Laboratoire d'Enseignement et de Recherche sur le Traitement de l'Information Médicale

FACULTÉ DE MÉDECINE DE MARSEILLE
UNIVERSITÉ DE LA MÉDITERRANÉE AIX-MARSEILLE II

Presentation of the project

MESURE

Estimation methods for relative survival

Workshop – 13 Mars 2009 – Paris

Roch Giorgi

LERTIM, Faculté de Médecine, Université de la Méditerranée, Marseille, France
http://cybertim.timone.univ-mrs.fr

Context

- Large utilisation of relative survival approach to estimate cancer survival (population-based studies)
- Models/Methods used may vary between research centres
- New developments are challenging

⇒ Creation of a research network involving methodologists, epidemiologists

⇒ MESURE Project

(submitted to the French National Research Agency (ANR), « Programme blanc 2009 »)

MESURE: Overall Aim

- To improve the current methods for estimating cancer survival
- To define required specifications for production of large-scale cancer survival statistics useful in Public Health

⇒To obtain

- ✓ more accurate estimates
- ✓ comparable information on cancer survival, on its public health impact

Teams Involved

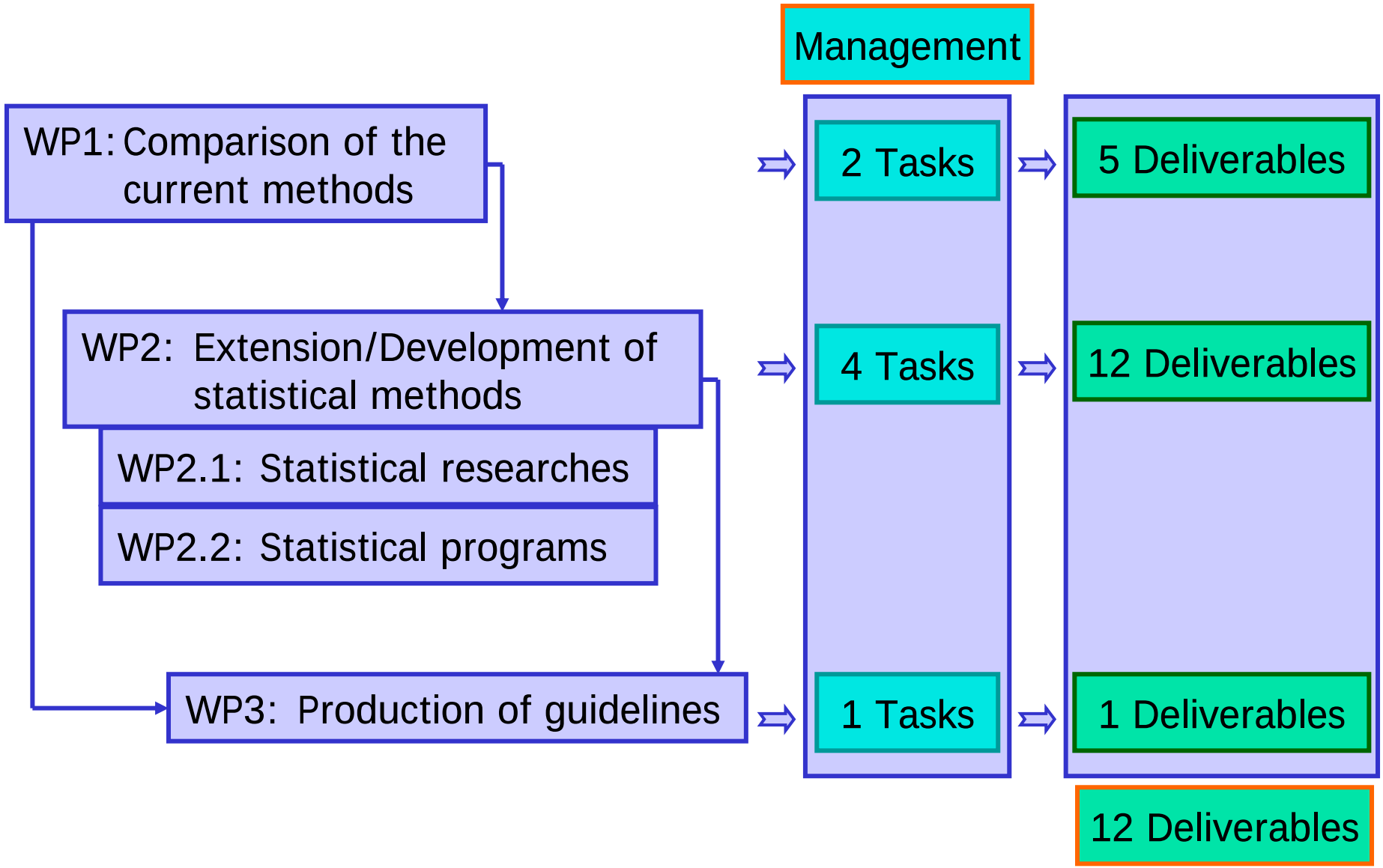
Partners

- Laboratoire d'Enseignement et de Recherche sur le Traitement de l'Information Médicale (LERTIM) – *Marseille*
- Service de Biostatistique des Hospices Civils de Lyon (SBHCL) – *Lyon*
- Service de Biostatistique et Informatique Médicale (SBIM) – *Dijon*
- Laboratoire d'Epidémiologie et de Santé Publique (LESP) – *Strasbourg*
- Réseau des registres français des cancers (FRANCIM)

External members

- Non Communicable Disease Epidemiology Unit (NCDEU) – *London*
- Centro Nazionale di Epidemiologia, Instituto Superior di Sanita (CNE) – *Roma*
- Department of Epidemiology and Biostatistics (DEP) – *Montreal*

Description of the Work



Task 0: Project Management

- Coordinator of the Project: R. Giorgi
  - ✓ Coordination between partners
  - ✓ Management of the project, with all the partners
