Contents

1. Nutrition and cancer: past, present and future

Nutrition and cancer: A complex relationship
Riboli E., Lambert R., Kleihues P. 3

Some methodological issues in nutritional epidemiology
Day N.E., Ferrari P. 5

A new method for calibration of long-term dietary intake by repeated short-term measurements
Hoffmann K., Kroke A., Klipstein-Grobusch K., Boeing H. 11

Potential use of the Web to improve dietary habits – the ECP Diet Web-1 Project
Maskens A. 15

Comparison of telephone versus face-to-face interviews in the assessment of dietary intake by the 24-hour recall EPIC SOFT programme – the Norwegian calibration study
Brustad M., Skeie G., Braaten T., Slimani N., Lund E. 17

The role of correlated errors in the multivariate analysis of dietary data
Michels K.B., Day N.E. 21

Do cross-check questions improve food frequency questionnaire data?
Nöthlings U., Hoffmann K., Boeing H. 23

Dietscan: a common approach for analysing dietary patterns

Demographics and socio-economic differences in adherence to the Mediterranean dietary pattern in Spain

Compliance with the urine marker PABAcheck in cancer epidemiology studies

Differences in calculating fibre intake of a British diet when applying the British, Danish and French food composition tables
Charrondière U.R., Vignat J., Riboli E. 39

Validity of the Italian EPIC questionnaire to assess past diet
Pasanisi P., Berrino F., Bellati C., Sieri S., Krogh V. 41
Comparative nutrient intake across countries is only possible through standardization of existing food composition tables
Charrondière U.R., Vignat J., Riboli E.

Do dietary patterns actually vary within the EPIC study?
Slimani N., Fahey M., Welch A., Wirfält E., Stripp C., Bergström E.

Using multiple imputation methods to estimate relative risks in small EPIC lung cancer subsets

Socio-economic determinants for participation in the Danish EPIC Diet, Cancer and Health cohort
Olsen A., Tjønneland A., Engholm G., Overvad K.

Adjustment for smoking in lung cancer analyses in the EPIC cohort

A European case-only study on familial breast cancer
Berrino F., Pasanisi P., Berrino J., Curtosi P., Bellati C.

Follow-up of the ORDET cohort, Lombardy cancer registry, 1987–1997
Tagliabue G., Evangelista A., Tittarelli A., Del Sette D., Contiero P., Crosignani P., Berrino F., Micheli A.

The Melbourne Collaborative Cohort Study
Giles G.G., English D.R.

Nutrition and cancer prevention in Australia: a national collaboration to promote the evidence
Lee S., Slevin T.

Nutrition and cancer prevention: working together to promote healthy eating
Lee S.

2. Vegetables, fruit and cereals

Epidemiological studies of cereals, fruit and vegetables
Schatzkin A.

Vegetable, fruit and cereal consumption and gastric cancer risk
González C.A.

Vegetables and fruits and lung cancer
Miller A.B.

Plant foods and the risk of colorectal cancer in Europe: preliminary findings
Bueno-de-Mesquita H.B., Ferrari P., Riboli E.

Carbohydrate consumption in 10 European countries
McTaggart A., Wirfält E., Pala V.

Vegetable and fruit consumption in the EPIC cohorts from 10 European countries
Agudo A., Slimani N., Ocke M.C., Naska A.
Consumption of soy products in 10 European countries
Keinan Boker L., Peeters P.H.M., Mulligan A.A., Navarro C., Slimani N.

Consumption of soy products among European consumers of a health-conscious diet
Keinan Boker L., Peeters P.H.M., Mulligan A.A., Navarro C., Slimani N.

Dietary and lifestyle characteristics of meat-eaters, fish-eaters, vegetarians and vegans

Consumption of wild vegetables in the EPIC cohort of Ragusa (Sicily)
Tumino R., Frasca G., Giurdanella M.C., Lauria C., Krogh V.

Plasma vitamin C, cancer mortality and incidence in men and women: a prospective study
Luben R., Khaw K.T., Welch A., Bingham S., Wareham N., Oakes S., Day N.E.

How vegetables are eaten in Italy EPIC centres: still setting a good example?
Pala V., Berrino F., Vineis P., Palli D., Celentano E., Tumino R., Krogh V.

Fruit and vegetable consumption and risk of cancer of the digestive tract: meta-analysis of published case-control and cohort studies
Norat T., Riboli E.

