2013
Arai Y, Yamashita K, Mizugishi K, Takaori-Kondo A, Chiba T, Watanabe T.	The implications of myelodysplastic syndrome - associated chromosomal abnormalities in the development of graft-versus-host disease.	Eur J Haematol	90(6)	525-530	2013
Shimazu Y, Kondo T, Ishikawa T, Yamashita K, Takaori-Kondo A.	Human herpesvirus-6 encephalitis during hematopoietic stem cell transplantation leads to poor prognosis.	Transpl Infect Dis	15(2)	195-201	2013
Arai Y, Yamashita K, Mizugishi K, Watanabe T, Kondo T, Kitano T, Kawabata H, Kadowaki N, Takaori-Kondo A.	Familial Mediterranean fever mutations in a patient with recurrent episodes of acute respiratory distress syndrome.	Clin Immunol	147(1)	58-60	2013
Saida S, Watanabe K, Sato-Otsubo A, Terui K, Yoshida K, Okuno Y, Toki T, Wang R, Shiraishi Y, Miyano S, Kato I, Morishima T, Fujino H, Umeda K, Hiramatsu H, Adachi S, Ito E, Ogawa S, Ito M, Nakahata T, Heike T.	Clonal selection in xenografted TAM recapitulates the evolutionary process of myeloid leukemia in Down syndrome.	Blood	121(21)	4377-4387	2013
Yanagimachi MD, Niwa A, Tanaka T, Honda-Ozaki F, Nishimoto S, Murata Y, Yasumi T, Ito J, Tomida S, Oshima K, Asaka I, Goto H, Heike T, Nakahata T, Saito MK.	Robust and highly-efficient differentiation of functional monocytic cells from human pluripotent stem cells under serum- and feeder cell-free conditions.	PLoS One	8(4)	e59243	2013
Tomizawa D, Tawa A, Watanabe T, Saito AM, Kudo K, Taga T, Iwamoto S, Shimada A, Terui K, Moritake H, Kinoshita A, Takahashi H, Nakayama H, Kiyokawa N, Isoyama K, Mizutani S, Hara J, Horibe K, Nakahata T, Adachi S.	Appropriate dose reduction in induction therapy is essential for the treatment of infants with acute myeloid leukemia: a report from the Japanese Pediatric Leukemia/Lymphoma Study Group.	Int J Hematol	98(5)	578-588	2013

Tokunaga T, Tomita A, Sugimoto K, Shimada K, Iriyama C, Hirose T, Shirahata-Adachi M, Suzuki Y, Mizuno H, Kiyoi H, Asano N, Nakamura S, Kinoshita T, Naoe T.	De novo diffuse large B-cell lymphoma with a CD20 immunohistochemistry-positive and flow cytometry-negative phenotype: Molecular mechanisms and correlation with rituximab sensitivity.	Cancer Sci		doi: 10.1111/cas.12307	2013
Kato S, Miyata T, Takata K, Shimada S, Ito Y, Tomita A, Elsayed AA, Takahashi E, Asano N, Kinoshita T, Kimura H, Nakamura S.	Epstein-Barr virus-positive cytotoxic T-cell lymphoma followed by chronic active Epstein-Barr virus infection-associated T/NK-cell lymphoproliferative disorder: a case report.	Hum Pathol	44(12)	2849-2852	2013
Tomita A, Kiyoi H, Naoe T.	Mechanisms of action and resistance to all-trans retinoic acid (ATRA) and arsenic trioxide (As ₂ O ₃) in acute promyelocytic leukemia.	Int J Hematol		doi: 10.1007/s12185-013-1354-4	2013
Ohashi H, Arita K, Suzuki Y, Tomita A, Naoe T, Hattori A, Tatsumi Y, Kato K, Nagai H.	Iron chelation therapy for a case of transfusion-independent MDS-RARS with significant iron overload.	Int J Hematol	97(1)	151-153	2013
Ohba R, Furuyama K, Yoshida K, Fujiwara T, Fukuhara N, Onishi Y, Manabe A, Ito E, Ozawa K, Kojima S, Ogawa S, Harigae H.	Clinical and genetic characteristics of congenital sideroblastic anemia: comparison with myelodysplastic syndrome with ring sideroblast (MDS-RS).	Ann Hematol	92(1)	1-9	2013
Yoshimi A, Kamachi Y, Imai K, Watanabe N, Nakadate H, Kanazawa T, Ozono S, Kobayashi R, Yoshida M, Kobayashi C, Hama A, Muramatsu H, Sasahara Y, Jakob M, Morio T, Ehl S, Manabe A, Niemeyer C, Kojima S.	Wiskott-Aldrich syndrome presenting with a clinical picture mimicking juvenile myelomonocytic leukaemia.	Pediatr Blood Cancer	60(5)	836-841	2013
Kato M, Yasui N, Seki M, Kishimoto H, Sato-Otsubo A, Hasegawa D, Kiyokawa N, Hanada R, Ogawa S, Manabe A, Takita J, Koh K.	Aggressive transformation of juvenile myelomonocytic leukemia associated with duplication of oncogenic KRAS due to acquired uniparental disomy.	J Pediatr	162(6)	1285-1288	2013
Horibe K, Saito AM, Takimoto T, Tsuchida M, Manabe A, Shima M, Ohara A, Mizutani S.	Incidence and survival rates of hematological malignancies in Japanese children and adolescents (2006-2010): based on registry data from the Japanese Society of Pediatric Hematology.	Int J Hematol	98(1)	74-88	2013
Kamesaki T, Toyotsuji T, Kajii E.	Characterization of direct antiglobulin test-negative autoimmune hemolytic anemia: a study of 154 cases.	Am J Hematol	88(2)	93-96	2013
Komaru Y, Higuchi T, Koyamada R, Haji Y, Okada M, Kamesaki T, Okada S.	Primary Sjögren syndrome presenting with hemolytic anemia and pure red cell aplasia following delivery due to Coombs-negative autoimmune hemolytic anemia and hemophagocytosis.	Intern Med	52(20)	2343-2346	2013
Kaneko S, Sato M, Sasaki G, Eguchi H, Oishi T, Kamesaki T, Kawaguchi H.	Case of cytomegalovirus-associated direct anti-globulin test-negative autoimmune hemolytic anemia.	Pediatr Int	55(6)	785-788	2013