- Leader of a task
  - ✓ Coordination of the specific researches for the task
  - ✓ Respect concerning the schedule/deliverables
- Organisation
  - ✓ 2 meetings a year with all the partners/external members
  - \+ Invited collaborators
- Deliverables
  1. Report of progress (every 6 months)
  2. Report of the meetings (every 6 months)

WP1 – Task 1: Comparisons

Leader	SBHCL
Partners	SBIM, LERTIM, LESP, CNE, DEP
Objectives	To highlight the methodological limits and the advantages of the existing models for relative survival analyses
Subtasks	1. Methodological comparisons 2. Determination of data sets 3. Analyses/real data
Deliverables	1. Description of the studied models 2. Determination/Constitution data sets 3. Comparison based on real data 4. Report indicating limits/advantages
Contributions	• Methodological assessment: SBHCL, SBIM, LESP, NCDEU, CNE, DEP • Management real data: SBHCL, SBIM, NCDEU, CNE • Analyses real data: SBHCL, SBIM, LERTIM, LESP, NCDEU, CNE, DEP

WP1 – Task 2: Recommendations

Leader	SBIM
Partners	SBHCL, LERTIM, LESP, FRANCIM, NCDEU, CNE, DEP
Objectives	To give advices for users of such relative survival models in their practice
Subtasks	None
Deliverables	1. Report indicating advices for users
Contributions	• Elaboration of recommendations: SBIM, SBHCL, LERTIM, LESP, FRANCIM, NCDEU, CNE, DEP

WP2 – Task 3: Life Tables

Leader	LERTIM
Partners	SBIM, SBHCL, LESP, NCDEU, DEP
Objectives	To assess the impact of the variable used to stratify the life tables for relative survival analyses
Subtasks	1. Life tables generation 2. Survival data generation 3. Analyses/simulated data 4. Analyses/real data
Deliverables	1. Simulations results 2. Real data application
Contributions	• Data generation: LERTIM, DEP • Simulation design: LERTIM, SBIM, SBHCL, LESP, NCDEU, DEP • Management of the real data: SBHCL, NCDEU • Analyses of the real data: LERTIM, SBIM, SBHCL, LESP, NCDEU, DEP • Programming: LERTIM