Subregional variations of dietary consumption and incidences of cancers in southern France

Mortality and fresh fruit consumption
Appleby P.N., Key T.J., Burr M.L., Thorogood M.

Validation study of soya intake and plasma isoflavone levels among British women

Fruit and vegetable intake and chronic disease risk in Portugal
Reis M.F., Oliveira L., Pereirinha A., Pereira Miguel J.M.

Fruit and vegetable consumption and colorectal cancer incidence

Diet and the risk of cancers of the lung, oral cavity and pharynx, and larynx: a population-based case-control study in north-east Italy
Pisa F.E., Barbone F.

Dietary factors and epithelial cell exfoliation in the human colon
Bailey N., Bandettoa T., Lektonov A., Cross A.J., Bingham S.

3. Alcoholic beverages and smoking

Alcoholic beverages and smoking
Franceschi S.

Alcohol and risk of cancer of the upper gastrointestinal tract: first analysis of the EPIC data
Boeing H.
Nutrition and lifestyle: opportunities for cancer prevention

Alcohol consumption and breast cancer risk. Preliminary results of the EPIC cohort
Clavel-Chapelon F., Thiebaut A., Berrino F.

Smoking and diet quality in teenage girls: are they related?
Baer Wilson D., Nietert P.J.

Alcohol consumption and oxidative damage

Effect of smoking on the association between alcohol consumption and cancer mortality among middle-aged Japanese men: JPHC Study Cohort I
Hara M., Sasaki S., Tsugane S.

Trends in self-reported past alcohol intake from 1950 to 1995 observed in eight European countries participating in the European Investigation into Cancer and Nutrition (EPIC) project
Klipstein-Grobusch K., Slimani N., Krogh V., Boeing H.

Alcohol consumption in EPIC cohorts from ten European countries.
Sieri S., Agudo A., Kesse E., Klipstein-Grobusch K., San-Jose B., Welch A.A., Krogh V.

4. Meat, fish and dairy products

Meat, fish and dairy products
Palli D.

Meat cooking and cancer risk
Sinha R., Norat T.

Fish and cancer
Lund E.

Dairy foods and colorectal cancer: epidemiological evidence
Kampman E.

Prostate cancer: rates in Europe, dietary hypotheses, and plans for EPIC
Key T.J.

Very-long-chain ω-3 fatty acids as markers for habitual fish intake in Spain
Amiano P., Dorronsoro M., Larrañaga N., Renobales M., Ruiz de Gordoa J.C.

Conjugated linoleic acid and the risk of breast cancer

Red meat and colorectal cancer risk: the effect of dietary iron and haem on endogenous N-nitrosation
Cross A.J., Pollock J.R.A., Bingham S.A.

Mercury intake associated with fish consumption in a cohort of Gipuzkoa, Basque Country, Spain
Larrañaga N., Amiano P., Dorronsoro M., Sanzo J.M.

Meat consumption in Europe – results from the EPIC study
Linseisen J., Kesse E., Slimani N.
Consumption of added fats and oils in EPIC
Linseisen J., Bergström E., Gafà L., Gonzalez C., Thiébaut A., Trichopoulou A., Tumino R.

Plasma concentrations of fatty acids in nine European countries: cross-sectional study within the European Prospective Investigation into Cancer and Nutrition (EPIC)

Use of high-temperature cooking methods in preparation of meat and fish in European countries
Rohrmann S., Linseisen J., Becker N., Sinha R.

Variability in fish consumption in 10 European countries
Welch A.A., Lund E., Amiano P., Dorronsoro M.

Meat consumption and colorectal cancer risk: an estimate of attributable and preventable fractions
Norat T., Lukanova A., Ferrari P., Riboli E.

Serum fatty acids and risk of breast cancer in a nested case–control study of the New York University Women’s Health Study

Dietary factors and multiple myeloma. Case–control study in Belgrade
Pekmezovic T., Vlajinac H., Adanja B., Marinkovic J., Kanazir M., Suvajdzic N., Colovic M.

5. Body weight, physical activity and cancer

Body weight, physical activity and cancer
Olsen K.

Anthropometry, physical activity and cancer of the breast and colon
Berglund G.

Leisure-time sport physical activity and dietary intake of foods in Spain
Chirlaque M.D., Tormo M.J., Navarro C.

