

## **Scientific Publications:**

### **A. Statistical and epidemiological methodology/Population genetics/Image analysis:**

Strandberg R and Humphreys K (2019) Statistical models of tumour onset and growth for modern breast cancer screening cohorts. *Mathematical Biosciences*. 2019 Oct 15:108270. doi: 10.1016/j.mbs.2019.108270.

Abrahamsson L, Isheden G, Czene K, Humphreys K. Continuous tumour growth models, lead time estimation and length bias in breast cancer screening studies. *Statistical Methods in Medical Research*. 2019 : 962280219832901.

Isheden G, Abrahamsson L, Andersson TM-L, Czene K, Humphreys K. Joint models of tumour size and lymph node spread for incident breast cancer cases in the presence of screening. *Statistical Methods in Medical Research*. 2019 Jan 3:962280218819568. doi: 10.1177/0962280218819568.

Alsheh Ali M, Eriksson M, Czene K, Hall P, Humphreys K. (2019) Detection of Potential Microcalcification Clusters Using Multi Vendor For-presentation Digital Mammograms for Short-term Breast Cancer Risk Estimation. *Medical Physics*. 46:4 1938-1946.

Isheden G and Humphreys K. (2019) Modeling breast cancer tumour growth for a stable disease population. *Statistical Methods in Medical Research*. 28: 681-702.

Alsheh Ali M, Czene K, Eriksson L, Hall P, Humphreys K. (2017) Breast tissue organization and its association with breast cancer risk. *Breast Cancer Research*. 19(1): 103.

Andersson TML, Rutherford M and Humphreys K. (2017) Assessment of lead time bias in estimates of relative survival. *Cancer Epidemiology*. 46; 50-56.

Andersson TML, Crowther M, Hall P, Czene K, Humphreys K. (2017) Mammographic density reduction as a prognostic marker for postmenopausal breast cancer; results using a joint longitudinal-survival modeling approach. *Am. J. Epidemiology*. 186: 1065-1073.

Alsheh Ali M, Garnier M, Humphreys K (2016) Spatial relations of mammographic density regions and their association with breast cancer risk. *Procedia Computer Science*. 90: 169-174.

Crowther M, Andersson T, Lambert P, Abrams K, Humphreys K (2016) Joint modelling of longitudinal and survival data: Incorporating delayed entry and an assessment of model misspecification. *Statistics in Medicine*. 35: 1193-1209.

Abrahamsson L, Czene K, Hall P, Humphreys K. (2015) Breast cancer tumour growth

modeling for studying the association of body size with tumour growth rate and symptomatic detection. *Breast Cancer Research*. 17: 116.

Abrahamsson L and Humphreys K. (2016) A statistical model of breast cancer tumour growth with estimation of screening sensitivity as a function of mammographic density. *Statistical Methods in Medical Research*. 25: 1620-1637.

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Cheddad A, Czene K, Eriksson M, Li J, Easton D, Hall P, Humphreys K. (2014) Area and volumetric density estimation in processed full-field digital mammography for risk assessment of breast cancer. *PLoS One*. 2014 Oct 20;9(10):e110690.

Cheddad A, Czene K, Shepherd JA, Li J, Hall P and Humphreys K (2014) Enhancement of mammographic density measures in breast cancer risk prediction. *Cancer Epidemiol Biomarkers Prev*. 23: 1314-1323.

Darabi H, Czene K, Zhao W, Liu J, Hall P, Humphreys K. (2012) Breast Cancer risk prediction and individualized screening based on common genetic variation and breast density measurement. *Breast Cancer Research* 14:R25.

Li J, Szekely L, Eriksson L, Hedström B, Sundbom A, Czene K, Hall P, Humphreys K. (2012) Automated mammographic density measurement: A tool to facilitate breast cancer screening. *Breast Cancer Research* 14:R114.

Darabi H and Humphreys K. (2011) Single SNP and pathway tests of genetic association incorporating phenotype heterogeneity. *Human Heredity*. 71; 11-22.

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Grünewald M, Humphreys K and Hössjer O. (2010) A stochastic EM type algorithm for parameter estimation in models with continuous outcomes, under complex ascertainment. *International Journal of Biostatistics*. Vol.6: Iss. 1, Article 23.

