

CURRICULUM VITAE

Ulla Wartiovaara-Kautto

Sept 25, 2022

Name, date of birth, academic title:

Ulla Wartiovaara-Kautto, Feb 13, 1972, M.D. PhD, docent

Current position:

Head of Division of Hematology, Chief Physician (act.); Principal Investigator
Helsinki University Hospital, Comprehensive Cancer Center University of Helsinki and Applied Tumor Genomics Research Program, Faculty of Medicine, University of Helsinki, Finland

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Special duties and consultancy areas:

- Head of Joint Adult and Pediatric Rare Hematologic Diseases Clinic (ERN EuroBloodNet membership 2021)
- Consultancy at national level in rare and/or inherited blood diseases and acute leukemias; clinical management and clinical trials
- CO-Chair (shared position with Dr Panagiotis Baliakas, Sweden) of Working Group of Germline Predisposition on Myeloid Malignancies of Nordic MDS Study Group
- Representative of adult hematologists of Finland in Nordic and European working groups of acute lymphoblastic leukemia
- Representative in the initiative to form an International Consortium of Rare Blood Cancers

Education

University of Helsinki, Finland	M.D., Medical doctor, May 3, 2000
University of Helsinki, Finland	PhD, Doctoral thesis, May 3, 2000
University of Helsinki, Finland	Specialist in Clinical Chemistry, Jun 14, 2005
University of Helsinki, Finland	Specialist in Clinical Hematology, Jan 25, 2012
University of Helsinki, Finland	Docent in Experimental Hematology, Jun 5, 2012

Scientific merits and current activities

One completed supervised doctoral thesis (Dr. Elina Hirvonen, 2019, University of Helsinki); Currently Principal Investigator/ Supervision of six graduate (PhD) studies; Principal investigator of HUH and/or Finnish adult hematology centers in five clinical trials (Amgen x2, Novartis, EWALL, AllTogether); Active international Research collaborations with e.g. professors Lucy Godley and the group in the University of Chicago, Jude Fitzgibbon and the group in the Barts Cancer Institute - Queen Mary University of London, and Eva Hellström-Lindberg and the group in Karolinska Institutet, and Alltogether Consortium members (in UKALL, NOPHO, BFM etc.); Active national collaborations e.g. with professors (and their research groups) Kimmo Porkka, University of Helsinki; Kirsi Jahnukainen, University of Helsinki, Seppo Meri, University of Helsinki, Kim Vettenranta Red Cross Blood Service; docents Esa Pitkänen, FIMM; Caroline Heckman, FIMM.

External funding during the last 3 years: VTR 2020-2021: 75 000e; VTR 2022-23: 85 000e; Finnish Cancer Institute 2022: 50 000e; CCC Research Funding 2019-22: 70 000e; Shared applications with docent Outi Kilpivaara: Cancer Society of Finland 2020-2021: 100 000e, Signe and Ane Gyllenberg Stiftelsen 2020 20 000e, Lasten syöpäsäätiö Väre 2019 6000e.

Publications: 45 original articles in peer-reviewed medical journals. Eight publications for professional communities (in Finnish). Thesis 1999; University of Helsinki.

List of Publications
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ORIGINAL PUBLICATIONS

