Surfing the electronic medical records: a biobank challenge

Dr. Nuria Somoza
September 15th 2017

About us

MARBIOBANC: Parc de Salut Mar's biobank.

Parc de Salut Mar is a large health services organization on the Barcelona coast.

- 1.036 hospital beds
- 780.000 patient visits per year
- 2.755 employees

Mar Hospital is a tertiary-level hospital and the main healthcare facility at the consortium.

IMIM: Hospital del Mar Medical Research Institute.

Our Collections

DNA bank for cardiovascular diseases

Cerebral infarction (ICTUS) sample bank

FORTIAM, acute myocardial infarction sample collection

DNA bank for oncological diseases

Left over diagnose sample bank

Bank of samples from influenza A (H1N1) patients

Bank of lung disease samples (Lung Biobank Platform)

Hematological malignancies bank

Cryopreserved tumour bank

Collection Alzheimer and families (Alfa Study)

ERyME: Sample collection from patients with rheumatic or muscle-skeletal disease

GLOSEN: Glomerular diseases sample collection
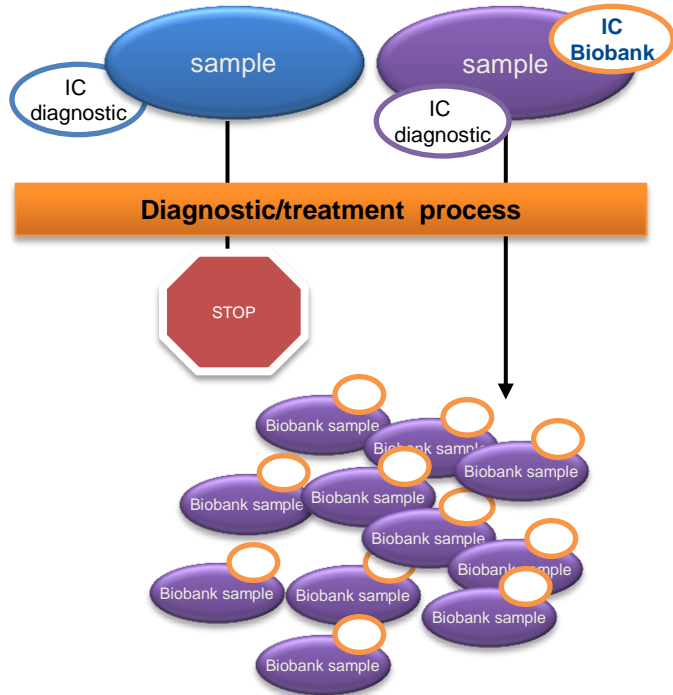
LEFT OVER DIAGNOSE SAMPLE BANK

>20.000 biopsies/year

>140.000 blood tests/year

"potentially" biobank samples

Left over diagnose sample bank

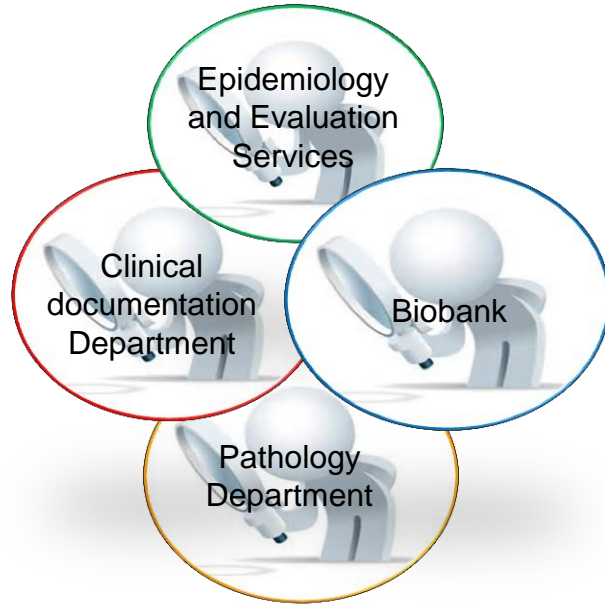"**virtual**" biobank samples

Not registered in biobank management software

Not stored in biobank facilities

No specific data base

Big amount of samples

www.imim.es

How to manage "virtual" samples?

