The RIC-Mel network : how valorization of a national database may support academic and industrial research

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INTRODUCTION

With a high incidence, low survival rates and limiter availability of effective treatment, melanoma is one of the research priorities for health authorities and is considered as priority of public health (Figure 1.). Optimizing the development of both academic and industrial research requires the availability of information on the characteristics of patients and clinical data.

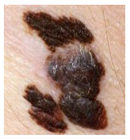

Figure 1. Primary melanoma tumour.

To meet this need, the French Multidisciplinary Melanoma Group (GMFMel) in collaboration with INCa (French National Cancer Institute) has set up in April 2011 a Clinical Investigation network for melanoma called :

RIC-Mel : network for Research and Clinical Investigation on Melanoma

Aims of our network were to promote translational, clinical and epidemiological research.

To achieve these goals, objectives of our network were :

- To **federate** the clinical cancerology and dermatology sites and the existing networks in melanoma,
- To set up and maintain a **national clinical database**.

METHODS

Each participating center filled in the database its active file of patients, for which data are treated confidentially. Database is available on the Internet at any given moment but each clinician have an exclusive access for his data.

All patients with a melanoma could be included, regardless of stage or location of the primary tumour (ocular, mucosal, cutaneous or unknown). All patient included in the database had given its consent to participate. Collected data describes patient characteristics, disease history and follow-up until death (Figure 2.).

NETWORK

Coordination

Coordinators : Pr B. Dréno and Pr C. Lebbé
Coordinating center : CHU Nantes

Decision-making body

Cutaneous Cancerology Group of the French Society of Dermatology
Steering Committee
Scientific Council

Participating centers

University or regional centers and Cancer centers

DATABASE

Identity form	Part I – Mandatory	Part II - Optional
Demographic features of patients	Key information for clinical trials	Additional information for translational investigations
▪ Initials ▪ Birth date ▪ Gender	▪ Primary tumour characteristics ▪ Lymph node investigations ▪ AJCC Stages (7TH edition of TNM classification) ▪ Mutations (BRAF, NRAS, Ckit) ▪ Antigens (only ones targeted in clinical trials of vaccination) ▪ Treatments (only ones specific of melanoma) ▪ Death	• Family history of melanoma • Metastases • HLA type A and B • Dose and response of treatments • Grade 3 and 4 adverse events

Figure 2. The RIC-Mel network and the database.

RESULTS

Nowadays, the RIC-Mel network includes 43 hospital's dermatology centers and 6 cancer centers located all over the country (Figure 3.).

The database launched in march 2012 was approved by French Health Authorities.

Figure 3. Distribution of the RIC-Mel centers.

After 6 years, more than 21,970 patients were included (Figures 4).

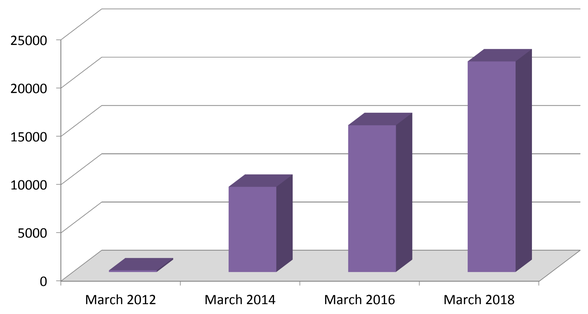

Figure 4a. Evolution of inclusions in the RIC-Mel database.
Around 3,500 melanoma patients were included per year by participating centers.

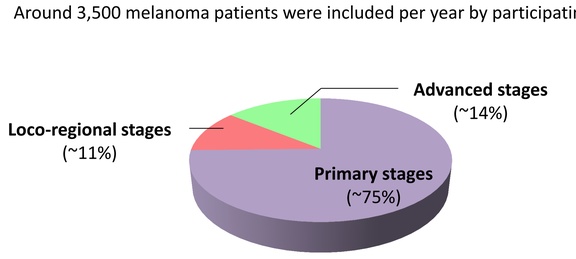

Figure 4b. Repartition by stages in the RIC-Mel database.

Academic research

Several local active files had been already used to support academic projects (Figure 5.).

