# EASD Diabetes and Cancer Study Group (DCSG)

# Annual Report 2016/17

**Prepared by Andrew Renehan and officers, September 2017**

# Executive Committee

## Officers

**Chairman**
Andrew Renehan, UK

**Vice Chairman**

Jeff Johnson, Canada

**Scientific Secretary**

Bendix Carstensen, Denmark

**Treasurer**

Soffia Gudbjornsdottir, Sweden

## Committee Members

Sarah Wild, Scotland

Marc Gunter, France

Henrik Moller, England

Edwin Gale, England (founding member)

Ulf Smith, Sweden (founding member)

Daniel Witte (Denmark)

Loraine Lipscombe (Canada)

**Website**

<https://www.herc.ac.uk/research_project/dcsg/>

### Background:

The former EASD Diabetes and Cancer Task Force was established in February 2011, by the then President of EASD, Professor Ulf Smith, with a 3-year window of activity in the first instance. At the 2013 EASD Annual Conference (Barcelona), this group became an EASD Study Group – The Diabetes and Cancer Study Group (DCSG). Its core business is the Diabetes and Cancer Research Consortium (DCRC).

The central objectives of the Consortium are:

(1) to establish minimum desirable criteria for performance of descriptive studies in cancer epidemiology, survival, and pharmaco-epidemiology in relation to the field of diabetes;

(2) to create and implement a mechanism for pooling data and for conducting combined analyses in relation to cancer and diabetes; and

(3) to undertake specific analyses in this area.

The DCRC held four workshops between 2010 and 2013 (Copenhagen, Banff, Brussels, Gothenburg – each in part supported by the EASD - and reported these to the EASD. The fifth workshop was held in Amsterdam, the Netherlands, on 10th and 11th March 2014, hosted by Lonneke van de Poll. The sixth workshop was held in Chancellors Hotel and Conference Venue, University of Manchester, United Kingdom, on 9th and 10th March 2014, hosted by Andrew Renehan and Iain Buchan, and supported by the Farr Institute@HeRC. The seventh workshop was held in Fógetinn, Reykjavik, Iceland, on 25-26th April 2016, hosted by Soffia Gudbjornsdottir and supported by local organisations.

The eight workshop was held at the University of Aarhus, Aarhus, Denmark, on 3rd and 4th April 2016, hosted by Daniel Witte and supported by the Danish Diabetes Association (DDA).

### The establishment of the EASD Diabetes and Cancer Study Group:

The DCSG was passed as an EASD Study Group at the 2013 EASD Annual Conference (Barcelona) under the Presidency of Professor Andrew Boulton. The ByLaws and Organisation are detailed as Appendices (2 & 3) at the end of this report.

The core business of the Study Group remains the DCRC.

The founders of the group – Ulf Smith (former EASD President); Edwin Gale (former editor-in-chief of Diabetologia); and Andrew Renehan (DCSG Chair) are keen to retain visible affiliations with other related organisations such as European Cancer Organisation (ECCO) and the European Association for the Study of Obesity (EASO).

This report now summarizes the activities of the Consortium workshop held in Reykjavik, April, 2016.

### Finances:

There are no finances to declare.

**Activities of the Consortium (DCRC)**

A workshop format has principally about sharing data and methods. Inevitably, each registry/cohort differs in terms (for example) of the types of data it has proved possible to capture, the ways in which these data are stored and retrieved, the period of observation, and legal constraints regarding data access and sharing. Considerable progress has been made in overcoming these obstacles, and the first pooled analysis from the consortium was published in print in *Diabetologia* in January 2015.

### Summary of the Aarhus, Denmark 2017

The 2017 meeting was attended by approximately 34 participants, listed in the appendix, with wide international participation.

We welcomed new members. As an novel aspect, this year we held a wide meeting with the Danish Diabetes Association (DDA), which was nested within the main meeting (see programme in Appendix I). This helped with financial support. There were approximately a further 30 DDA participants for the first day of the meeting.