Hanaoka N, Murakami Y, Nagata M, Horikawa K, Nagakura S, Yonemura Y, Murata S, Sonoki T, Kinoshita T, Nakakuma H.	Occupancy of whole blood cells by a single PIGA-mutant clone with HMGA2 amplification in a paroxysmal nocturnal haemoglobinuria patient having blood cells with NKG2D ligands.	Br J Haematol	160(1)	114-116	2013
Kuki I, Takahashi Y, Okazaki S, Kawawaki H, Ehara E, Inoue N, Kinoshita T, Murakami Y. Author information	Vitamin B6-responsive epilepsy due to inherited GPI deficiency.	Neurology	81(16)	1467-1469	2013
Krawitz PM, Höchsmann B, Murakami Y, Teubner B, Krüger U, Klopocki E, Neitzel H, Hoellein A, Schneider C, Parkhomchuk D, Hecht J, Robinson PN, Mundlos S, Kinoshita T, Schrezenmeier H.	A case of paroxysmal nocturnal haemoglobinuria caused by a germline mutation and a somatic mutation in PIGT.	Blood	122(7)	1312-1325	2013
Krawitz PM, Murakami Y, Rieß A, Hietala M, Krüger U, Zhu N, Kinoshita T, Mundlos S, Hecht J, Robinson PN, Horn D.	PGAP2 mutations, affecting the GPI-anchor-synthesis pathway, cause hyperphosphatasia with mental retardation syndrome.	Am J Hum Genet	92(4)	584-589	2013
Hansen L, Tawamie H, Murakami Y, Mang Y, Rehman S, Buchert R, Schaffer S, Muhammad S, Bak M, Nöthen MM, Bennett EP, Maeda Y, Aigner M, Reis A, Kinoshita T, Tommerup N, Baig SM, Abou Jamra R.	Hypomorphic mutations in PGAP2, encoding a GPI-anchor-remodeling protein, cause autosomal-recessive intellectual disability.	Am J Hum Genet	92(4)	575-83	2013
Harada Y, Inoue D, Ding Y, Imagawa J, Doki N, Matsui H, Yahata T, Matsushita H, Ando K, Sashida G, Imawama A, Kitamura T, Harada H.	RUNX1/AML1 mutant collaborates with BMI1 overexpression in the development of human and murine myelodysplastic syndromes.	Blood	121(17)	3434-3446	2013
Imagawa J, Harada Y, Shimomura T, Tanaka H, Okikawa Y, Harada H.	High early death rate in elderly patients with acute promyelocytic leukemia treated with all-trans retinoic acid combined chemotherapy.	Int J Hematol	98(2)	264-266	2013
Inoue D, Kitaura J, Togami K, Nishimura K, Enomoto Y, Uchida T, Kagiyama Y, Kawabata KC, Nakahara F, Izawa K, Oki T, Maehara A, Isobe M, Tsuchiya A, Harada Y, Harada H, Ochiya T, Aburatani H, Kimura H, Thol F, Heuser M, Levine RL, Abdel-Wahab O, Kitamura T.	Myelodysplastic syndromes are induced by histone methylation-altering ASXL1 mutations.	J Clin Invest	123(11)	4627-4640	2013
Goto T, Ikuta K, Inamoto Y, Kamoshita S, Yokohata E, Koyama D, Onodera K, Seto A, Watanabe K, Imahashi N, Tsukamoto S, Ozawa Y, Sasaki K, Ito M, Kohgo Y, Miyamura K.	Hyperferritinemia after adult allogeneic hematopoietic cell transplantation: quantification of iron burden by determining non-transferrin-bound iron.	Int J Hematol	97(1)	125-134	2013