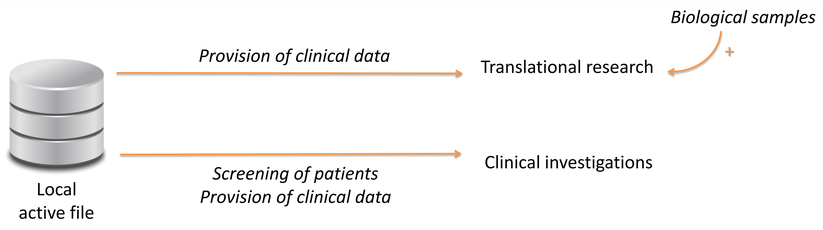

Figure 5. Valorisation of local active files for academic projects.
Clinical data of targeted patients were provided to research teams in order to extrapolate predictive or prognostic factors. In these cases, biological samples of these patients were already exploited (examples : Knol A.C. *et al.* (2016) and Simon S. *et al.* (2017)).
However, the RIC-Mel database is only dedicated to data gathering. Local biological samples are managed by each participating center.
Several projects were carried out for rational studies. Screening of patients for these clinical investigations were performed thanks to the request module of the database. Pertinent information about a targeted population were provided to clinical teams (examples : Peuvrel L. *et al.* (2016), Chasseuil E. *et al.* (2017), the EADO research project on nodular melanoma).

The network could also facilitate request of centers about availability of biological samples. In this case, the network could be used to centralize this request to help academic teams.

Institutional requests

The French National Authority (HAS) could also use the clinical database for stating on drug reimbursement, for example : Population of unresectable stage III and stage IV melanoma patients with BRAF mutation for targeted therapies.

Industrial projects

Six pharmaceutical companies (Roche, GSK, BMS, AMGEN, MSD and Novartis) support the RIC-Mel database for prospective inclusions of patients as well as regular updating of the clinical data.

Moreover, epidemiological and medico-economic projects with different purposes had been already realized (Figure 6.).

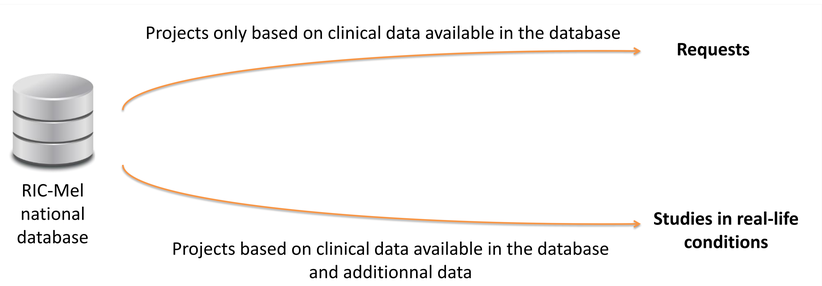

Figure 6. Valorization of the RIC-Mel national active file for industrial projects.
Four partners requested national active file analyse. For these epidemiological studies:

- Medico-economic modelling for drug registration (GSK, 2014),
- Estimate the proportion of patients meeting the selection criteria for a clinical trial (AMGEN, 2016),
- To determine features of a sub-population of melanoma patients (BMS and Novartis, 2018).

Another goal of the RIC-Mel network is to collect data on real-life conditions. For these kind of projects, additional clinical data than those collected in the database may be required and sometimes added :

- To determine survival of patients included in an ATU (Authorisation of Temporary Use) program (BMS, the post-ATU study of Nivolumab, NCT03325257, 400 patients enrolled, 2017 and MSD, HORIZON study, 663 patients enrolled, 2017).

CONCLUSIONS

The RIC-Mel network :

- is a **structured** network able to **federate** centers involved in melanoma patients care,
- develop and maintain a **national database** with almost 22,000 patients included nowadays,
- provide **expertise and knowledge of melanoma** (pathology, treatments and patient care),
- **listen**, **advice** and **support** all project leaders.

Thanks to this, the RIC-Mel network demonstrated :

- capacity to **support research**, from both academic and industrial partners,
- **adaptability** based on a huge service offering.

In fact, valorization of the database through all research projects performed with academic and industrial partners highlight :

- that is an **efficient instrument** to satisfy translational and epidemiological research,
- that is a **pertinent** way through relevant information could be communicated **rapidly** and **accurately**.

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- EADO research project « A multicenter study assessing the epidemiological, clinical and diagnostic patterns of thin nodular melanoma » (http://www.eado.org/eado-research-projects/37)

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