

Curriculum Vitae

Name : Kathelijne Catherina Jeanette Maria Kraal
Date of birth: 19th of February 1975
Gender: Female
Working address: Princess Máxima Center for Pediatric Oncology, Heidelberglaan 25, 3584CS Utrecht The Netherlands.
Contact details: K.C.J.Kraal@prinsesmaximacentrum.nl, telephone number: +31889727272
Current position: Consultant pediatric hemato-oncologist, MD, PhD, Head of solid tumor department and International patients. Programme Director JACIE autologous stem cell transplantation (JACIE PMC).

Professional development:

- Sept. 1993 - July 1999: Medical training (Rijks Universiteit Leiden, the Netherlands):
- July 1999: Qualified Medical doctor
- Oct. 2005: Qualified pediatrician
- Jan. 2008: Qualified consultant pediatric hemato-oncologist
- February 2017: PhD
- May 2018: Programme Director JACIE autologous stem cell transplantation (JACIE PMC)
- 2019: PI VERITAS study, SIOPEN, open December 2019.
- NB-SCI PI registration study
- NB congenital-SCI registration study
- Student project: M Rozeman, Autologous stem cell mobilisation and transplantation in paediatric oncology; Poor Mobilisers, successful use of Plerixafor and superior harvest after a single injection of Pegfilgrastim compared to daily Filgrastim. 2020
- Student Project: Rosa Sledering (NL cohort liver tumor patients)
- Student project Susan Dijkstra: NBL multidisciplinary tumor board and quality of life and use of quality indicators

Job history:

- June 1999 –Oct. 2000: senior house-officer pediatrics, Groene Hart Ziekenhuis and Leiden University Medical Centre (LUMC), Leiden, The Netherlands
- Oct. 2000 – Sept. 2005: Registrar pediatrics, LUMC (Leiden), RdGG (Delft), Great Ormond Street Hospital (GOSH, London).

- Oct. 2004- Sept. 2005: Fellowship Hemato-oncology, GOSH, Londen.
- Sept. 2005- Aug. 2006: Fellowship Hemato-oncology, LUMC, Leiden.
- Jan. 2007- Jan. 2008: Fellowship Hemato-oncology, LUMC, Leiden
- Jan. 2008- March 2011: Consultant pediatric Hemato-oncologist, LUMC, Leiden.
- March 2011- December 2014: Consultant pediatric hemato-oncologist, AMC, Amsterdam.
- January 2015- current: Consultant pediatric oncologist, Princess Máxima Center, Utrecht.

Special interests are: neuroblastoma, liver tumors and autologous stem cell transplantation.

Head clinical solid tumors 2019- current

VS training K Steketee

PA training Marlies Kortland, Sept 2021- 2023

Experience of conducted clinical trials for a minimum of 2 years (number, phases, indications): Yes

Certificates regarding clinical trials:

- BROK registration: till 30-12-2023.
- JACIE auditor training 2012.
- Developing a cochrane systematic review of interventions June 2012.
- Radiotherapy certificate training 11-10-2018
- APLS Sept 2021

BIG registration number: 69050734801

Publication overview:

Abstracts

1. Chakraborty S, Kraal KCJM, Nanduri V, Mc Hugh K, Brock P. Role of abdominal ultrasound in children with LCH. *Pediatr Radiology* 2005, Vol 35(2):O92.
2. Kraal KCJM, Anderson J, Brock P, Levitt G. Sebire NJ. Clinicopathological correlation in infantile/ juvenile fibromatosis and infantile fibrosarcoma. 2006 Pathological Society of GB meeting. *J Pathol* 2006, Vol 208, Issue S1:1-35.
3. Ten Dam MM, Verhoeven D, Kraal KCJM, Bongaerts R, Bergen J, Ball LM, Lankester AC, Tol MJD, Zwaginga JJ. Comparison of two GMP protocols for NK

isolation from leukapheresis material. Preclinical validation of an NK cell preparation. Clinimacs, Antwerpen, October 2009.