1. Armes H, Bewicke-Copley F, Rio-Machin A, Di Bella D, Philippe C, Wozniak A, Tummala H, Wang J, Ezponda T, Prosper F, Dokal I, Vulliamy T, Kilpivaara O, **Wartiovaara-Kautto U**, Jude Fitzgibbon J, Rouault-Pierre K. Germline *ERCC6L2* mutations lead to impaired erythropoiesis and reshaping of the bone marrow microenvironment. *Brit J Haematol.*, in press, 2022.
2. Lahtinen AK, Koski J, Ritari J, Hyvärinen K, Koskela S, Partanen J, Vettenranta K, Koskenvuo M, Niittyvuopio R, Salmenniemi U, Itälä-Remes M, Jahnukainen K*, Kilpivaara O*⁸, **Wartiovaara-Kautto U***. Clinically relevant germline variants in allogeneic hematopoietic stem cell transplant recipients. *Bone Marrow Transplantation*, in press, 2022.
3. Hakkarainen M, Koski J, Heckman CA, Anttila P, Silvennoinen R, Lievonen J, Kilpivaara O*, **Wartiovaara-Kautto U***. A germline exome analysis reveals harmful *POT1* variants in multiple myeloma patients and families. *EJHaem*, in press, 2022.
4. Lundgren S, Keränen M, **Wartiovaara-Kautto U**, Reilly CR, Myllymäki M. Somatic compensation of bone marrow failure. *Seminars in Hematology*, in press, 2022.
5. Pehrsson M, Heikkinen H, **Wartiovaara-Kautto U**, Mäntylähti S, Bäckström P, Lassenius MI, Uusi-Rauva K, Carpén O, Elomaa K. Screening for potential undiagnosed Gaucher disease patients: Utilisation of the Gaucher Earlier Diagnosis Consensus point-scoring system (GED-C PSS) in conjunction with electronic health record data, tissue specimens, and small nucleotide polymorphism (SNP) genotype data available in Finnish biobanks. *Molecular Genetics and Metabolism Reports*, in press, 2022.
6. Douglas S*, Lahtinen A*, Koski J, Leimi L, Keränen MA, Koskenvuo M, Heckman C, Jahnukainen K, Pitkänen E, **Wartiovaara-Kautto U***, Kilpivaara O*. Enrichment of cancer-predisposing germline variants in adult and pediatric patients with acute lymphoblastic leukemia. 2022, *Sci Rep*, 12(1); 10670, 2022.
7. Skipper, Mette; Rank, Cecilie; Jarvis, Kirsten; Lynggaard, Line; Andrés-Jensen, Liv; Quist-Paulsen, Petter; Semaskeviciene, Ruta; Hallböök, Helene; **Wartiovaara-Kautto, Ulla**; Ranta, Susanna; Saulyte Trakymiene, Sonate; Abrahamsson, Jonas; Huttunen, Pasi; Klug Albertsen, Birgitte; Schmiegelow, Kjeld; Tuckuviene, Ruta. Cerebral sinovenous thrombosis and asparaginase re-exposure in patients aged 1 to 45 years with acute lymphoblastic leukaemia: a NOPHO ALL2008 study. *EJ Haem*, in press, 2022
8. Boissel N, Chevallier P, Dorinin V, Griskevicius L, Maschan A, McCloskey J, Rambaldi A, Rossi G, Sokolov A, **Wartiovaara-Kautto U.**, Oprea C, Abbadessa G, Gosselin A, Macé S, Thomas X. Isatuximab monotherapy in patients with relapsed/refractory T-acute lymphoblastic leukemia or T-lymphoblastic lymphoma: Phase 2 study. *Cancer Medicine*, 2022, 11(5):1292-1298.
9. Feurstein S, Churpek JE, Walsh T, Keel S, Hakkarainen M, Schroeder T, Germing U, Geyh S, Heuser M, Thol F, Pohlkamp C, Haferlach T, Gao J, Owen C, Goehring G, Schlegelberger B, Verma D, Krause DS, Gao G, Cronin T, Gulsuner S, Lee M, Pritchard CC, Subramanian HP, Del Gaudio D, Li Z, Das S, Kilpivaara O, **Wartiovaara-Kautto U**, Wang ES, Griffiths EA, Döhner K, Döhner H, King MC, Godley LA. Germline variants drive myelodysplastic syndrome in young adults. *Leukemia* 2021, 35(8):2439-2444.
10. Rönkkö R, Hirvonen E, Malila N, Kilpivaara O, **Wartiovaara-Kautto U***, Pitkäniemi J*. Familial aggregation of early-onset haematological malignancies. *Brit J Haematol*, 2021, 193(6):1134-41.
11. Rajala H, Anttila V-J, Haapio M, Keränen M, **Wartiovaara-Kautto U**, Rätty R. Gemtuzumab-ozogamicin-related impaired hemoglobin-haptoglobin scavenging as on-target/off-tumor toxicity of anti-CD33 AML therapy: a report of two cases. *Case reports in hematology* 2021, 2021:6641349.