Energy intake, energy expenditure and BMI influence the risk of endometrial cancer in a prospective study in Norway
Furberg A.S., Thune I.

Prevalence of overweight, general and central obesity in 50- to 64-year-olds involved in the EPIC cohort
Haftenberger M., Lahmann P.H., Panico S., Gonzalez C., Seidell J., Boeing H.

BMI and smoking status in the EPIC cohorts
Kroke A., Haftenberger M., Hoffmann K., Boeing H.

Colorectal cancer associated with BMI, physical activity, diabetes, and blood glucose
Lund Nilsen T.I., Vatten L.J.

BMI throughout life, intake of vitamin supplements and oral cancer in Spain
Nieto A., Sánchez M.J., Quintana M.J., Castellsagué X., Martínez C., Muñoz J., Bosch F.X., Muñoz N., Herrero R., Franceschi S.

Adolescent BMI and cancer risk
Okasha M., Davey Smith G., McCarron P., McEwen J.
Nutrition and lifestyle: opportunities for cancer prevention

Physical activity in the EPIC cohort in Italy
Salvini S., Saieva C., Sierl S., Vinelis P., Panico S., Tumino R., Palli D.

6. Endogenous hormones and cancer

Hormones and breast cancer
Key T.J., Allen N.E.

Possible mechanisms relating diet to colorectal cancer risk
Bruce W.R., Giacca A., Medline A.

Androgenic hormones and prostate cancer risk: status and prospects
Gann P.H.

Nutrition, energy balance and colon cancer risk: the role of insulin and insulin-like growth factor-I
Kaaks R.

The effect of diet on serum insulin-like growth-factor-I and its main binding proteins
Allen N.E., Appleby P.N., Davey G.K., Key T.J., Rinaldi S., Kaaks R.

Diet and postmenopausal breast cancer in Portugal
Amaral T., de Almeida M.D.V., Barros H.

Use of hormonal therapy for menopause in nine European countries
Banks E., Barnes I., Baker K., Key T.J.

Plasma bile acids and risk of breast cancer
Costarelli V., Sanders T.A.B.

Age at menarche in relation to adult height in the EPIC cohort
Moret N.C., van Gils C.H., Peeters P.H.M.

The 1944–1945 Dutch famine and age at natural menopause – the value and validity of individual exposure assessment.

Effects of maternal age at birth on breast cancer risk factors in daughters. A hypothesis on the role of oocyte, mitochondrial-related chromosomal instability
Van Noord P.A.H.

Bone mineral density and the subsequent risk of prostate cancer in the NHANES-I follow-up
Nelson R.L., Turyk M., Kim J., Persky V.

Reliability and validity of direct radioimmunoassays for measurement of postmenopausal serum androgens and estrogens
Rinaldi S., Déchaud H., Tonio/lo P., Kaaks R.

7. Mechanisms of nutritional carcinogenesis and anticarcinogenesis

Food and carcinogenesis
Lambert R.

Phytoestrogens and breast cancer risk: review of the epidemiological evidence
Peeters P.H.M., Keinan-Boker L., van der Schouw Y.T., Grobbee D.E.
n-3 fatty acids and breast cancer
Bougnoux P., Maillard V., Ferrari P., Jourdan M.L., Chajès V.

Novel plant-derived anticarcinogens
Kosmeder J.W. II, Pezzuto J.M.

Plant polysaccharides, meat and colorectal cancer
Bingham S.A., Luben R., Day N.E., Riboli E.

Dietary catechins and cancer incidence: the Iowa Women’s Health Study
Arts I.C.W., Jacobs Jr. D.R., Folsom A.R.

Micronutrients and ovarian cancer: an Italian case–control study
Bidoli E., La Vecchia C., Talamini R., Negri E., Parpinel M., Conti E., Montella M., Carbone A., Franceschi S.

Micronutrients and the risk of colorectal adenomas: a case–control study in São Paulo, Brazil

Biocide residues in healthy food as risk factors
Frentzel-Beyme R., Helmert U.

Daidzein and genistein intakes in England (the EPIC Norfolk cohort)
Mulligan A.A., Luben R.N., Welch A.A., Bingham S.A.

Sources of selected vitamins in a sample of the Italian population
Parpinel M., Bidoli E., Talamini R., Dal Maso L., Franceschi S.