4. Kraal KCJM, Ostaijen-Ten Dam, Ball LM, van Tol MJD, Egeler RM. Neuroblastoma cell lines, phenotype and susceptibility towards natural killer cells. SIOP, Boston, October 2010.
5. Ball LM, Bernardo ME, Kraal KCJM, van Tol MJD, Lankester AC et al. Co-transplantation of Haplo-identical Mesenchymal stem cells and peripheral blood stem cells. Platform for immune therapy in high risk pediatric hematological malignancies. SIOP, Boston, October 2010.
6. MM van Ostaijen-ten Dam, D Pende, DHJ Verhoeven, K Kwappenberg, K Kraal, L Ball, JJ Zwaginga, MW Schilham, AC Lankester, MJD van Tol, A Moretta. IL-15 increases lytic activity of NK-cells towards KIR ligand mismatched leukemic blasts. NVVI, 16-17 December 2010.
7. A Perez-Martinez, M Gonzalez-Vicent, W Leung, LM Ball, KCJM Kraal, A Velardi, F Porta et al. Madrid, 2nd International workshop for haploidentical stem cell transplantation in pediatric solid tumours. EBMT, Paris, 3-6 April 2011.
8. KCJM Kraal, AJ Blom, GAM Tytgat, HN Caron and HJH van der Pal. Late adverse events in long-term dumbbell neuroblastoma survivors. Amsterdam Kindersymposium 2013 abstract 71.
9. KCJM Kraal, Th J Blom, HN Caron, LCM Kremer, MM van Noesel, GAM Tytgat, HJH van der Pal et al. Neuroblastoma with intraspinal extension: late adverse events in long term survivors. ANR, Koln, May 2014.
10. KCJM Kraal, M Nagtegaal, M Tas, MM van Noesel, HN Caron, GAM Tytgat. The sense and sensibility of Philadelphia score in stage 4S neuroblastoma patients. ANR, Koln, May 2014.
11. KCJM Kraal, M Tas, M Nagtegaal, HN Caron, GAM Tytgat, MM van Noesel. Tumor regression rate in neuroblastoma stage 4S: clinical, biochemical and radiological parameters and recommendations. ANR, Koln, May 2014.

Articles:

1. KCJM Kraal, AC Lankester, B Granzen, M Oudshoorn, RM Egeler. Twee broers met familiale hemofagocyttaire lymfohistiocytose, behandeld met transplantatie van stamcellen van dezelfde onverwante donor. Ned Tijdschr Geneeskd 2002; 146 (48): 2309-12.