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12. Rank CU, Ole Wolthers B, Grell K, Klug Albertsen B, Leth Frandsen T, Overgaard U, Toft N, Nielsen O, Wehner P, Harila-Saari A, Grillner P, Abrahamsson J, Norén-Nyström U, Tomaszewska-Toporska B, Lund B, Brunsvig Jarvis K, Quist-Paulsen P, Vaitkevičienė G, Griškevičius L, Taskinen M, **Wartiovaara-Kautto U**, Lepik K, Punab M, Jónsson O, Schmiegelow K. Asparaginase-associated Pancreatitis in Acute Lymphoblastic Leukemia: Results from the NOPHO ALL2008 Treatment of Patients 1–45 Years. *J Clin Oncol* 2020;38(2):145-154.
13. Quist-Paulsen P, Toft N, Heyman M, Abrahamsson J, Griškevičius J, Hallböök H, Jónsson ÓG, Palk K, Pruunsild K, Vaitkeviciene G, Vettenranta K, Åsberg A1, Frandsen TL, Opdahl S, Marquart HV, Madsen HO, Overgaard UM, **Wartiovaara-Kautto U**, Schmiegelow K. T cell acute lymphoblastic leukemia in patients 1-45 years treated with the pediatric NOPHO ALL2008 protocol. *Leukemia* 2020;34(2):347-357.
14. Vakkilainen S, Costantini A, Taskinen M, **Wartiovaara-Kautto U**, Mäkitie O. Metaphyseal dysplasia without hypotrichosis' can present with late-onset extraskkeletal manifestations. *J Med Genet* 2020;57(1):18-22.
15. Baliakas P, Tesi B, **Wartiovaara-Kautto U**, Stray-Pedersen A, Friis L, Dybedal I, Hovland R, Jahnukainen K, Raaschou-Jensen K, Ljungman P, Rustad C, Kvist Lautrup C, Kilpivaara O, Olsnes Kittang A, Grønbæk K, Cammenga J, Hellström-Lindberg E, Andersen M. Nordic guidelines for germline predisposition to myeloid neoplasms: Recommendations for genetic diagnosis, clinical management and follow-up. *Hemasphere* 2019;3(6):e321. doi: 10.1097/HS9.0000000000000321
16. Forsblom E, Lepäntalo A, **Wartiovaara-Kautto U**, Ruotsalainen E, Järvinen A. Changes in hemostasis parameters in methicillin-sensitive *Staphylococcus aureus* bacteremia complicated by endocarditis or thromboembolic events: A prospective age-gender adjusted cohort study. *APMIS* 2019;127(7):515-528
17. Douglas S.P.M, Siipola P, Kovanen P.E., Pyörälä M, Kakko S, Savolainen E-R, Salmenniemi U, Orte K, Kytölä S, Pitkänen E, Porkka K, Kilpivaara O*, **Wartiovaara-Kautto U***. ERCC6L2 defines a novel entity within inherited acute myeloid leukemia. *Blood* 2019;133(25):2724-2728
18. Hirvonen E, Peuhkuri S, Norberg A, Degerman S, Hannula-Jouppi K, Välimaa H, Kilpivaara O*, **Wartiovaara-Kautto U***. Characterization of an X-chromosome-linked telomere biology disorder in females with DKC1 mutation. *Leukemia* 2019;33(1):275-278.