WP2 – Task 4: Spatial Variations

Leader	LERTIM
Partners	SBHCL, SBIM, LESP, FRANCIM, CNE
Objectives	To propose a relative survival model to analyse the geographical variations in cancer survival
Subtasks	1. Development of the model 2. Survival data generation 3. Analyses/simulated data 4. Analyses/real data 5. Specific statistical program
Deliverables	1. Model for spatial survival data 2. Simulations results 3. Real data applications 4. Specific statistical program
Contributions	• Data generation: LERTIM • Simulation design: LERTIM, SBHCL, FRANCIM • Management of the real data: SBHCL, CNE • Analyses of the real data: LERTIM, SBHCL, SBIM, FRANCIM, CNE • Programming: LERTIM, LESP

WP2 – Task 5: Frailty

Leader	SBHCL
Partners	LERTIM, LESP, SBIM, FRANCIM, NCDEU, DEP
Objectives	To take benefits from random effect framework in relative survival
Subtasks	1. Development of the model 2. Comparison fixed/random effect 3. Analyses/real data 4. Specific statistical program
Deliverables	1. Flexible frailty relative survival model 2. Comparison of fixed & random effect models 3. Real data applications 4. Specific statistical program
Contributions	• Methodological assessment: SBHCL, LERTIM, LESP, SBIM, FRANCIM, NCDEU, DEP • Management of the real data: SBHCL, SBIM, NCDEU • Analyses of the real data: SBHCL, LERTIM, LESP, SBIM, FRANCIM, NCDEU, DEP