2. KCJM Kraal, N Paassen, LM Ball, PM Jansen, R ten Cate. Drie kinderen met algehele malaise, koorts, gewichtsverlies en cervicale lymfadenopathie. *Ned Tijdschr Geneeskd* 2004 Mar 6;148(10):453-7.
3. KCJM Kraal, LM Ball et al. Optic nerve relapse in a child with with a common ALL, treated with systemic anti-CD20 treatment. *Haematologica* 2005 Nov;90 Suppl:ECR24.
4. AML Peek, KCJM Kraal, Overweg- Plandsoen, RM Egeler. Posterior Reversible Encephalopathy Syndrome bij kinderen met leukemie. *Ned Tijdschr Hemat* 2007;4:310-
5. LFA Visser, KCJM Kraal, D Bresters, LM Ball, RM Egeler. Hemofagocytair lymfocytose: een zeldzame, maar ernstige complicatie bij kinderen met een hemato-oncologische maligniteit. *NTVG*, accepted for publication 2008.
6. LM Ball, KCJM Kraal, SM van Walraven, AC Lankester. Cells, cells and more cells. *Oncologica*, nummer 01.2009.
7. Kraal KCJM, BLF van Eck-Smit, MM van Noesel, HN Caron en GAM Tytgat. Nieuwe behandelingen voor pediatrische (HR) NBL patiënten. *Ned Tijdschr Oncol* 2013;10:11-9.
8. Kraal KCJM, van Dalen EC, Tytgat GAM, van Eck-Smit BLF, Caron HC. Cochrane protocol: "Iodine-131-meta-iodobenzylguanidine therapy for patients with high risk neuroblastoma". *The Cochrane Library* 2013, Issue 2.
9. SC Clement, KCJM Kraal, BLF van Eck, C van den Bos, LCM Kremer, GAM Tytgat, H.M. van Santen. Primary Ovarian Insufficiency in Children after Treatment with ¹³¹I-Metaiodobenzylguanidine for Neuroblastoma: Report of the First Two Cases. *J Clin Endocrinol Metab.* 2014 Jan;99(1):E112-6.
10. GH Boerman, MM van Ostaijen-ten Dam, KCJM Kraal, SJ Santos, LM Ball, AC Lankester, MW Schilham, RM Egeler, MJD van Tol. Role of NKG2D, DNAM-1 and Natural Cytotoxicity receptors in cytotoxicity towards Rhabdomyosarcoma cell Lines mediated by resting and IL-15 activated Natural Killer cells. Submitted for publication februari 2014 *Cancer Immunology Immunotherapy*.
11. KCJM Kraal, GAM Tytgat, J de Kraker, BLF van Eck-Smit, HN Caron and MM van Noesel. Upfront treatment of high-risk neuroblastoma with ¹³¹I-MIBG therapy and Topotecan. *Pediatric Blood and Cancer* 2015 Nov;62(11):1886-91.
12. T Trahair, S Sorrentino, L Selek, D Plantaz, T Simon, K Kraal, M beck-Popovic, R Haupt, S Ash, B de Bernardi. Spinal canal involvement in neuroblastoma; time for an

international prospective registry, Journal of paediatrics grand rounds submitted June 2016.

13. Kraal K, Blom T, Tytgat L, van Santen H, van Noesel M, Smets A, Bramer J, Caron H, Kremer L, van der Pal H. Neuroblastoma With Intraspinal Extension: Health Problems in Long-Term Survivors. *Pediatr Blood Cancer*. 2016 Jun;63(6):990-6.
14. GAM Tytgat, KCJM Kraal, M van Grotel, PM Hoogerbrugge, MM van Noesel. Immunotherapie bij kinderen met neuroblastoom, submitted for publication May 2016 Nvvo.
15. KCJM Kraal, AJ Blom, MM van Noesel, LCM Kremer, HN Caron, GAM Tytgat and HJH van der Pal. Treatment and outcome of neuroblastoma with intraspinal extension: A systematic review. *Pediatr Blood Cancer*. 2017 Feb 2.
16. KCJM Kraal, GM Bleeker, BLF van Eck-Smit, NKA van Eijkelenburg, F Berthold, MM van Noesel, HN Caron and GAM Tytgat. Feasibility/ Toxicity and response of Upfront ¹³¹I-MIBG therapy followed by standard arm GPOH NB 2004 protocol in newly diagnosed HR NBL patients. *European Journal of Cancer* 76(2017):188-196.
17. Full review KCJM Kraal, EC van Dalen, GAM Tytgat, BLF van Eck-Smit. Cochrane protocol: "Iodine-131-meta-iodobenzylguanidine therapy for patients with high risk neuroblastoma". Cochrane 2017
18. KCJM Kraal, I Timmerman, HM Kansen, C Voermans, C vd Bos, J Zsiros, H van den Berg, S Somers, E Braakman, AML Peek, MM van Noesel, CE van der Schoot, M Fiocco, HN Caron, GAM Tytgat. Peripheral Stem Cell Apheresis is Feasible Post ¹³¹Iodine-Metaiodobenzylguanidine-Therapy in High-Risk Neuroblastoma, but Results in Delayed Platelet Reconstitution. *Clinical cancer research* Feb 2019. 1;25(3):1012-1021.
19. T Trahair, S Sorrentino, L Selek, D Plantaz, T Simon, K Kraal, M beck-Popovic, R Haupt, S Ash, B de Bernardi. Spinal canal involvement in neuroblastoma. *The Journal of Pediatrics*, Volume 188, September 2017, Pages 294-298.
20. M.L. Tas, M. Nagtegaal, K.C.J.M. Kraal, G.A.M. Tytgat, N.G.G.M. Abeling, S.M.F. Pluijm, C.M. Zwaan, J.J. Molenaar, M.M. van Noesel. Neuroblastoma stage 4S: tumor regression rate and risk factors for progressive disease. *Pediatr Blood Cancer*. 2020 Apr;67(4):
21. M.L. Tas, K. Kraal et al. Neuroblastoma between 1990-2014 in the Netherlands: Increased incidence and improved survival of high-risk neuroblastoma. *Eur J Cancer*. 2019;124:47-55.