Epidemiology and Evaluation Services

Clinical documentation Department

Biobank

Pathology Department

Low efficiency

High economic cost

Inadequate privacy

Data base=EMR

Surfing the EMR

>20.000 biopsies/year
>140.000 blood tests/year

"virtual" biobank samples

EMR
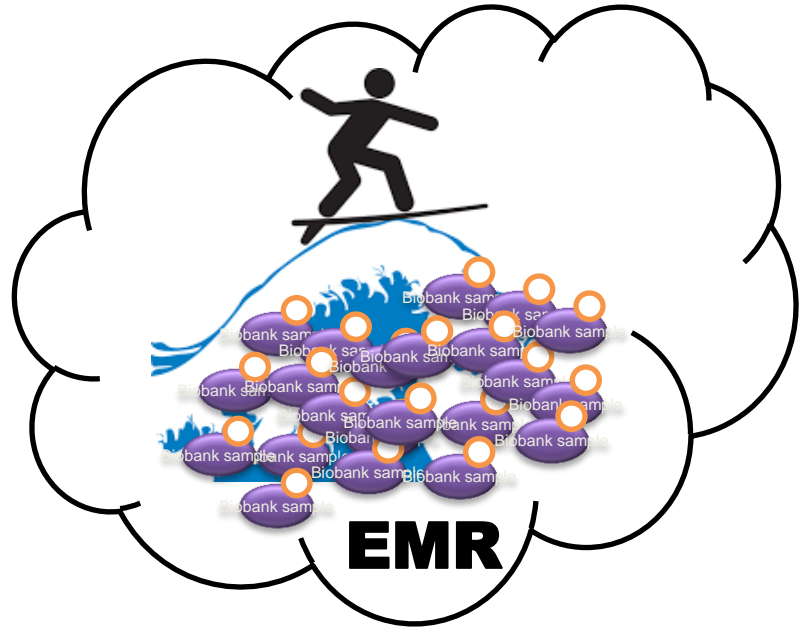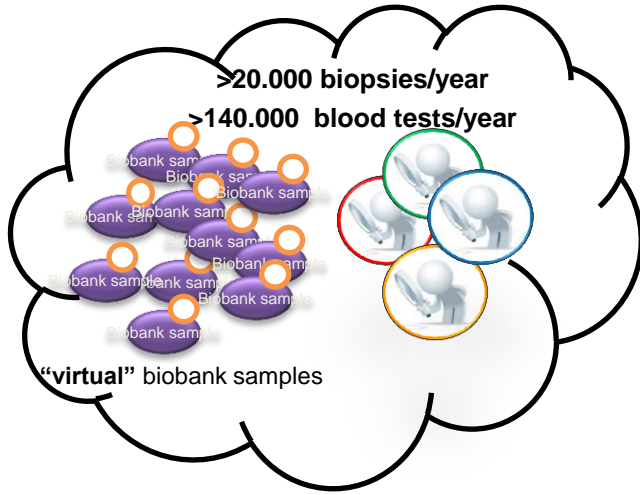
EMR browser

Camps Consulta BIOBANC

Camp 1	Comparació 1	Valor 1	Operador 1
Camp 2	Comparació 2	Valor 2	Operador 2
Camp 3	Comparació 3	Valor 3	Operador 3
Camp 4	Comparació 4	Valor 4	Operador 4
Camp 5	Comparació 5	Valor 5	Operador 5

Darreres Consultes

10 different DB	7 different combinations		
Diagnostics			
Treatments			
Clinical course	>	Coded data	AND
Analytic tests	≥	Free text	OR
Anatomopathological Reports	<		
Molecular reports	≤		
Hospital discharge report	=		
Nursing reports	≠		
Tumour Register	Content (free text)		
Digitalized Documents			

Request example

	Data	Searched on:
	Biobank I.C. availability	Digitalized documents
	Diagnostic date	Anatomopathological report
	Sample date	Analytic tests
	Age	Hospital discharge report
	Gender	Hospital discharge report
Sera from intrahepatic cholangiocarcinoma and hepatocarcinoma patients	Histology data (number and lesions size, vascular invasion)	Anatomopathological report
	TNM staging	Tumour Register
	Cirrhosis	Diagnostics
	HCV	Analytic tests
	HBV	Analytic tests
	Alcohol consumption	Tumour Register
	Tobacco consumption	Tumour Register
	Diabetes	Diagnostics
	Treatments	Treatments and Hospital discharge report
	Exitus	Clinical course

EMR browser benefits

Universal
It allows browsing all the EMR contents.

It's able to search for coded data or free-text.

Useful for all healthcare personnel.

Efficiency
Searching time reduction ≈70%.

Biobank cost case reduction.

Clinical Documentation Department workload reduction.

Privacy
Searches only done in patients with a Biobank I.C.

Coded patients list is returned, preserving personal data.

MARBIOBANC TEAM

THANKS FOR YOUR ATTENTION

www.imim.es