The effects of an isoflavone intervention on the urinary excretion of hormone metabolites in premenopausal women
Maskarinec G., Franke A.A., Williams A.E., Stanczyk F.C.

Bracken fern (Pteridium aquilinum) ingestion and oesophageal and stomach cancer
Marliere C.A., Watchen P., Castro M.C.F.M., O'Connor P., Galvao M.A.

Ranking chemopreventive agents on rat colon carcinogenesis
Carpet D.E., Taché S.

Anti-tumour-promoting action of Allium constituents
Le Bon A.M., Guyonnet D., Chaumontet C., Bergès R., Pinnert M.F., Martel P.

Purified and endogenous phytic acid in wheat bran affects early biomarkers of colon cancer risk
Jenab M., Thompson L.U.

Indigestible carbohydrates which reduce colon tumour incidence in Mln mice may interfere with the local immune response
Menanteau J., Pierre F., Bassonga E., Forest V., Bornet F., Perrin P., Meftah K.

Analysis of oxidized and nitrated proteins in plasma and tissues as biomarkers for exposure to reactive oxygen and nitrogen species
Ohshima H., Pignatelli B., Li C.-Q., Belfast S., Glibert J., Boffetta P.

Beneficial effect of an antioxidant micronutrient-enriched food on DNA damage: experimental study in rats using a modified comet assay in total blood
Hininger L., Chollat-Namy A., Osman M., Arnaud J., Ducros V., Favier A., Roussel A.M.

Peroxyl radical-scavenging activity of beverages in vitro, especially of tea, coffee and wine
Maeda H., Kanazawa A.
Nutrition and lifestyle: opportunities for cancer prevention

Micronutrients and the regulation of cancerous cell growth and death: effect of sulforaphane, an isothiocyanate from broccoli
Rouimi P., Assoumaya C., Tulliez J., Gamet-Payrastre L.

Lack of chemoprevention of indole-3-carbinol in N-methyl-N-nitrosourea-induced mammary carcinogenesis in rats
Kang J.K.

Interaction of dietary beta-carotene and alpha-linolenic acid: effect on promotion of experimental mammary tumours
Maillard V., Holnard C., Steghens J.P., Jourdan M.L., Pinault M., Bougnoux P., Chajes V.

Effects of conjugated linoleic acid on adenoma formation in the ApcMin mouse
Rajakangas J., Turpeinen A.M., Salminen I., Mutanen M.

Geraniol, a component of plant essential oils, sensitizes human colon cancer cells to 5-fluorouracil treatment
Camesecchi S., Langley K., Exinger F., Gosse F., Raul F.

Could apigenin metabolism explain the estrogenic effect of this flavonoid in the female immature rat?
Gradolatto A., Teyssier C., Stroheker T., Chagnon M.-C., Canivenc-Lavier M.-C.

Estrogenic effects of apigenin, kaempferol and bisphenol A in immature Wistar female rats and in MCF-7 cells
Stroheker T., Pinnert M.F., Picard K., Chagnon M.C., Canivenc-Lavier M.C.

Animal tissue components may be anticarcinogenic
Griciute L., Uleckiene S., Domkiene V.

Diet modulates the genotoxicity of IQ (2-amino-3-methylimidazo[4,5-f]quinoline) in rats associated with a human faecal flora
Humblot C., Kassie F., Nugon-Baudon L., Knäsmüller K., Lhoste E.F.

IQ (2-amino-3-methylimidazo[4,5-f]quinoline)-induced aberrant crypt foci and colorectal tumour development in rats fed two different carbohydrate diets
Mølk A.-M., Thorup I., Kristiansen E., Meyer O.

L-methionine supplementation accelerates tumour growth and shifts the phospholipid derivative pattern in a murine model of malignant melanoma. A proton HRMAS NMR spectroscopy study
Demidem A., Morvan D., Papon J., Madelmont J.C.

Simple sugars modulate the development of aberrant crypt foci in rat colon during post-initiation
Poulsen M., Mølk A.-M., Thorup I., Breinholt V., Meyer O.

Colonic luminal contents (faecal water) induce COX-2
Glinghammar B.

8. Trials on the dietary prevention of cancer

Trials on dietary prevention of cancer
Berglund G.
DIANA trials on diet and endogenous hormones  

Lack of effect of a low-fat high-carbohydrate diet on ovarian hormones in premenopausal women: results from a randomized trial  
Boyd N.F., Greenberg C., Martin L., Stone J., Hammond G., Minkin S.  