Baba T, Naka K, Morishita S, Komatsu N, Hirao A, Mukaida N.	MIP-1 α /CCL3-mediated maintenance of leukemia-initiating cells in the initiation process of chronic myeloid leukemia.	J Exp Med	210(12)	2661-2673	2013
Sunami Y, Araki M, Hironaka Y, Morishita S, Kobayashi M, Liew EL, Edahiro Y, Tsutsui M, Ohsaka A, Komatsu N.	Inhibition of the NAD-dependent protein deacetylase SIRT2 induces granulocytic differentiation in human leukemia cells.	PLoS One	8(2)	e57633	2013
Nozaki Y, Mitsumori T, Yamamoto T, Kawashima I, Shinohubo Y, Hamanaka S, Nakajima K, Komatsu N, Kirito K.	Rituximab activates Syk and AKT in CD20-positive B cell lymphoma cells dependent on cell membrane cholesterol levels.	Exp Hematol	41(8)	687-696.e1	2013
Suzuki HI, Matsuyama H, Noguchi M, Yao T, Komatsu N, Mano H, Sugimoto K, Miyazono K.	Computational dissection of distinct microRNA activity signatures associated with peripheral T cell lymphoma subtypes.	Leukemia	27(10)	2107-2711	2013
Isobe Y, Hamano Y, Ito Y, Kimura H, Tsukada N, Sugimoto K, Komatsu N.	A monoclonal expansion of Epstein-Barr virus-infected natural killer cells after allogeneic peripheral blood stem cell transplantation.	J Clin Virol	56(2)	150-152	2013
Sugiyama H, Maeda Y, Nishimori H, Yamasuji Y, Matsumoto KI, Fujii N, Kondo E, Shinagawa K, Tanaka T, Takeuchi K, Teshima T, Tanimoto M.	mTOR inhibitors permit regulatory T cell reconstitution and inhibit experimental chronic GVHD.	Biol Blood Marrow Transplant	In press	In press	2013
Asada N, Katayama Y, Sato M, Minagawa K, Wakahashi K, Kawano H, Kawano Y, Sada A, Ikeda K, Matsui T, Tanimoto M.	Matrix-embedded osteocytes regulate mobilization of hematopoietic stem/progenitor cells.	Cell Stem Cell	12(6)	737-47	2013
Kurita N, Obara N, Fukuda K, Nishikii H, Sato S, Inagawa S, Kurokawa T, Owada Y, Ninomiya H, Chiba S.	Perisurgical induction of eculizumab in a patient with paroxysmal nocturnal hemoglobinuria: its inhibition of surgery-triggered hemolysis and the consequence of subsequent discontinuation.	Blood Coagulation Fibrinolysis	24(6)	658-662	2013
Sakamoto T, Obara N, Kurita N, Sakata-Yanagimoto M, Nishikii H, Yokoyama Y, Suzukawa K, Hasegawa Y, Chiba S.	Effectiveness and safety of rabbit anti-thymocyte globulin in Japanese patients with aplastic anemia.	Int J Hematol	98(3)	319-322	2013