Sjölander A, Vansteelandt S. and Humphreys K. (2010) A principal stratification approach to assess the differences in prognosis between cancers caused by hormone replacement therapy and by other factors. *International Journal of Biostatistics*. Vol.6: Iss. 1, Article 20.

Hössjer O, Hartman L and Humphreys K. (2009) Ancestral recombination graphs under nonrandom ascertainment with applications to gene mapping. *Statistical Applications of Genetics and Molecular Biology*. Vol. 8. Issue 1.

Hartman L, Hössjer and Humphreys K. (2009) Using Identity-By-Descent probabilities for genetic fine mapping in population based samples, via spatial smoothing of haplotype effects. *Computational Statistics and Data Analysis*. 53: 1802-17.

Sjölander A, Humphreys K, Vansteelandt S, Bellocco R and Palmgren J. (2009) Sensitivity analysis for principal stratum direct effects. *Biometrics*. 65:514-20.

Jonasdottir G, Becker T, Humphreys K, Palmgren J. (2008) Testing association in the presence of linkage using the GRE and multiple markers. *Genetic Epidemiology*. 32; 425-33.

Sjölander A, Humphreys K, Palmgren J (2008). On informative detection bias in screening studies. *Statistics in Medicine*. 27(14):2635-50

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Humphreys, K. (1997). Classification error adjustments for female labour force transitions using a latent Markov chain with multivariate random effects. In J. Rost and R. Langeheine (Eds.) *Applications of latent trait and latent class models in the Social Sciences* (Pp. 370-379). Waxmann Munster, New York.

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Skinner, C.J., Humphreys, K. and Holt, D. (1991). Analysis of survival times recorded with error. *Bulletin of the International Statistical Institute*. Contributed Papers. 54(2), 632-3.

#### B. Epidemiology (Genetic, Breast Cancer, and other):

Alsheh Ali M, Czene K, Hall P and Humphreys K (2019) Association of Microcalcification Clusters with Short-term Invasive Breast Cancer Risk and Breast Cancer Risk Factors. *Scientific Reports*, 9, 14604 (2019) doi:10.1038/s41598-019-51186-w.

Eriksson L, He W, Eriksson M, Humphreys K, Bergh J, Hall P, Czene K. Adjuvant therapy and mammographic density changes in women with breast cancer. *JNCI Cancer Spectr.* 2019 Jan 29; 2(4).

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Li J, Humphreys K, Ho P-J, Eriksson M, Darai-Ramqvist E, Lindström L, Hall P, Czene K. (2019) Family history, reproductive and lifestyle risk factors for fibroadenoma and breast cancer. *J. Nat. Cancer Inst. Cancer Spectrum*. 10:2(3)

Eriksson L, Bergh J, Humphreys K, Wärnberg F, Törnberg S, Czene K. (2018) Time from breast cancer diagnosis to therapeutic surgery and breast cancer prognosis: a population-based cohort study. *Int. J. Cancer*. 143: 1093-1104.

Strand F, Humphreys K, Holm J, Eriksson M, Törnberg S, Hall P, Azavedo E, Czene K. (2018) Long-term prognostic implications of risk factors associated with tumor size: a case study of women regularly attending screening. *Breast Cancer Research*. 20(1):31.

Brand J, Humphreys K, Li J, Karlsson R, Hall P, Czene K. (2018) Common genetic variation and novel loci associated with volumetric mammographic density. *Breast Cancer Research*. 20(1):30.

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Strand F, Humphreys K, Cheddad A, Törnberg S, Azavedo E, Shepherd J, Hall P, Czene P. (2017) Novel mammographic image features differentiate between interval and screen-detected breast cancer: a case-case study. *Breast Cancer Res*. 18(1): 100.

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Li J, Humphreys K, Eriksson M, Dar H, Brandberg Y, Hall P, Czene K. (2016) Worse quality of life in young and recently-diagnosed breast cancer survivors compared to female survivors of other cancers: A cross-sectional study. *Int. J. Cancer*. 139: 2415-25.

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