QUALITY AND INNOVATION IN BREAST CENTERS

How to integrate Innovation in our daily practice?

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CGFL
CENTRE GEORGES FRANÇOIS LECLERC
Beating cancer together

UBFC

Conflicts of interest

Participation in boards: Roche, Pfizer, Novartis, Janssen, Sanofi, Pierre Fabre Oncology, Debiopharm

Honoraria duly returned to my institution CGFL

Content

1. Definition of innovation

2. Different type of innovation in health care

3. Barriers to implementation of innovation in daily practice

4. Steps to promote innovation in daily practice
   - Focus on unmet need
   - Promote an innovation culture

5. Conclusions

Definition of innovation

- The word “innovation” comes from the Latin noun innovatio in lay language use
- It refers to the act or process of introducing new ideas, devices, or methods
- In business, economics and politics, the term is often evoked as an imperative to drive growth

Definition of innovation in health care (Breast cancers)

- The concept of ‘therapeutic’ innovation indicates a new treatment such as drugs, medical technologies, devices that entails benefits to the patient when compared with previously existing options
- Current definitions adopted by payers are focused on therapeutic added value and more specifically include clinically significant benefit, large health gains, and favorable risk-benefit balance at an acceptable cost

(1) Motola D, Therapeutic innovation in the European Union : analysis of the drugs approved bt the EMEA between 1995 and 2003, Brit J of Clin Pharmacol 2005;59(4) : 475-478.

Different types of innovation in health care (Breast cancers)

- Incremental innovation
  - The innovation is incremental when it joins in the continuation of an already hired process
  - Benefits to the patients by small steps
    - Examples: new cytotoxics (Taxanes Vs. Anthracyclines) (Capecitabine Vs. Fluorouracil); new hormonal therapy (aromatase inhibitors Vs. Tamoxifen), new targeted therapies (Pertuzumab Vs. Trastuzumab), new formulations (Trastuzumab subcutaneous versus intravenous)….
  - The cumulative effect of the numerous minor incremental innovations can sometimes bring huge benefit
    - Example: Increase over time of survival in MBC with new systemic therapies

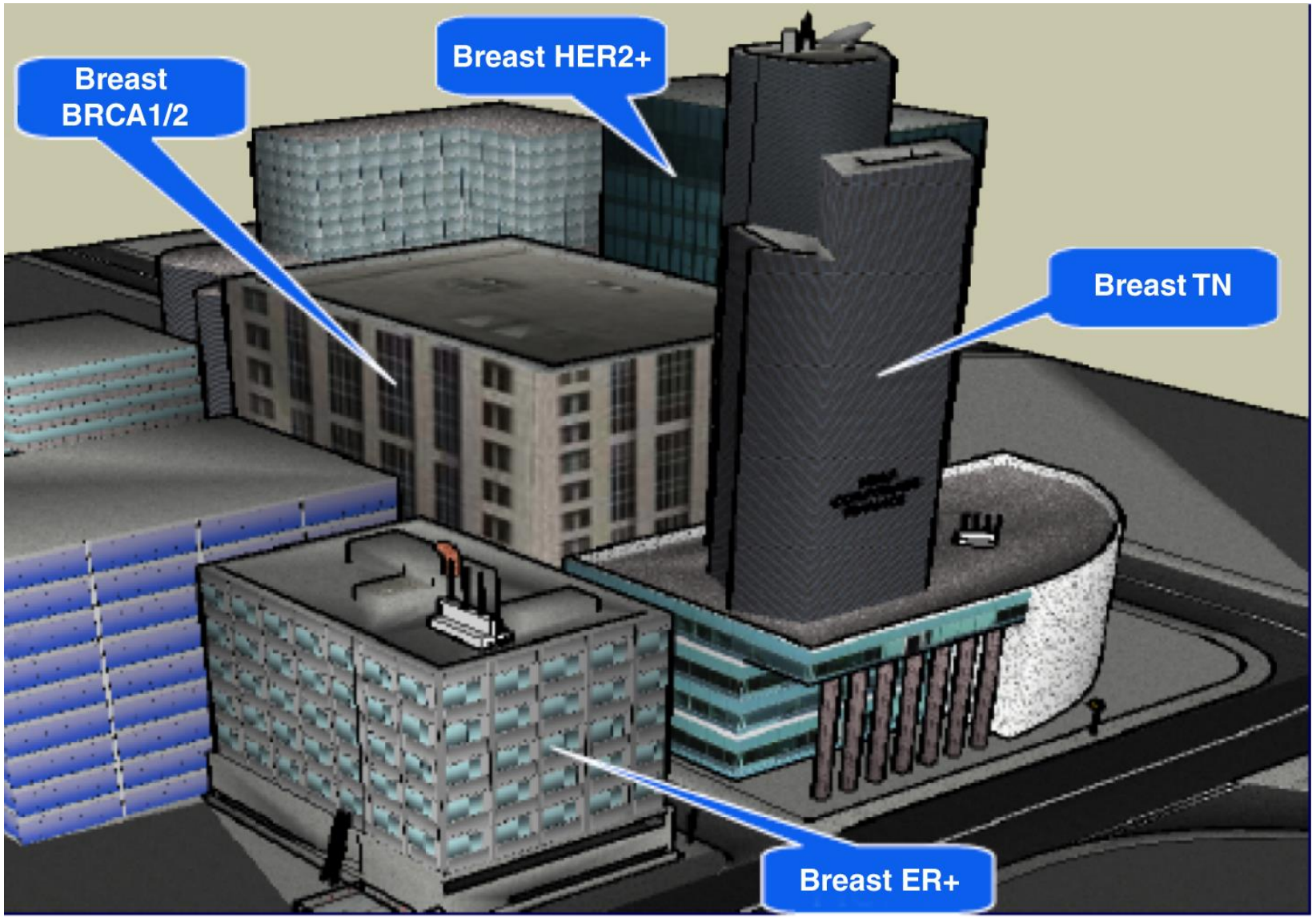
Wertheimer AI, et al. Pharmacoevolution : the advantages of incremental innovation. April 2009. ISBN 1-905041-05-5