Kon A, Shih LY, Minamino M, Sanada M, Shiraishi Y, Nagata Y, Yoshida K, Okuno Y, Bando M, Nakato R, Ishikawa S, Sato-Otsubo A, Nagae G, Nishimoto A, Haferlach C, Nowak D, Sato Y, Alpermann T, Nagasaki M, Shimamura T, Tanaka H, Chiba K, Yamamoto R, Yamaguchi T, Otsu M, Obara N, Sakata-Yanagimoto M, Nakamaki T, Ishiyama K, Nolte F, Hofmann WK, Miyawaki S, Chiba S, Mori H, Nakauchi H, Koefler HP, Aburatani H, Haferlach T, Shirahige K, Miyano S, Ogawa S.	Recurrent mutations in multiple components of the cohesin complex in myeloid neoplasms.	Nat Genet	45(10)	1232-1237	2013
Tsujioka T, Yokoi A, Uesugi M, Kishimoto M, Tochigi A, Suemori S, Tohyama Y, Tohyama K.	Effects of DNA methyltransferase inhibitors (DNMTIs) on MDS-derived cell lines.	Exp Hematol	41(2)	189-197	2013
Fujiwara T, Harigae H.	Pathophysiology and genetic mutations in congenital sideroblastic anemia.	Pediatr Int	55(6)	675-679	2013
Miyatake J, Ohguro N, Kawachi M, Kumode T, Yamaguchi T, Morita Y, Tatsumi Y, Maeda Y, Matsumura I.	A case of intraocular lymphoma with central nervous system involvement and high interleukin-10 levels in both vitreous humor and cerebrospinal fluids: successful treatment with a combination of intravitreal, intrathecal, and systemic therapy.	Int Canc Conf J	2(2)	71-75	2013
Rai S, Matsuda M, Yamairi N, Eguchi G, Iwanaga T, Morita Y, Tanaka H, Tatsumi Y, Ashida T, Matsumura I.	Successful allogeneic hematopoietic stem cell transplantation in a young patient with Richter syndrome presenting with chronic lymphocytic leukemia and diffuse large B-cell lymphoma with different cell origins.	Intern Med	52(2)	273-276	2013
Kato M, Takahashi Y, Tomizawa D, Okamoto Y, Inagaki J, Koh K, Ogawa A, Okada K, Cho Y, Takita J, Gyoto H, Sakamaki H, Yabe H, Kawa K, Suzuki R, Kudoh K, Kato K.	Comparison of intravenous with oral busulfan in allogeneic hematopoietic stem cell transplantation with myeloablative conditioning regimens for pediatric acute leukemia.	Biol Blood Marrow Transplant	19(12)	1690-1694	2013
Hira A, Yabe H, Yoshida K, Okuno Y, Shiraishi Y, Chiba K, Tanaka H, Miyano S, Nakamura J, Kojima S, Ogawa S, Matsuo K, Takata M, Yabe M.	Variant ALDH2 is associated with accelerated progression of bone marrow failure in Japanese Fanconi anemia patients.	Blood	122(18)	3206-3209	2013
Sawada A, Ohga S, Ishii E, Inoue M, Okada K, Inagaki J, Goto H, Suzuki N, Koike K, Atsuta Y, Suzuki R, Yabe H, Kawa K, Kato K, Yasutomo K.	Feasibility of reduced-intensity conditioning followed by unrelated cord blood transplantation for primary hemophagocytic lymphohistiocytosis: a nationwide retrospective analysis in Japan.	Int J Hematol	98(2)	223-230	2013

Murata M, Nakasone H, Kanda J, Nakane T, Furukawa T, Fukuda T, Mori T, Taniguchi S, Eto T, Ohashi K, Hino M, Inoue M, Ogawa H, Atsuta Y, Nagamura-Inoue T, Yabe H, Morishima Y, Sakamaki H, Suzuki R.	Clinical factors predicting the response of acute graft-versus-host disease to corticosteroid therapy: an analysis from the GVHD Working Group of the Japan Society for Hematopoietic Cell Transplantation.	Biol Blood Marrow Transplant	19(8)	1183-1189	2013
Shinzato A, Tabuchi K, Atsuta Y, Inoue M, Inagaki J, Yabe H, Koh K, Kato K, Ohta H, Kigasawa H, Kitoh T, Ogawa A, Takahashi Y, Sasahara Y, Kato S, Adachi S.	PBSCT is associated with poorer survival and increased chronic GVHD than BMT in Japanese paediatric patients with acute leukaemia and an HLA-matched sibling donor.	Pediatr Blood Cancer	60(9)	1513-1519	2013
Takahashi Y, Muramatsu H, Sakata N, Hyakuna N, Hamamoto K, Kobayashi R, Ito E, Yagasaki H, Ohara A, Kikuchi A, Morimoto A, Yabe H, Kudo K, Watanabe K, Ohga S, Kojima S; Japanese Childhood Aplastic Anemia Study Group.	Rabbit antithymocyte globulin and cyclosporine as first-line therapy for children with acquired aplastic anemia.	Blood	121(5)	862-863	2013
Shima T, Forraz N, Sato N, Yamauchi T, Iwasaki H, Takenaka K, Akashi K, McGuckin C, Teshima T.	A novel filtration method for cord blood processing using a polyester fabric filter.	Int J Lab Hematol	35(4)	436-46	2013
Muta T, Miyamoto T, Fujisaki T, Ohno Y, Kamimura T, Kato K, Takenaka K, Iwasaki H, Eto T, Takamatsu Y, Teshima T, Akashi K; Fukuioka Blood and Marrow Transplant Group (FBMTG).	Evaluation of the feasibility and efficacy of autologous stem cell transplantation in elderly patients with multiple myeloma.	Intern Med	52(1)	63-70	2013
Yamasaki S, Miyagi-Maeshima A, Kakugawa Y, Matsuno Y, Ohara-Waki F, Fujisaki S, Morita-Hoshi Y, Mori M, Kim SW, Mori S, Fukuda T, Tanosaki R, Shimoda T, Tobinai K, Saito D, Takae Y, Teshima T, Heike Y.	Diagnosis and evaluation of intestinal graft-versus-host disease after allogeneic hematopoietic stem cell transplantation following reduced-intensity and myeloablative conditioning regimens.	Int J Hematol	97(3)	421-426	2013
Miyatake Y, Oliveira AL, Jarbouli MA, Ota S, Tomaru U, Teshima T, Hall WW, Kasahara M.	Protective roles of epithelial cells in the survival of adult T-cell leukemia/lymphoma cells.	Am J Pathol	182(5)	1832-1842	2013
Uchida M, Ikesue H, Miyamoto T, Kato K, Suetsugu K, Ichinose K, Hiraiwa H, Sakurai A, Takenaka K, Muta T, Iwasaki H, Teshima T, Shiratsuchi M, Egashira N, Akashi K, Oishi R.	Effectiveness and safety of antiemetic aprepitant in Japanese patients receiving high-dose chemotherapy prior to autologous hematopoietic stem cell transplantation.	Biol Pharm Bull	36(5)	819-824	2013