We set clear objectives for this meeting and all these were met:

1. To address methodological issues related to the complex relationships of diabetes, diabetes therapies and cancer risk;
2. To address methodological issues related to the complex relationships of diabetes, cancer diagnosis, cancer treatment, and outcomes (including traditional oncological outcome and patient reported outcomes);
3. To present and discuss (meta)analyzed data from different databases;
4. To include new members, with the goal of validating observations across diverse populations;
5. To complement our understanding of the (pharmaco)-epidemiological observations with understandings of underpinning and plausible biological mechanisms;
6. To identify new, deliverable and fundable projects from within the consortium.

In contrast to previous years, we did not open the workshop by an update of the previous 12 month literature (*Whet the appetite*) but rather a talk entitled ‘Six of the best from 2016/17 was presented by Professor Jeff Johnson. As preparation, six or 7 of the senior members of DCRC vetted scored approximately twenty papers. These were scored against five criteria and the top six discussed in more detail. This approach was widely supported and with some refinements to the selection process, the group felt that we could pursue this approach at future meetings.

Other talks from the meeting are listed in Appendix 1.

Figure The collected DCRC group (April 2017) outside the

**Thank you to Daniel as our host**

During the meeting dinner, we graciously thanked our host.

**Other Activities (2016/17)**:

In November 2016, there was a NCRI (National Cancer Research Institute) Conference Symposium titled ‘Opportunities for Step Changes in the Cancer Landscape through Health Informatics’ and co-chaired by Professor Andrew Renehan. The symposium included a delivery from DCRC member, Professor Morten Andersen, titled ‘Cancer data management and analysis using a pre-planned multi-database approach across Nordic countries and the United Kingdom’, with particular reference to Insulin analogue data from the CARING consortium and cancer risk. This was well received.

The DCRC has a very active e-mail discussion group – ‘virtual journal club’ type format. There have been several methodological clarifications through these. Additionally, there have motivated several published letters to editor from collaborative sub-groups within DCRC.

We congratulate Soffia Gudbjornsdottir and to Sarah Wild on a number of high-profile international publications in the last 12 months, relevant to our field [[1-3](#_ENREF_1)]:

