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## CV for Bendix Carstensen

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Cand. scient. (MSc) in Mathematical Statistics, University of Copenhagen: January 1983

Graduated gymnasium (high school): June 1971

Born: 14 July 1952

## Employment

### Research

Senior statistician, Steno Diabetes Center, April 1999 –

Senior statistician, Danish Zoonosis Center, Danish Veterinary Laboratory, Ministry of Food, Agriculture and Fishery, August 1995 – March 1999.

Statistician, Danish Cancer Registry, Institute of Cancer Epidemiology, Danish Cancer Society, June 1984 – July 1995

Research assistant, Statistical Research Unit, Copenhagen, Danish Medical and Social Science Research Councils. February 1983 – May 1984.

### Teaching

External lecturer, Department of Biostatistics, University of Copenhagen, 1995 –

Assistant lecturer, Statistical Institute, University of Copenhagen, August 1985 – December 1997

## Research areas

1. Application of registers in surveillance of public health. In my current job this has primarily focused on diabetes on the last 10 years, but I have previously been working in cancer epidemiology [10, 14, 15, 16, 17, 30, 25, 33, 37, 39, 38].
2. I am the maintainer (and a contributor to) the R-package `Epi` for statistical and demographic analysis in epidemiology, <http://BendixCarstensen.com/Epi/>

## Biostatistics

1. Analysis of follow-up data from register studies and demographic databases:
  - Age-period-cohort models [29, 28].
  - Multistate models and their practical application [12, 18, 19, 25, 32].
2. Comparison of clinical measurement methods. This is a topic where I have been involved with the clinical departments and laboratory at Steno Diabetes Center in providing practical analyses and as a consequence also in development of the methodology [23, 24, 26, 27, 31, 34, 35]
3. I am the maintainer (and main author of) the R-package `MethComp` for statistical analysis of method comparison studies, <http://BendixCarstensen.com/MethComp/>

## Grants

- PI: European Foundation of the Study of Diabetes: “Cancer incidence and survival in Danish diabetes patients: The role of medication”, 200,000 EUR, 2011–2013.

## Teaching

The following are the most recent courses outside my employment as external lecturer at the Biostatistics Department at University of Copenhagen I have been teaching:

Course co-director and teacher at: “Statistical practice in Epidemiology”, Tartu, Estonia, annually 2002–2009, Lyon 2011, Pärnu, Estonia 2012, Lyon 2013, Tartu 2014, 2015, 2016, 2017.

Course director and teaching assistant at “Bayesian Data Analysis”. Danish Research School of Biostatistics, Copenhagen May 2006 & August 2008 and Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, June 2007.

Modern Demographic Methods in Epidemiology:

- Stockholm, 2-3 February 2006 (using R).
- Oslo, 28 February - 1 March 2007 (with Paul Lambert, using Stata)
- Aalborg, 14-16 January 2008 (using R).
- University of Melbourne, February 2008 (with Paul Dickman, using Stata & R)
- University of St. Andrews, June 2010 (using R).
- IBC, Florence, July 2014 (tutorial).
- University of Edinburgh, August 2014 (using R).
- University of Melbourne, November 2015 (using R).
- Freiburg Institute of Advanced Studies, September 2016 (tutorial).

Statistical Analysis of Method Comparison Studies:

- Karolinska Institutet, Stockholm, November 2007.
- School of Population Health, University of Melbourne, February 2008.
- Australian Statistical Society, University of Adelaide, February 2009.
- Copenhagen, PhD-school, dept. Biostatistics, February 2011.
- Preconference course at SISMEC, Ancona, September 2011 (with Claus Ekstrøm).

Age-Period-Cohort models:

- Max Planck Institute for Demographic Research, Rostock. March 2009 (with Eva Gelnarova).
- Lisboa, September 2011.
- Max Planck Institute for Demographic Research, Rostock, May 2016.