Uchida M, Kato K, Ikesue H, Ichinose K, Hiraiwa H, Sakurai A, Muta T, Takenaka K, Iwasaki H, Miyamoto T, Teshima T, Shiratsuchi M, Suetsugu K, Nagata K, Egashira N, Akashi K, Oishi R.	Efficacy and safety of aprepitant in allogeneic hematopoietic stem cell transplantation.	Pharmacotherapy	33(9)	893-901	2013
Muroi K, Miyamura K, Ohashi K, Murata M, Eto T, Kobayashi N, Taniguchi S, Isumamura M, Ando K, Kato S, Mori T, Teshima T, Mori M, Ozawa K.	Unrelated allogeneic bone marrow-derived mesenchymal stem cells for steroid-refractory acute graft-versus-host disease: a phase I/II study.	Int J Hematol	98(2)	206-213	2013
Aoyama K, Saha A, Tolar J, Riddle MJ, Veenstra RG, Taylor PA, Blomhoff R, Pinoskaltis-Mortari A, Klebanoff CA, Socié G, Munn DH, Murphy WJ, Serody JS, Fulton LM, Teshima T, Chandraratna RA, Dmitrovsky E, Guo Y, Noelle RJ, Blazar BR.	Inhibiting retinoic acid signaling ameliorates graft-versus-host disease by modifying T-cell differentiation and intestinal migration.	Blood	122(12)	2125-2134	2013
Ito Y, Miyamoto T, Kamimura T, Takase K, Henzama H, Sugio Y, Kato K, Ohno Y, Eto T, Teshima T, Akashi K.	Clinical outcomes of allogeneic stem cell transplantation for relapsed or refractory follicular lymphoma: a retrospective analysis by the Fukuoka Blood and Marrow Transplantation Group.	Int J Hematol	98(4)	463-71	2013
Kato K, Miyamoto T, Numata A, Nakaïke T, Oka H, Yurino A, Kuriyama T, Mori Y, Yamasaki S, Muta T, Takenaka K, Iwasaki H, Teshima T, Akashi K.	Diffuse panbronchiolitis after humanized anti-CCR4 monoclonal antibody therapy for relapsed adult T-cell leukemia/lymphoma.	Int J Hematol	97(3)	430-432	2013
Nakaïke T, Kato K, Oku S, Hayashi M, Kikushige Y, Kuroiwa M, Takenaka K, Iwasaki H, Miyamoto T, Teshima T, Ohshima K, Akashi K.	Reduced-intensity conditioning followed by cord blood transplantation in a patient with refractory folliculotropic mycosis fungoides.	Int J Hematol	98(4)	491-495	2013
Shiratori S, Ito M, Yoneoka M, Hayasaka K, Hayase E, Iwasaki J, Sugita J, Shigenatsu A, Fujimoto K, Kondono T, Shimizu C, Teshima T.	Successful engraftment in HLA-mismatched bone marrow transplantation despite the persistence of high-level donor-specific anti-HLA-DR antibody.	Transplantation	96(5)	e34-44	2013
Fukuhara A, Tanino Y, Ishii T, Inokoshi Y, Saito K, Fukuhara N, Sato S, Saito J, Ishida T, Yamaguchi H, Munakata M.	Pulmonary fibrosis in dyskeratosis congenita with TINF2 gene mutation.	Eur Respir J	42(6)	1757-1759	2013
Nannya Y, Shinohara A, Ichikawa M, Kurokawa M.	Serial Profile of Vitamins and Trace Elements during the Acute Phase of Allogeneic Stem Cell Transplantation.	Biol Blood Marrow Transplant	Epub	doi: 10.1016/j.bbmt.2013.12.554	2013
Ogura M, Ichikawa M, Masuda A, Kandabashi K, Nannya Y, Kurokawa M.	A mixed-type autoimmune hemolytic anemia with immune thrombocytopenia related with myositis and post-transplantation lymphoproliferative disorder.	Ann Hematol	Epub		2013