1. Justice AE, Winkler TW, Feitosa MF, Graff M, Fisher VA, Young K, Barata L, Deng X, Czajkowski J, Hadley D, Ngwa JS, Ahluwalia TS, Chu AY, Heard-Costa NL, Lim E, Perez J, Eicher JD, Kutalik Z, Xue L, Mahajan A, Renstrom F, Wu J, Qi Q, Ahmad S, Alfred T, Amin N, Bielak LF, Bonnefond A, Bragg J, Cadby G, Chittani M, Coggeshall S, Corre T, Direk N, Eriksson J, Fischer K, Gorski M, Neergaard Harder M, Horikoshi M, Huang T, Huffman JE, Jackson AU, Justesen JM, Kanoni S, Kinnunen L, Kleber ME, Komulainen P, Kumari M, Lim U, Luan J, Lyytikainen LP, Mangino M, Manichaikul A, Marten J, Middelberg RPS, Muller-Nurasyid M, Navarro P, Perusse L, Pervjakova N, Sarti C, Smith AV, Smith JA, Stancakova A, Strawbridge RJ, Stringham HM, Sung YJ, Tanaka T, Teumer A, Trompet S, van der Laan SW, van der Most PJ, Van Vliet-Ostaptchouk JV, Vedantam SL, Verweij N, Vink JM, Vitart V, Wu Y, Yengo L, Zhang W, Hua Zhao J, Zimmermann ME, Zubair N, Abecasis GR, Adair LS, Afaq S, Afzal U, Bakker SJL, Bartz TM, Beilby J, Bergman RN, Bergmann S, Biffar R, Blangero J, Boerwinkle E, Bonnycastle LL, Bottinger E, Braga D, Buckley BM, Buyske S, Campbell H, Chambers JC, Collins FS, Curran JE, de Borst GJ, de Craen AJM, de Geus EJC, Dedoussis G, Delgado GE, den Ruijter HM, Eiriksdottir G, Eriksson AL, Esko T, Faul JD, Ford I, Forrester T, Gertow K, Gigante B, Glorioso N, Gong J, Grallert H, Grammer TB, Grarup N, Haitjema S, Hallmans G, Hamsten A, Hansen T, Harris TB, Hartman CA, Hassinen M, Hastie ND, Heath AC, Hernandez D, Hindorff L, Hocking LJ, Hollensted M, Holmen OL, Homuth G, Jan Hottenga J, Huang J, Hung J, Hutri-Kahonen N, Ingelsson E, James AL, Jansson JO, Jarvelin MR, Jhun MA, Jorgensen ME, Juonala M, Kahonen M, Karlsson M, Koistinen HA, Kolcic I, Kolovou G, Kooperberg C, Kramer BK, Kuusisto J, Kvaloy K, Lakka TA, Langenberg C, Launer LJ, Leander K, Lee NR, Lind L, Lindgren CM, Linneberg A, Lobbens S, Loh M, Lorentzon M, Luben R, Lubke G, Ludolph-Donislawski A, Lupoli S, Madden PAF, Mannikko R, Marques-Vidal P, Martin NG, McKenzie CA, McKnight B, Mellstrom D, Menni C, Montgomery GW, Musk AB, Narisu N, Nauck M, Nolte IM, Oldehinkel AJ, Olden M, Ong KK, Padmanabhan S, Peyser PA, Pisinger C, Porteous DJ, Raitakari OT, Rankinen T, Rao DC, Rasmussen-Torvik LJ, Rawal R, Rice T, Ridker PM, Rose LM, Bien SA, Rudan I, Sanna S, Sarzynski MA, Sattar N, Savonen K, Schlessinger D, Scholtens S, Schurmann C, Scott RA, Sennblad B, Siemelink MA, Silbernagel G, Slagboom PE, Snieder H, Staessen JA, Stott DJ, Swertz MA, Swift AJ, Taylor KD, Tayo BO, Thorand B, Thuillier D, Tuomilehto J, Uitterlinden AG, Vandenput L, Vohl MC, Volzke H, Vonk JM, Waeber G, Waldenberger M, Westendorp RGJ, Wild S, Willemsen G, Wolffenbuttel BHR, Wong A, Wright AF, Zhao W, Zillikens MC, Baldassarre D, Balkau B, Bandinelli S, Boger CA, Boomsma DI, Bouchard C, Bruinenberg M, Chasman DI, Chen YD, Chines PS, Cooper RS, Cucca F, Cusi D, Faire U, Ferrucci L, Franks PW, Froguel P, Gordon-Larsen P, Grabe HJ, Gudnason V, Haiman CA, Hayward C, Hveem K, Johnson AD, Wouter Jukema J, Kardia SLR, Kivimaki M, Kooner JS, Kuh D, Laakso M, Lehtimaki T, Marchand LL, Marz W, McCarthy MI, Metspalu A, Morris AP, Ohlsson C, Palmer LJ, Pasterkamp G, Pedersen O, Peters A, Peters U, Polasek O, Psaty BM, Qi L, Rauramaa R, Smith BH, Sorensen TIA, Strauch K, Tiemeier H, Tremoli E, van der Harst P, Vestergaard H, Vollenweider P, Wareham NJ, Weir DR, Whitfield JB, Wilson JF, Tyrrell J, Frayling TM, Barroso I, Boehnke M, Deloukas P, Fox CS, Hirschhorn JN, Hunter DJ, Spector TD, Strachan DP, van Duijn CM, Heid IM, Mohlke KL, Marchini J, Loos RJF, Kilpelainen TO, Liu CT, Borecki IB, North KE, Cupples LA. Genome-wide meta-analysis of 241,258 adults accounting for smoking behaviour identifies novel loci for obesity traits. Nature communications 2017; 8: 14977

2. Rawshani A, Rawshani A, Gudbjornsdottir S. Mortality and Cardiovascular Disease in Type 1 and Type 2 Diabetes. The New England journal of medicine 2017; 377: 300-301

3. Read SH, Lewis SC, Halbesma N, Wild SH. Measuring the Association Between Body Mass Index and All-Cause Mortality in the Presence of Missing Data: Analyses From the Scottish National Diabetes Register. American journal of epidemiology 2017; 185: 641-649

**Next DCRC workshop**

Location: Lyon, France

April 2018 – exact dates to be finalised

Host: Dr Marc Gunter

Attendance: by invite only

**Appendix 1**

**Diabetes and Cancer Research Consortium**

**8th Workshop, 3rd and 4th April 2017**

Aarhus University, Aarhus, Denmark

**Final Programme**

**Sunday 2nd April 2017**

Arrival and check in at Hotel Comwell Aarhus (<http://www.comwellaarhus.dk/frontpage/>)