## Selected publications

A complete list of publications is in the full version of my CV: <http://BendixCarstensen.com/cv.pdf>

- [1] K. Ishtiak-Ahmed, B. Carstensen, U. Pedersen-Bjergaard, and M. E. Jørgensen. Incidence Trends and Predictors of Hospitalization for Hypoglycemia in 17,230 Adult Patients With Type 1 Diabetes: A Danish Register Linkage Cohort Study. *Diabetes Care*, 40(2):226–232, Feb 2017.
- [2] P. Gæde, J. Oellgaard, B. Carstensen, P. Rossing, H. Lund-Andersen, H. H. Parving, and O. Pedersen. Years of life gained by multifactorial intervention in patients with type 2 diabetes mellitus and microalbuminuria: 21 years follow-up on the Steno-2 randomised trial. *Diabetologia*, Aug 2016.
- [3] B. Carstensen, S. H. Read, S. Friis, R. Sund, I. Keskimaki, A. M. Svensson, R. Ljung, S. H. Wild, J. J. Kerssens, J. L. Harding, D. J. Magliano, and S. Gudbjornsdottir. Cancer incidence in persons with type 1 diabetes: a five-country study of 9,000 cancers in type 1 diabetic individuals. *Diabetologia*, Feb 2016.
- [4] L. Lundby-Christensen, L. Tarnow, T. W. Boesgaard, S. S Lund, N. Wiinberg, H. Perrild, T. Krarup, O. Snorgaard, B. Gade-Rasmussen, B. Thorsteinsson, M. Røder, E. R. Mathiesen, T. Jensen, H. Vestergaard, C. Hedetoft, L. Breum, E. Duun, S. B. Sneppen, O. Pedersen, B. Hemmingsen, B. Carstensen, S. Madsbad, C. Gluud, J. Wetterslev, A. Vaag, and T. P. Almdal. Metformin versus placebo in combination with insulin analogues in patients with type 2 diabetes mellitus-the randomised, blinded Copenhagen Insulin and Metformin Therapy (CIMT) trial. *BMJ Open*, 6(2):e008376, 2016.

- [5] L. Lundby-Christensen, A. Vaag, L. Tarnow, T. P. Almdal, S. S. Lund, J. Wetter-slev, C. Gluud, T. W. Boesgaard, N. Wiinberg, H. Perrild, T. Krarup, O. Snorgaard, B. Gade-Rasmussen, B. Thorsteinsson, M. Røder, E. R. Mathiesen, T. Jensen, H. Vester-gaard, C. Hedetoft, L. Breum, E. Duun, S. B. Sneppen, O. Pedersen, B. Hemmingsen, B. Carstensen, and S. Madsbad. Effects of biphasic, basal-bolus or basal insulin analogue treatments on carotid intima-media thickness in patients with type 2 diabetes mellitus: the randomised Copenhagen Insulin and Metformin Therapy (CIMT) trial. *BMJ Open*, 6(2):e008377, 2016.
- [6] B. S. Rasmussen, K. B. Yderstræde, B. Carstensen, O. Skov, and H. Beck-Nielsen. Sub-stantial reduction in the number of amputations among patients with diabetes: a cohort study over 16 years. *Diabetologia*, 59(1):121–129, Jan 2016.
- [7] Z. Kamper-Jørgensen, B. Carstensen, M. Nørredam, I. C. Bygbjerg, P. H. Andersen, and M. E. Jørgensen. Diabetes-related tuberculosis in Denmark: effect of ethnicity, diabetes duration and year of diagnosis. *Int. J. Tuberc. Lung Dis.*, 19(10):1169–1175, Oct 2015.
- [8] A. Peeters, E. Gearon, K. Backholer, and B. Carstensen. Trends in the skewness of the body mass index distribution among urban Australian adults, 1980 to 2007. *Ann Epi-demiol*, 25(1):26–33, Jan 2015.
- [9] R. Hiscock, S. Simmons, B. Carstensen, and L. Gurrin. Comparison of Massimo Pronto-7 and HemoCue Hb 201+ with laboratory haemoglobin estimation: a clinical study. *Anaesth Intensive Care*, 42(5):608–613, Sep 2014.
- [10] B. Carstensen, M. E. Jørgensen, and S. Friis. The epidemiology of diabetes and cancer. *Curr. Diab. Rep.*, 14(10):535, Oct 2014.
- [11] G. Andresdottir, M. L. Jensen, B. Carstensen, H. H. Parving, P. Hovind, T. W. Hansen, and P. Rossing. Improved prognosis of diabetic nephropathy in type 1 diabetes. *Kidney Int.*, Jun 2014.
- [12] S. Iacobelli and B. Carstensen. Multiple time scales in multi-state models. *Stat Med*, 32(30):5315–5327, Dec 2013.
- [13] J. A. Johnson, B. Carstensen, D. Witte, S. L. Bowker, L. Lipscombe, A. G. Renehan, and the Diabetes and Cancer Research Consortium. Diabetes and cancer (1): evaluating the temporal relationship between type 2 diabetes and cancer incidence. *Diabetologia*, 55(6):1607–1618, Jun 2012.
- [14] B. Carstensen, D. R. Witte, and S. Friis. Cancer occurrence in Danish diabetic patients: duration and insulin effects. *Diabetologia*, 55(4):948–958, Apr 2012.
- [15] M. B. Hansen, M. L. Jensen, and B. Carstensen. Causes of death among diabetic patients in Denmark. *Diabetologia*, 55(2):294–302, Feb 2012.
- [16] B. Carstensen and Borch-Johnsen K. Register-based studies of diabetes. *Scandinavian Journal of Public Health*, 39(7 suppl):175–179, 2011.