19. Giebel S, Marks DI, Boissel N, Baron F, Chiaretti S, Ciceri F, Cornelissen JJ, Doubek M, Esteve J, Fielding A, Foa R, Gorin NC, Gökbuget N, Hallböök H, Hoelzer D, Paravichnikova E, Ribera JM, Savani B, Rijnneveld AW, Schmid C, **Wartiovaara-Kautto U**, Mohty M, Nagler A, Dombret H. Hematopoietic stem cell transplantation for adults with Philadelphia chromosome-negative acute lymphoblastic leukemia in first remission: a position statement of the European Working Group for Adult Acute Lymphoblastic Leukemia (EWALL) and the Acute Leukemia Working Party of the European Society for Blood and Marrow Transplantation (EBMT). *Bone Marrow Transplant* 2019;54(6):798-809.
20. Trotta L, Norberg A, Taskinen M, Beziat V, Degerman S, **Wartiovaara-Kautto U**, Välimaa H, Jahnukainen K, Casanova J-L, Seppänen M, Saarela J, Koskenvuo M, Martelius T. Diagnostics of rare disorders: whole-exome sequencing deciphering locus heterogeneity in telomere biology disorders. *Orphanet J Rare Dis* 2018;17:13(1):139-147.
21. **Wartiovaara-Kautto U**, Hirvonen EAM, Pitkänen E, Heckman C., Saarela J., Kettunen K., Porkka K, Kilpivaara O. Germline mutations and variants in a consecutive series of acute myeloid leukemia. *Leukemia* 2018;32(10):2282-2285.
22. Rank CU, Toft N, Tuckuviene R, Grell K, Nielsen UJ, Frandsen TL, Hansen Marquart H, Klug Albertsen B, Tedgård U, Hallböök H, Ruud E, Brunsvig Jarvis K, Quist-Paulsen P, Huttunen P, **Wartiovaara-Kautto U**, Gísli Jónsson Ó, Saulyte Trakymiene S, Griškevičius L, Saks K, Punab M, Schmiegelow K. Thromboembolism in acute lymphoblastic leukemia: results of NOPHO ALL2008 protocol treatment in patients aged 1 to 45 years. *Blood* 2018;131:2475-2484.
23. Roininen S, Laine O, Kauppila M, Vesänen M, Rämetsä M, Sinisalo M, Jantunen E, Säily M, Rätty, R, Elonen E, **Wartiovaara-Kautto, U**. A minor role of asparaginase in predisposing to cerebral venous thromboses in adult acute lymphoblastic leukemia patients. *Cancer Medicine* 2017;6(6):1275-1285.
24. Reggiani M, Karttunen V, **Wartiovaara-Kautto U**, Riutta A, Uchiyama S, Hillbom M. Fibrinolytic activity and platelet function in subjects with obstructive sleep apnoea and a patent foramen ovale: is there an option for prevention of ischaemic stroke? *Stroke Res Treat.* 2012;945849.