22. T Blom, M Tas , K. Kraal et al. Outcome of anti-GD2 immunotherapy in Dutch high-risk neuroblastoma patients. *Poster okt 2019 Lyon.*
23. T Blom, K. Kraal et. al. The value of FDG PET-CT in neuroblastoma imaging. *Poster okt 2019 Lyon.*
24. L. Nijstad, NKA van Eijkelenburg, KCJM Kraal et al. Cisplatin and carboplatin pharmacokinetics in a pediatric patient with hepatoblastoma receiving peritoneal dialysis. *Cancer Chemotherapy and Pharmacology* accepted for publication Aug 2020.
25. Celina L. Szanto, Sara Tamminga, Eveline M. Delemarre, Kathelijne C.J.M. and Stefan Nierkens et al.. Comprehensive immune monitoring in patients with high-risk neuroblastoma during chemo- and immunotherapy. Paper....
26. S Dijkstra, P Hoogerbrugge, M van Noesel, K Kraal et al. Use of quality indicators in neuroblastoma treatment: a feasibility assessment. *Ped Blood Cancer* 2020.
27. S Dijkstra, P Hoogerbrugge, M van Noesel, L Kremer, K Kraal et al. Examining the potential relationship between multidisciplinary team meetings and patient survival in pediatric oncology settings: a systematic review. *JPHO-20-377R1, entitled "Examining the potential relationship between multidisciplinary team meetings and patient survival in pediatric oncology settings: a systematic review."*
28. ML. Tas, KCJM Kraal, AML Peek, GAM Tytgat and MM van Nooesel et al. Anti-GD2 Based Immunotherapy Prevents Late Events in High-Risk Neuroblastoma Patients over 18 Months at Diagnosis. *Cancers* 2021;13:4941.

Oral presentation:

1. KCJM Kraal¹, J de Kraker†¹, C. Hoefnagel², BLF van Eck-Smit³, HN Caron¹, MM van Noesel⁴ and GAM Tytgat¹. Upfront treatment of high risk neuroblastoma with ¹³¹I-MIBG therapy and Topotecan. A phase I-II pilot window study (AMRO-NB-HR-2000/01). SIOP Hong Kong 2013.
2. Invited speaker SIOPEN meeting (Paris, October 16 2014), spinal cord compression in neuroblastoma patients. Retrospective and prospective study: "The Dutch experience".
3. First ¹³¹I-MIBG therapy workshop (Chair: Dr. GAM Tytgat, presenter Drs. KCJM Kraal), Advances in Neuroblastoma research (ANR), Koln, May 2014.
4. Feasibility/ Toxicity and response of Upfront ¹³¹I-MIBG therapy followed by standard arm GPOH NB 2004 protocol in newly diagnosed HR NBL patients, oral presentation SIOP 11 October 2015, South Africa.

5. Yearly update NB-SCI outpatient clinic at SIOPEN NB-SCI meeting
6. ANR 2020, Symposium sponsored by Sanofi: Plerixafor and stemcells, poor mobilisers.