Dinner on Sunday evening is not provided

**Monday 3rd April 2017**

7.00-8.00 Breakfast at Hotel Comwell

8.00-8.30 Make your own way to the Jeppe Vontillius Auditorium (30 min walk from the hotel)

Lakeside Auditoriums, Vennelyst Boulevard 8, Aarhus University Campus

8.30-8.40 Registration

8.40-8.50 Welcome, Introduction / Housekeeping and

Welcome to new members D. Witte

8.50-9.00 EASD Diabetes & Cancer Study Group/ website A. Renehan

9.00-9.30 Diabetes and risks of cancer and CVD:

marginal structural models R. Farmer

9.30-10.00 Updates from the Research Groups

 1. Steno Diabetes Center Copenhagen

 2. PHARMO Institute Utrecht

***DDA Symposium on Diabetes and Cancer***

*10:00-10:30 Coffee and registration of DDA delegates*

*10:30-11:10 Diabetes and Cancer:*

*The evidence and the controversies A. Renehan*

*11.10-11.50 Projects in diabetes and cancer in the Swedish*

*Diabetes Register S. Gudbjörnsdottir*

*11:50-12:30 Update on ongoing metformin trials J. Yeh*

*12:15-13:15 Lunch*

*13.15-14:00 Closing in on potential aetiological explanations J. Frystyk*

*14:00-14:45 Multigenerational family studies of the*

*diabetes-cancer link C. Häggström*

*14:45-15:15 Break*

*15:15-15:45 ‘Six of the best for 2017’ J. Johnson*

*15:45-16:15 Debate: How do we advance the field of research?*

*16:15 End of DDA Symposium programme*

16.15-16.45 ‘Stretch your legs’ and Group photo

16.45-17.45 Updates from the Research Groups (4 x15 minutes)

1. University of Toronto

 2. Manchester. Optimising the use of latent class modelling to identify trajectories of body mass index by gender. Hannah Lennon

 3. Manchester. Weight loss, diabetes and early detection of pancreatic cancer: not so clear Elena Badrick (given by A Renehan)

 4. Aarhus / Mexico. Descriptive analysis of diabetes and cancer as co-occurring causes of death in Mexico. Omar Silverman

17.45-19.30 Free time to walk around in Aarhus and make your own way to the restaurant

19.30-21.30 Workshop dinner at Restaurant Komfur, Guldsmedgade 38, 8000 Aarhus C.

**Tuesday 4th April 2017**

7.00-8.00 Breakfast at Hotel Comwell + Check out.

8.00-9.00 Make your own way to the Merete Barker Auditorium (30 min walk from the hotel)

Lakeside Auditoriums, Vennelyst Boulevard 8, Aarhus University Campus

8.00-9.00 A framework to evaluate the impact of diabetes

on initial cancer treatment (Writing group only)

9.00-11.00 Genetics of the Diabetes – Cancer link

 1. Can genetics help untangle etiological relevance of

obesity-related risk factors for cancer?

The case of kidney and pancreatic cancer Mattias Johansson

 2. Genetics of type 2 diabetes, related traits and

cancer risk: The Malmö Diet and Cancer Study I. Drake

 3. Insulin, IGF-I and colorectal cancer: Results from

a large-pooled study  and MR analysis M. Gunter

 4. Discussion

11.00-11.30 Coffee

11.30-12.30 Updates from the research groups (4x15 minutes)

 1. Swedish Diabetes Register Group

 2. Diabetes Center Isala Zwolle

 3. University of Hawaii Cancer Center

 4. Edinburgh University

12.30-12.45 Wrap up/ announcement of next meeting

12.45-13.45 Lunch + Depart

**Venue: Restaurant**

Lakeside Auditoriums Komfur

Vennelyst Boulevard 8 Guldsmedgade 38

8000 - Aarhus C 8000 - Aarhus C

The venue is a pleasant 30 minute walk from Hotel Comwell, through Aarhus old town. The restaurant for Monday evening is a 10 minute walk from our venue.

For those who have a few hours to spare on Tuesday afternoon, we have free tickets to visit ARoS, the Aarhus contemporary art museum: <http://en.aros.dk/>