The SU.VI.MAX trial on antioxidants  
Hercberg S., Galan P., Preziosi P., Malvy M., Briançon S., Ait Hadad M., Rahim B., Favier A.  

Effect of fibre and calcium supplementation on adenoma recurrence and growth  
Faire J., Bonithon-Kopp C.  

Polyps and vegetables (and fat, fibre): the polyp prevention trial  
Schatzkin A., Lanza E. and the Polyp Prevention Trial Study Group  

9. Gene–nutrient interactions  

DNA adducts and the protective role of fruits and vegetables  
Vineis P.  

Malondialdehyde-DNA adducts in relation to diet and disease risk – a brief overview of recent results  
Shuker D.E.G., Atkin W., Bingham S.A., Leuratti C., Singh R.  

Meat intake, metabolic genes and colorectal cancer  
Le Marchand L.  

Expression of cytochrome P450 enzymes in human colon  

Role of EPHX genotype in the associations of smoking and diet with colorectal adenomas  
Tiemersma E.W., Kloosterman J., Bunschoten A., Kok F.J., Kampman E.  

NQO1 and mEH exon 4 (mEH4) gene polymorphisms, smoking and colorectal cancer risk  
Mitrou P., Watson M., Bingham S., Stebbings W.S., Speakman C.T., Loktionov A.  

The role of folic acid and vitamin B12 in colorectal carcinogenesis in genetically different individuals – design of a study  
Van den Donk M., Pellis E.P.M., Keijer J., Kok F.J., Nagengast F.M., Kampman E.  

Diet and K-ras mutations in colorectal cancer  
Moreno V., Guiné E., Bosch F.X., Penadó M., Capellá G., Navarro M., Martí J., Cambray M., Lloberas B. and the Bellvitge Colorectal Cancer Study Group  

Dietary factors, genetic susceptibility and somatic mutations in colorectal cancer: a prospective study  

Diet and truncating APC mutations in sporadic colon tumours  
Diergaardt B., van Geloof W.L., van Mulijen G.N.P., Kok F.J., Kampman E.  

Cruciferous vegetable intake, GSTM1 genotype and lung cancer risk in a non-smoking population  
10. **Cancer prevention: global implications of new European evidence**

**Trends in foods available for consumption: Europe, 1961–1999**
*Burlingame B.*

**WHO’s strategy on nutrition and noncommunicable diseases prevention**
*Puska P.*

**The World Cancer Research Fund Expert Report: the next steps**
*Wiseman M.J.*

**A global perspective on food, environment and health, with particular reference to diet and cancer**
*McMichael A.J.*

**The dietary prevention of ischaemic heart disease**
*Saracci R.*

**Malignant tumour follow-up in Italy, 1993–1998**
*Evangelista A., Tagliabue G., Del Sette D., Tittarelli A., Contiero P., Krogh V., Crosignani P., Berrino F.*

**Benign neoplasms: a follow-up study in Italy, 1993–1998**
*Contiero P., Evangelista A., Tittarelli A., Del Sette D., Krogh V., Berrino F., Tagliabue G.*

**Age at exposure to the Dutch famine of 1944–1945 has opposing effects on adult mammographic density (DY); a study in the DOM cohort**
*Van Noord P.A.H., Haars G., Peeters P.H.M.*

**Diet, energy intake and breast cancer risk in an Asian country**
*Rattanamongkolgul S., Muir K., Armstrong S., Sriamporn S., Vatanasapt V.*

**Epidemiological characteristics of colorectal cancer in Vojvodina**
*Miladinov-Mikov M., Lukic N., Petrovic T.*

**Diet and colorectal cancer in Portugal**
*Amaral T., de Almeida M.D.V., Barros H.*

**Calorie restriction reduces the incidence of radiation-induced myeloid leukaemia**
*Yoshida K., Hirabayashi Y., Inoue T.*

**Dietary factors and brain tumours in adults: pilot study results of a case-control investigation in Rio de Janeiro, Brazil**
*Pereira R.A., Monteiro G.T.R., Kolfman S.*

**Diet and cancer of oral cavity and pharynx: a case-control study in São Paulo, Brazil**
*Marchioni D.L., Fisberg R.M., de Rosário M., Latorre D.O., Wunsch V.*