Chiyonobu T, Inoue N, Morimoto M, Kinoshita T, Murakami Y.	Glycosylphosphatidylinositol (GPI) anchor deficiency caused by mutations in PIGW is associated with West syndrome and hyperphosphatasia with mental retardation syndrome.	J Med Genet	Epub	doi: 10.1136/jmedgenet-2013-102156	2013
Sakamoto K, Nakasone H, Tsurumi S, Sasaki K, Mitani K, Kida M, Hangaishi A, Usuki K, Kobayashi A, Saito K, Karasawa-Yamaguchi M, Izutsu K, Okoshi Y, Chiba S, Kanda Y.	Prednisone versus high-dose dexamethasone for untreated primary immune thrombocytopenia. A retrospective study of the Japan Hematology & Oncology Clinical Study Group.	J Thromb Thrombolysis	Epub		2013
Chonabayashi K, Hishizawa M, Matsui M, Kondo T, Ohno T, Ishikawa T, Takaoiri-Kondo A.	Successful allogeneic stem cell transplantation with long-term remission of ETV6/FLT3-positive myeloid/lymphoid neoplasm with eosinophilia.	Ann Hematol	Epub		2013
Kagoya Y, Yoshimi A, Kataoka K, Nakagawa M, Kumano K, Arai S, Kobayashi H, Saito T, Iwakura Y, Kurokawa M.	Positive feedback between NF- κ B and TNF- α promotes leukemia-initiating cell capacity.	J Clin Invest	124(2)	528-542	2014
Nakazaki K, Nannya Y, Kurokawa M.	Distribution of serum erythropoietin levels in lower risk myelodysplastic syndrome cases with anemia.	Int J Hematol	99(1)	53-56	2014
Shinohara A, Imai Y, Nakagawa M, Takahashi T, Ichikawa M, Kurokawa M.	Intracellular reactive oxygen species mark and influence the megakaryocyte-erythrocyte progenitor fate of common myeloid progenitors.	Stem Cells	32(2)	548-557	2014
Tsutsumi Y, Shimono J, Miyashita N, Teshima T.	No effect of humanized CCR monoclonal antibody (mogamulizumab) on treatment-resistant adult T cell leukemia with meningeal infiltration.	Leuk Lymphoma	55(2)	457-459	2014
Koyama M, Hashimoto D, Nagafuji K, Eto T, Ohno Y, Aoyama K, Iwasaki H, Miyamoto T, Hill GR, Akashi K, Teshima T	Expansion of donor-reactive host T cells in primary graft failure after allogeneic hematopoietic SCT following reduced-intensity conditioning.	Bone Marrow Transplant	49(1)	110-115	2014
Ichiki K, Ikuta K, Addo L, Tanaka H, Sasaki Y, Shimonaka Y, Sasaki K, Ito S, Shindo M, Ohtake T, Fujiyama M, Torimoto Y, Kohgo Y.	Upregulation of iron regulatory hormone hepcidin by interferon α .	J Gastroenterol Hepatol	29(2)	387-394	2014
Japan Society for Hematopoietic Cell Transplantation.	PBSC collection from family donors in Japan: a prospective survey.	Bone Marrow Transplant	49(2)	195-200	2014
Nukina A, Kagoya Y, Watanabe-Okochi N, Arai S, Ueda K, Yoshimi A, Nannya Y, Kurokawa M.	Single-cell gene expression analysis reveals clonal architecture of blast-phase chronic myeloid leukaemia.	Br J Haematol	Epub	doi: 10.1111/bjh.12726	2014