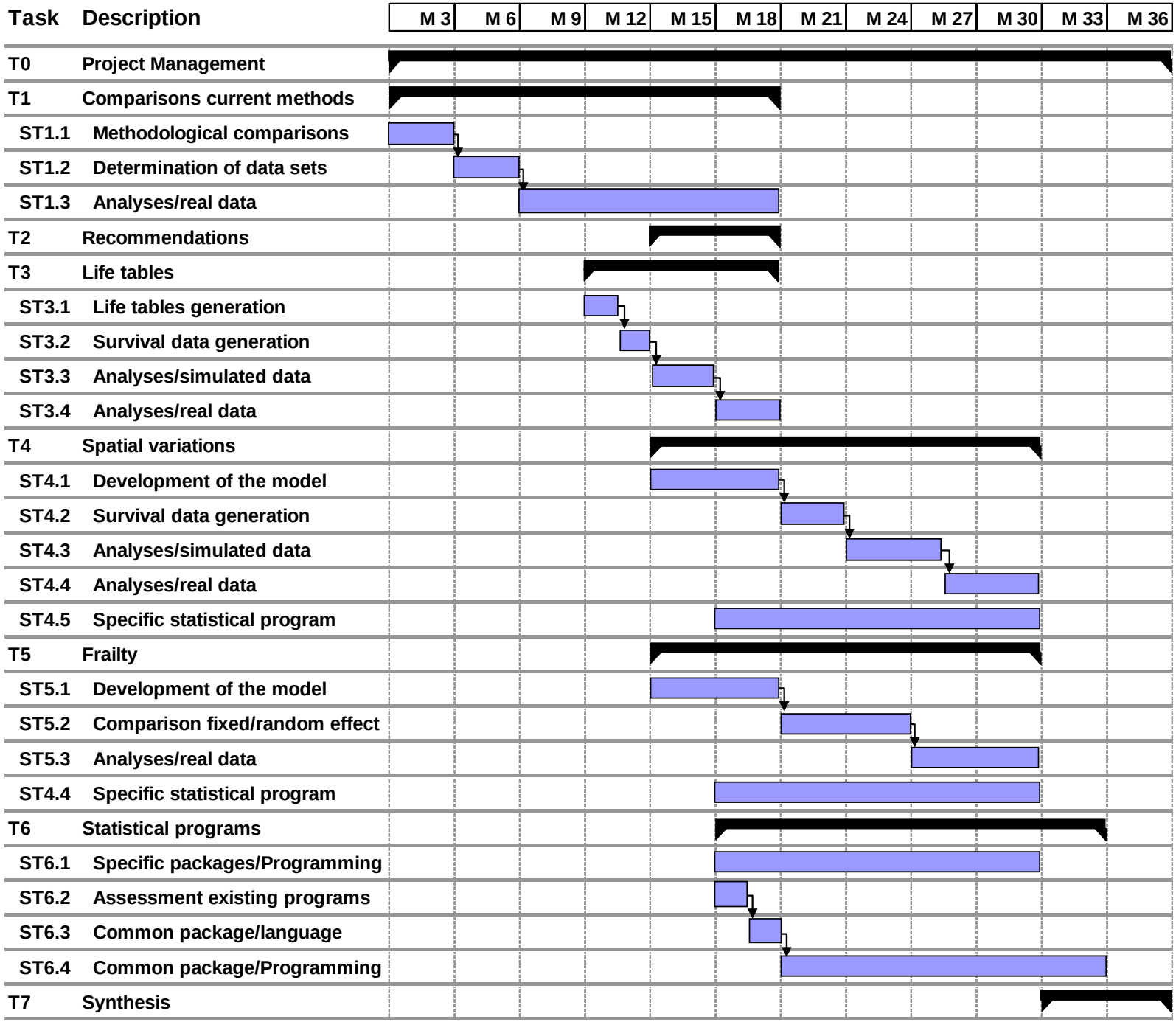
WP2 – Task 6: Statistical Programs

Leader	LESP
Partners	LERTIM, SBHCL, NCDEU, DEP
Objectives	To propose a statistical package to perform relative survival analyses using approaches studied and developed in this project
Subtasks	1. Specific packages/Programming 2. Assessment existing programs 3. Common package/Language 4. Common package/Programming
Deliverables	1. Specific programs for Tasks 4 to 6 2. Common statistical program
Contributions	• Programming for the specific packages: LERTIM, SBHCL, LESP • Programming for the common package: LERTIM, SBHCL, LESP, NCDEU

WP3 – Task 7: Synthesis

Leader	FRANCIM
Partners	LERTIM, SBHCL, SBIM, LESP, NCDEU, CNE, DEP
Objectives	To produce guidelines for cancer survival analysis with population-base data
Subtasks	None
Deliverables	1. Synthesis and recommendations
Contributions	• Synthesis and redaction of recommendations: FRANCIM, LERTIM, SBHCL, SBIM, LESP, NCDEU, CNE, DEP

Planning



Planning

Task	Deliverables	Delivery date	Partner in charge
T0 Project management	D0.1 Biannual and final reports	M6:M36 each 6M	LERTIM
	D0.2 Biannual meetings with report	M6:M36 each 6M	LERTIM
T1 Comparisons of current methods	D1.1 Description of the studied models	M3	SBHCL
	D1.2 Determination/Constitution datasets	M6	SBHCL
	D1.3 Comparisons based on real data	M12	SBHCL
	D1.4 Report indicating limits/advantages	M15	SBHCL
T2 Recommendations	D2.1 Report indicating advices for users	M18	SBIM
T3 Life tables	D3.1 Simulations results	M15	LERTIM
	D3.2 Real data application	M18	LERTIM
T4 Spatial variations	D4.1 Model for spatial survival data	M18	LERTIM
	D4.2 Simulations results	M27	LERTIM
	D4.3 Real data applications	M30	LERTIM
	D4.4 Specific statistical program	M30	LERTIM
T5 Frailty	D5.1 Flexible frailty relative survival model	M18	SBHCL
	D5.2 Comparison of fixed & random effect models	M24	SBHCL
	D5.3 Real data applications	M30	SBHCL
	D5.4 Specific statistical program	M30	SBHCL
T6 Statistical Programs	D6.1 Specific programs for Task 4 to 6	M30	LESP
	D6.2 Common statistical package	M33	LESP
T7 Synthesis	D7.1 Synthesis and recommendations	M36	FRANCIM

Requested Budget

- Nature

  - ✓ Persons (total: 72 pers.months)
  - ✓ Meetings*/Missions/Congress
  - ✓ Computing hard/software
  - ✓ Publication fees
  - ✓ Various furniture

468 000 euros

* Also for external members