Poster presentation:

1. Kraal KCJM, Ball LM, Egeler RM. Optic nerve relapse in a child with common Acute Lymphoblastic Leukemia treated with systemic anti CD-20 (Rituximab). 6th international symposium and expert workshops on Leukemia and lymphoma, VU, Amsterdam, March 2005.
2. Kraal KCJM, Dam MM, Ball LM, van Tol MJD, Egeler RM. Co-transplantation of mesenchymal stem cells with haploidentical transplantation provides the ideal platform for immune modulation and treatment of refractory malignant neoplasia. SIOP Berlin, October 2008.
3. Ostaijen-Ten Dam MM, D. Verhoeven, K. Kraal, J. Zwaginga et.al. Pre-clinical validation of an NK cell preparation: phenotype and function of NK cell products isolated via Clinimacs and subsequent ex vivo activation with IL-2 or IL-15. M. van Ostaijen-ten Dam. Abstract 1233. EBMT Vienna, March 2010.
4. Kraal KCJM, Ostaijen-Ten Dam MM, Ball LM, van Tol MJD, Egeler RM. Neuroblastoma cell lines, phenotype and susceptibility towards natural killer cells. ANR, Stockholm, June 2010.
5. KCJM Kraal, GA Bleeker, M de Kwaasteniet, BLF van Eck-Smit, MM van Noesel , GAM Tytgat and HN Caron. Pilot feasibility and toxicity of 2 cycles of upfront ¹³¹I-meta-iodobenzylguanidine (MIBG) therapy followed by the standard arm of high-risk GPOH NB 2004 protocol. POC37. Advances in Neuroblastoma Research (ANR), Toronto, June 2012.
6. KCJM Kraal, NG Abeling, BLF van Eck-Smit, MM van Noesel, GAM Tytgat and HN Caron. A phase I/II study of ¹³¹I-meta-iodobenzylguanidine (MIBG), hyperbaric oxygen (HBO) and Vitamin C in patients with recurrent neuroblastoma (NBL). POC07. ANR, Toronto, June 2012.
7. KCJM Kraal, AJ Blom, GAM Tytgat, HN Caron and HJH van der Pal. Late adverse events in long-term dumbbell neuroblastoma survivors. Amsterdam Kindersymposium 2013 abstract 71.
8. KCJM Kraal, Th J Blom, HN Caron, LCM Kremer, MM van Noesel, GAM Tytgat, HJH van der Pal et al. Neuroblastoma with intraspinal extension: late adverse events in long term survivors. ANR, Koln, May 2014.

9. KCJM Kraal, M Nagtegaal, M Tas, MM van Noesel, HN Caron, GAm Tytgat. The sense and sensibility of Philadelphia score in stage 4S neuroblastoma patients. ANR, Koln, May 2014.
10. KCJM Kraal, M Tas, M Nagtegaal, HN Caron, GAM Tytgat, MM van Noesel. Tumor regression rate in neuroblastoma stage 4S: clinical, biochemical and radiological parameters and recommendations. ANR, Koln, May 2014.
11. Stem cells ANR 2016
12. S. Dijkstra, K Kraal, M Wijnen, MM van Noesel, PH Hoogerbrugge. QUALITY INDICATORS IN NEUROBLASTOMA (NBL) TREATMENT. SIOP 2017 Washington, USA.
13. M.L. Tas, M. Nagtegaal, K.C.J.M. Kraal, G.A.M. Tytgat, N.G.G.M. Abeling, S.M.F. Pluijm, C.M. Zwaan, J.J. Molenaar, M.M. van Noesel. Neuroblastoma stage 4S: regression rate and patients at risk. SIOP 2017 Washington, USA.

Books

1. Handboek Kinderoncologie, neuroblastoom 2018. Kraal K en Tytgat GAM.
2. Chapter Pediatric surgical oncology, editor Dr. Sarnacki 2018. Bernardi, Ash, Kraal et al. Spinal canal involvement in peripheral neuroblastic tumors.

Memberships

- SIOP member
- SIOPEL member
- SIOPEN member
- Advances in neuroblastoma research (ANR)
- Dutch Childhood Oncology Group (DCOG) member; specifically neuroblastoma, and liver tumors working groups.
- Dutch association of paediatrics (NVK) member