Ueda Y, Mizutani C, Nannya Y, Kurokawa M, Kobayashi S, Takeuchi J, Tamura H, Ogata K, Dan K, Shibayama H, Kanakura Y, Niimi K, Sasaki K, Watanabe M, Emi N, Teramura M, Motoji T, Kida M, Usuki K, Takada S, Sakura T, Ito Y, Ohyashiki K, Ogawa H, Suzuki T, Ozawa K, Imai K, Kasai M, Hata T, Miyazaki Y, Morita Y, Kanamaru A, Matsuda A, Tohyama K, Kogada D, Tamaki H, Mitani K, Naoe T, Sugiyama H, Takaku F.	Clinical evaluation of WT1 mRNA expression levels in peripheral blood and bone marrow in patients with myelodysplastic syndromes.	Leuk. Lymphoma			in press
Mimuro J, Mizukami H, Shimama M, Matsushita T, Takimura M, Muto S, Higasa S, Sakai M, Ohmori T, Madoiwa S, Ozawa K, Sakata Y.	The prevalence of neutralizing antibodies against adeno-associated virus capsids is reduced in young Japanese individuals.	J. Med. Virol.			in press
Tomizawa D, Tawa A, Watanabe T, Saito AM, Kudo K, Taga T, Iwamoto S, Shimada A, Terui K, Moritake H, Kinoshita A, Takahashi H, Nakayama H, Koh K, Kitagawa H, Kosaka Y, Miyachi H, Horibe K, Nakahata T, Adachi S.	Excess reduction of anthracyclines results in inferior event-free survival in core binding factor acute myeloid leukemia in children; a report from the Japanese Pediatric Leukemia/Lymphoma Study Group.	Leukemia			In press
Nishimura J, Yamamoto M, Hayashi S, Ohyashiki K, Ando K, Brodsky AL, Noji H, Kitamura K, Eto T, Takahashi T, Masuko M, Matsumoto T, Wano Y, Shichishima T, Shibayama H, Hase M, Li L, Johnson K, Lazarowski A, Tamburini P, Inazawa J, Kinoshita T, Kanakura Y.	Genetic variants in C5 and poor response to eculizumab in PNH.	New Engl J Med			In press

III. 研究成果の刊行物・別刷

(主なものを抜粋)

研究成果の刊行物・別刷り一覧
(主なものを抜粋)

1. Kagoya Y, Yoshimi A, Kataoka K, Nakagawa M, Kumano K, Arai S, et al. Positive feedback between NF-kappaB and TNF-alpha promotes leukemia-initiating cell capacity. *The Journal of clinical investigation*. 2014;124(2):528-42.
2. Muroi K, Miyamura K, Ohashi K, Murata M, Eto T, Kobayashi N, et al. Unrelated allogeneic bone marrow-derived mesenchymal stem cells for steroid-refractory acute graft-versus-host disease: a phase I/II study. *International journal of hematology*. 2013;98(2):206-13.
3. Satoh Y, Yokota T, Sudo T, Kondo M, Lai A, Kincade PW, et al. The Satb1 protein directs hematopoietic stem cell differentiation toward lymphoid lineages. *Immunity*. 2013;38(6):1105-15.
4. Seiki Y, Sasaki Y, Hosokawa K, Saito C, Sugimori N, Yamazaki H, et al. Increased plasma thrombopoietin levels in patients with myelodysplastic syndrome: a reliable marker for a benign subset of bone marrow failure. *Haematologica*. 2013;98(6):901-7.
5. Ubukawa K, Guo YM, Takahashi M, Hirokawa M, Michishita Y, Nara M, et al. Enuclation of human erythroblasts involves non-muscle myosin IIB. *Blood*. 2012;119(4):1036-44.
6. Kikushige Y, Akashi K. TIM-3 as a therapeutic target for malignant stem cells in acute myelogenous leukemia. *Annals of the New York Academy of Sciences*. 2012;1266:118-23.
7. Greenberg PL, Tuechler H, Schanz J, Sanz G, Garcia-Manero G, Sole F, et al. Revised international prognostic scoring system for myelodysplastic syndromes. *Blood*. 2012;120(12):2454-65.
8. Chonabayashi K, Hishizawa M, Kawamata S, Nagai Y, Ohno T, Ishikawa T, et al. Direct binding of Grb2 has an important role in the development of myeloproliferative disease induced by ETV6/FLT3. *Leukemia*. 2013;27(6):1433-6.
9. Kikuchi A, Hasegawa D, Ohtsuka Y, Hamamoto K, Kojima S, Okamura J, et al. Outcome of children with refractory anaemia with excess of blast (RAEB) and RAEB in transformation (RAEB-T) in the Japanese MDS99 study. *British journal of haematology*. 2012;158(5):657-61.
10. Goto E, Tomita A, Hayakawa F, Atsumi A, Kiyoi H, Naoe T. Missense mutations in PML-RARA are critical for the lack of responsiveness to arsenic trioxide treatment. *Blood*. 2011;118(6):1600-9.