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25. **Wartiovaara-Kautto U**, Joutsu-Korhonen L, Ilveskero S, Armstrong E, Lassila R. Platelets significantly modify procoagulant activities in haemophilia A. *Haemophilia* 2011;17:743-751.
26. Lindström O, Tukiainen E, Kylänpää M-L, Mentula P, Puolakkainen P, **Wartiovaara-Kautto, U**, Repo H, Petäjä J. Thrombin generation in vitro and in vivo, and disturbed tissue factor regulation in patients with acute pancreatitis. *Pancreatology* 2011;11:557-566.
27. Jormalainen M, Vento AE, **Wartiovaara-Kautto U**, Suojaranta-Ylinen R, Lauronen J, Paavonen T, Petäjä J. Ischemic intestinal injury during cardiopulmonary bypass does not show an association with neutrophil activation: a porcine study. *Eur Surg Res* 2009;42:59-69.
28. Långström S, Rautiainen P, Mildh L, Peltola K, **Wartiovaara-Kautto U**, Heikinheimo M, Petäjä J. Fresh frozen plasma does not reduce in vivo thrombin formation after neonatal cardiopulmonary bypass surgery. *Thromb Haemost* 2008; 100:1207-1208.
29. Långström S, Rautiainen P, Mildh L, Peltola K, **Wartiovaara-Kautto U**, Heikinheimo M, Petäjä J. Thrombin regulation in neonates undergoing cardiopulmonary bypass. *Thromb Haemost* 2008;99:791-792.
30. Jormalainen M, Vento AE, **Wartiovaara-Kautto U**, Suojaranta-Ylinen R, Lauronen J, Paavonen T, Petäjä J. Antithrombin reduces pulmonary hypertension during reperfusion after cardiopulmonary bypass in a pig. *Acta Anesthesiol Scand* 2007;51:178-188.
31. Långström S, **Wartiovaara-Kautto U**, Andersson S, Heikinheimo M, Petäjä J. Exchange transfusion activates coagulation and alters the coagulation profile in newborn infants. *Thromb Haemost* 2006;96:142-148.
32. Ulander, VM, **Wartiovaara U**, Hiltunen L, Rautanen A, Kaaja R. Thrombophilia: A new potential risk factor for cervical insufficiency. *Thromb Res* 2006;18:705-708.
33. Hyytiäinen S, **Wartiovaara-Kautto U**, Ulander VM, Kaaja R, Heikinheimo M, Petäjä J. The procoagulant effects of factor V Leiden may be balanced against decreased levels of factor V and do not reflect in vivo thrombin formation in newborns. *Thromb Haemost* 2006;95:434-440.
34. Niiranen S, **Wartiovaara-Kautto U**, Syrjälä M, Puustinen R, Yli-Hietanen J, Mattila H, Kalli S, Lamminen H. Reorganization of oral anticoagulant (warfarin) treatment follow-up. *Scand J Prim Health Care* 2006; 24:33-37.
35. Pelkonen M, **Wartiovaara-Kautto U**, Nieminen MS, Ahonen K, Sinisalo J. Low normal level of protein C or antithrombin increases risk for recurrent cardiovascular events. *Blood Coagulation and Fibrinolysis* 2005;16:275-280.
36. Jormalainen M, Vento AE, **Wartiovaara-Kautto U**, Suojaranta-Ylinen R, Rämö OJ, Petäjä J. Recombinant hirudin enhances cardiac output and decreases systemic vascular resistance during reperfusion after cardiopulmonary bypass in a porcine model. *J Thorac Cardiovasc Surg* 2004;128(2):189-96.
37. Lepäntalo A, Virtanen KS, Heikkilä J, **Wartiovaara U**, Lassila R. Limited early antiplatelet effect of 300mg clopidogrel in patients with aspirin therapy undergoing percutaneous coronary interventions. *Eur Heart J* 2004;25:476-483.
38. Rätty R, Franssila K, Jansson SE, Joensuu H, **Wartiovaara-Kautto U**, Elonen E. Predictive factors for blastoid transformation in the common variant of mantle cell lymphoma. *Eur J Cancer* 2003;39:321-329.
39. Balogh I, Szöke G, Kárpáti L, **Wartiovaara U**, Katona E, Komáromi I, Haramura G, Pfliegler G, Mikkola H, Muszbek L. Val34Leu polymorphism of plasma factor XIII: biochemistry and epidemiology in familial thrombophilia. *Blood* 2000;96:2479-2486.
40. Mikkelsen J, Perola M, **Wartiovaara U**, Peltonen L, Palotie A, Penttilä A, Karhunen PJ. Plasminogen activator inhibitor-1 (PAI-1) 4G/5G polymorphism, coronary thrombosis, and myocardial infarction in middle-aged Finnish men who died suddenly. *Thromb Haemost* 2000;84:78-82.
41. **Wartiovaara U**, Perola M, Mikkola H, Tötterman K, Savolainen V, Penttilä A, Grant PJ, Tikkanen MJ, Vartiainen E, Karhunen PJ, Peltonen L, Palotie A. Association of FXIII Val34Leu with decreased risk of myocardial infarction in Finnish males. *Atherosclerosis* 1999;142:295-300.
42. **Wartiovaara U**, Mikkola H, Szöke G, Haramura G, Kárpáti L, Balogh I, Lassila R, Muszbek L, Palotie A. Effect of Val34Leu polymorphism on the activation of the coagulation factor XIII-A. *Thromb Haemost* 2000;84:595-600.
43. Heliö T, **Wartiovaara U**, Halme L, Turunen UM, Mikkola H, Palotie A, Färkkilä M, Kontula K. Arg506Gln factor V mutation and Val34Leu factor XIII polymorphism in Finnish patients with inflammatory bowel disease. *Scand J Gastroenterol* 1999;34:170-174.

