Course Plan

Title of course	Cancer survival: Principal, method and analysis	
Target group	PhD by research students	
Course Director	Dr. Kazem Zendehdel, (MD. PhD.) Paul W. Dickman (PhD) from Karolinska Institute, Dep. Of Medical Epidemiology and Biostatistics	
Other Eligible groups	Students in all public health sciences	
Credit	ONE (theory credits)	
Place	Conference Hall, Cancer Research Center, Cancer Institute, Imam Khomeini Medical Center	
Main Objective	Population-based cancer registries seek to collect data on all new cases of cancer occurring in a well-defined population. Usually, the population is that which is resident in a particular geographical region. As a result, and in contrast to hospital-based registries, the main objective of this type of cancer registry is to produce statistics on the occurrence of cancer in a defined population and to provide a framework for assessing and controlling the impact of cancer in the community.	
Course syllabus	**First day**	**8hr**
	• Introduction to the course;	
	• Cancer registration in Iran (Kazem Zendehdel)	
	• Recap of basic concepts (survivor and hazard functions);	
	• The role of patient survival in cancer control;	
	• How does 'population-based cancer survival analysis' differ from other applications of survival analysis? Net survival – concepts and estimation; Intro to competing risks;	
	• Comparison of methods (Ederer I, Ederer II, Hakulinen, Pohar Perme) for estimating relative survival & net survival;	
	• Age standardization;	
	• Interpreting relative survival estimates Introduction to STATA and the strings package for estimating relative/net survival;	
	• Practical exercises;	
	Second Day	**8hrs**
	• Review of previous day's exercises and concepts;	
	• Modelling cause-specific mortality using Cox regression, Poisson regression, and flexible parametric models:	
	o Includes an introduction to splines	
	o Includes an introduction to the concept of time-splitting Practical exercises.	
	Note: this is material that is taught in standard survival analysis courses in epidemiology. It sets the ground for the extension to relative survival presented tomorrow.	

	Third Day	8hrs
	• Review of previous day's exercises and concepts;	
	• Modelling excess mortality (relative survival) using Poisson regression and flexible parametric models	
	• Comparison of various approaches (lifetable and model-based) to estimate relative survival and net survival	
	• Estimating crude and net probabilities of death , competing risks	
	• Practical exercises.	
	Forth Day	**8hrs**
	• Review of previous day's exercises and concepts;	
	• Estimating loss in expectation of life;	
	• Discussion of what to include in a report of cancer patient survival;	
	• Practical exercises;	
	• Recap and close.	
Cognitive Specific Objectives	All specific objectives mentioned on the Syllabus part.	
Attitude Specific Objectives	At completion of workshop participants will be able to: Explain importance and roll of population based cancer registry Estimate age – standardized survival, cause-specific survival and relative survival by using population based cancer registry data Cancer survival modeling by clinical data	
Practical Specific Objectives	Learning to develop the model and working with them; Running the analytical model for data samples from population based cancer registries.	
Content & Suggestions	Go to syllabus	
Educational Strategy	Understanding principles, Practice individually in the class,	
Educational Methods	We will use social networks to sharing files and opinions, using databases like Scopus and Medline for literature review, using STATA for modelling and running analytical models.	
Educational Tools	We will use social networks to sharing files and opinions, using databases like Scopus and Medline for literature review	
Students duties	• Attending class • Being active in course discussions • Doing Exercise in the class • Study the subjects	
Course evaluation	Attending class, Doing exercise, Final exam	
References	Paul W. Dickman and Timo Hakulinen; Population-based cancer survival analysis; 2003.	