Research article

Positive feedback between NF- κ B and TNF- α promotes leukemia-initiating cell capacity

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Acute myeloid leukemia (AML) is a heterogeneous hematologic malignancy that originates from leukemia-initiating cells (LICs). The identification of common mechanisms underlying LIC development will be important in establishing broadly effective therapeutics for AML. Constitutive NF- κ B pathway activation has been reported in different types of AML; however, the mechanism of NF- κ B activation and its importance in leukemia progression are poorly understood. Here, we analyzed myeloid leukemia mouse models to assess NF- κ B activity in AML LICs. We found that LICs, but not normal hematopoietic stem cells or non-LIC fractions within leukemia cells, exhibited constitutive NF- κ B activity. This activity was maintained through autocrine TNF- α secretion, which formed an NF- κ B/TNF- α positive feedback loop. LICs had increased levels of active proteasome machinery, which promoted the degradation of I κ B α and further supported NF- κ B activity. Pharmacological inhibition of the proteasome complex markedly suppressed leukemia progression in vivo. Conversely, enhanced activation of NF- κ B signaling expanded LIC frequency within leukemia cell populations. We also demonstrated a strong correlation between NF- κ B activity and TNF- α secretion in human AML samples. Our findings indicate that NF- κ B/TNF- α signaling in LICs contributes to leukemia progression and provide a widely applicable approach for targeting LICs.

Introduction

Acute myeloid leukemia (AML) is a highly aggressive hematologic malignancy characterized by a relentless proliferation of immature myeloid blasts. Recent studies have demonstrated that the apparently uniform leukemia cell population is organized as a hierarchy that originates from leukemia-initiating cells (LICs) (1, 2). Although intensive chemotherapy is initially effective in most cases of AML, the surviving LIC clones repopulate the disease, leading to subsequent relapse and an ultimately dismal prognosis (3). Another problem is that AML is a heterogeneous disease with different cytogenetic and molecular abnormalities. This heterogeneity has increasingly been unveiled by recent work involving the screening of recurrent mutations seen in AML cells using high-throughput sequencing technology, which is useful for constructing individualized therapeutics (4, 5). At the same time, however, these findings indicate that it is difficult to develop a treatment strategy in addition to standard chemotherapy that is widely applicable to AML. Therefore, to establish effective treatments, it is important to identify the universally essential mechanisms involved in the LIC phenotype, irrespective of the cells' diverse genetic abnormalities.

NF- κ B is a transcription factor initially discovered in B cells (6). Although well known for its role in controlling various aspects of immune responses, the NF- κ B pathway is now also recognized as an important regulator of cell survival, proliferation, and differentiation (7–9). Its constitutive activation has been reported in a variety of malignancies and mostly plays a cancer-promoting role (10–12). There is some evidence that this pathway activity is also seen in the AML CD34⁺CD38⁻ fraction, which is considered

to be enriched for LICs (13, 14). Given that NF- κ B activity is not restricted to specific AML subtypes or genetic abnormalities, it is possible that the signaling is universally essential for myeloid leukemia progression, and a variety of agents have been reported to induce apoptosis in cultured leukemia cells via NF- κ B pathway inhibition (15–19). The effect of specific inhibition of the NF- κ B pathway on LICs in vivo, however, has not been sufficiently studied. Furthermore, the mechanism of this pathway's activation remains to be elucidated. Although several gene mutations found in hematologic malignancies have been reported to be associated with enhanced NF- κ B signaling (20–22), these findings do not fully explain why the activation of NF- κ B is observed in a number of different types of leukemia. It is more intriguing, as well as reasonable, to consider that NF- κ B activation arises from the signaling pathways that are commonly involved in LICs. Another limitation of the previous studies is that LIC-enriched populations in AML are highly heterogeneous among patients and are not necessarily confined to the CD34⁺CD38⁻ fraction, as they are in normal HSCs. Therefore, it is problematic to strictly define LICs by their surface-marker antigens (23, 24).

To overcome these challenges, we used variable myeloid leukemia mouse models, in which LIC-enriched fractions were well characterized using a surface marker phenotype and revealed that NF- κ B signaling is constitutively activated in LICs, but not in normal cells or non-LIC fractions within leukemic BM cells. We also elucidate the mechanism of NF- κ B activation in LICs in each model and demonstrate that the inhibition of NF- κ B or its upstream machinery in LICs markedly suppresses leukemia progression in vivo.

Results

The NF- κ B pathway is activated in LICs of different types of myeloid leukemia models. To extensively investigate NF- κ B activity in LICs of

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