- [17] B. Carstensen, Christensen J.K., Marcussen M.M., and Borch-Johnsen K. The National Diabetes Register. *Scandinavian Journal of Public Health*, 39(7 suppl):58–61, 2011.
- [18] Bendix Carstensen and Martyn Plummer. Using Lexis objects for multi-state models in R. *Journal of Statistical Software*, 38(6):1–18, 1 2011.
- [19] Martyn Plummer and Bendix Carstensen. Lexis: An R class for epidemiological studies with long-term follow-up. *Journal of Statistical Software*, 38(5):1–12, 1 2011.
- [20] S. Eising, A. Nilsson, B. Carstensen, D. M. Hougaard, B. Nørgaard-Pedersen, J. Nerup, Å. Lernmark, and F. Pociot. Danish children born with glutamic acid decarboxylase-65 and islet antigen-2 autoantibodies at birth had an increased risk to develop type 1 diabetes. *Eur. J. Endocrinol.*, 164:247–252, Feb 2011.
- [21] K. Pilgaard, K. Færch, B. Carstensen, P. Poulsen, C. Pisinger, O. Pedersen, D. R. Witte, T. Hansen, T. Jørgensen, and A. Vaag. Low birthweight and premature birth are both associated with type 2 diabetes in a random sample of middle-aged Danes. *Diabetologia*, 53:2526–2530, Dec 2010.
- [22] B. Carstensen. Comment on: Yang et al. (2010) Associations of hyperglycemia and insulin usage with the risk of cancer in type 2 diabetes: the Hong Kong Diabetes Registry. *Diabetes*;59:1254-1260. *Diabetes*, 59:e17–18, Sep 2010.
- [23] B. Carstensen. *Comparing Clinical Measurement Methods: A practical guide*. Wiley, 2010.
- [24] B. Carstensen. Comparing methods of measurement: Extending the LoA by regression. *Stat Med*, 29:401–410, Feb 2010.
- [25] B. Carstensen, J.K. Kristensen, P. Ottosen, and K. Borch-Johnsen. The Danish National Diabetes Register: Trends in incidence, prevalence and mortality. *Diabetologia*, 51:2187–2196, 2008.
- [26] B Carstensen, J Simpson, and LC Gurrin. Statistical models for assessing agreement in method comparison studies with replicate measurements. *International Journal of Biostatistics*, 4(1):Article 16, 2008.
- [27] B Carstensen, J Lindström, J Sundvall, K Borch-Johnsen, J Tuomilehto, and the DPS Study Group. Measurement of blood glucose: Comparison between different types of specimens. *Ann Clin Biochem.*, 45(2):140–148, 2008.
- [28] B Carstensen. Age-Period-Cohort models for the Lexis diagram (author’s reply). *Statistics in Medicine*, 27:1561–1564, 2007.
- [29] B Carstensen. Age-Period-Cohort models for the Lexis diagram. *Statistics in Medicine*, 26(15):3018–3045, July 2007.
- [30] JK Kristensen, TB Drivsholm, B Carstensen, M Steding-Jensen M, and A Green. [Validation of methods to identify known diabetes on the basis of health registers] (in Danish). *Ugeskr Laeger*, 169(18):1687–1692, 2007.

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- [33] Freddie Bray, Bendix Carstensen, Henrik Moller, Marco Zappa, Maja Primic Zakelj, Gill Lawrence, Matti Hakama, and Elisabete Weiderpass. Incidence trends of adenocarcinoma of the cervix in 13 European countries. *Cancer Epidemiol Biomarkers Prev*, 14(9):2191–2199, Sep 2005.
- [34] B Carstensen. Comparing and predicting between several methods of measurement. *Biostatistics*, 5(3):399–413, Jul 2004.
- [35] S Colagiuri, A Sandbæk, B Carstensen, J Christensen, C Glümer, T Lauritzen, and K Borch-Johnsen. Comparability of venous and capillary glucose measurements in blood. *Diabetic Medicine*, 20(11):953–956, Nov 2003.
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