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44. **Wartiovaara U**, Salven P, Mikkola H, Lassila R, Kaukonen J, Joukov V, Orpana A, Ristimäki A, Heikinheimo M, Joensuu H, Alitalo K, Palotie A. Peripheral blood platelets express VEGF-C and VEGF which are released during platelet activation. *Thromb Haemost* 1998;80:171-175.
45. Kukk E, **Wartiovaara U**, Gunji Y, Kaukonen J, Bühring HJ, Rappold I, Matikainen MT, Vihko P, Partanen J, Palotie A, Alitalo K, Alitalo R. Analysis of Tie receptor tyrosine kinase in haemopoietic progenitor and leukaemia cells. *Br J Haematol* 1997;98:195-203.

PUBLICATIONS INTENDED FOR PROFESSIONAL COMMUNITIES

1. Jahnukainen K, **Wartiovaara-Kautto U**, Aaltonen K. Lasten syöpäalttiusoireyhtymät – Varhainen toteaminen ja oikea seuranta parantavat ennustetta. *Suomen Lääkärilehti* 2021;76(44):2567-2572
2. Taskinen M, **Wartiovaara-Kautto U**, Lohi O. Lasten ja nuorten aikuisten akuutin lymfoblastileukemian hoito kehittyi. *Lääketieteellinen Aikakauskirja Duodecim* 2019;135(12):1155-61.
3. Myntti T, Saisto T, **Wartiovaara-Kautto U**. Maahanmuuttajan raskaus. *Lääketieteellinen Aikakauskirja Duodecim* 2018;134(22):2181-8.
4. **Wartiovaara-Kautto U**, Jahnukainen K. Sirppisolukriisi – kun selkäkipu ei olekaan noidannuoli tai kuume flunssaa. *Lääketieteellinen Aikakauskirja Duodecim* 2017; 133(22):2161-7.
5. Jahnukainen, K., Helminen-Pacius, P., Anttonen, A-K., Matinlauri, I., Mustanoja, S., Sirkiä, K. & **Wartiovaara-Kautto U**. Maahanmuuttajien perinnölliset hemoglobiinipoikkeavuudet. *Suomen Lääkärilehti* 2016; 71:12-13: 901-905.
6. **Wartiovaara-Kautto U**, Syrjälä M. Laskimotukostaipumuksen laboratoriodiagnostiikka. *Suomen Lääkärilehti* 2004; 4:265-269.
7. Myntti T, Saisto T, **Wartiovaara-Kautto U**. Maahanmuuttajan raskaus_ Anemiat. Naistentaudit ja synnytykset. *Juha Tapanainen, Oskari Heikinheimo, Kaarin Mäkikallio (toim.) Duodecim, 6., uudistettu painos, 2019.*
8. **Wartiovaara-Kautto U**. Anemiat. *Therapia Fennica*. Acar, Kauma, Kotila, Mertsalmi. 10. laitos. Kandidaattikustannus, 2015.

THESIS

Wartiovaara U. Coagulation Factor XIII (FXIII) and Vascular Endothelial Growth Factors VEGF and VEGF-C Produced by Platelets: From Clinical Findings to Molecular Characteristics. University of Helsinki, 1999.