Different types of innovation in health care (Breast cancers)

- Breakthrough Innovation
  - involves a paradigm shift
  - examples in breast cancer
    - Gene expression patterns distinguish tumor subclasses with clinical implication (Sorlie T & Perou C PNAS September 11, 2001)
    - Trastuzumab as treatment of HER2 positive BC
    - Ambulatory surgery
    - Per operative radiotherapy

Duveau MH. Innovation technologique au service de la santé. Expertise Pharmacie Santé.Décembre 2010/Janvier 2011

Breast Cancer; new innovative buildings?



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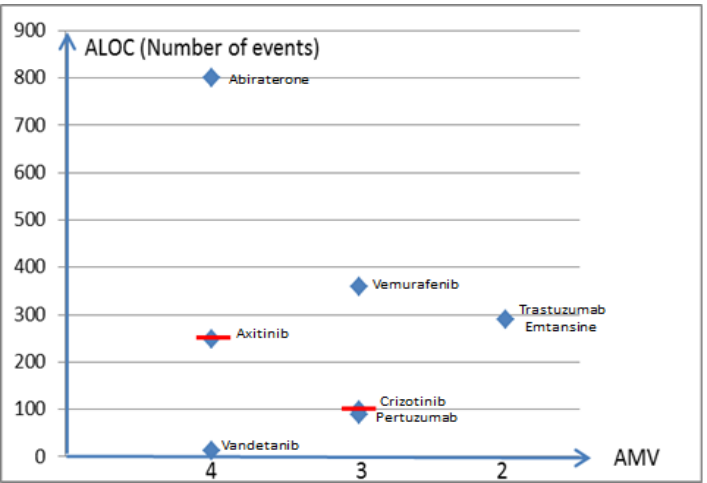
Barriers to implementation of innovation in daily practice (1)

- A gap between evidence (innovation) and daily practice
- MEDLINE, about 10 000 new trials included every year and 350 000 trials identified by the Cochrane collaboration
- Studies from US and Netherlands suggest that about 30 – 40% of patients do not receive care according to present scientific evidence and innovation

Schuster M, et al. How good is the quality of Health care in the United States? *Milbank Q* 1998; **76** 517-63
Grol R. et al. Successes and failures in the implementation of evidence-based guidelines for clinical practice *Med Care* 2001; 39 (suppl 2) 46-54

Barriers to implementation of innovation in daily practice (2)

- A Loss of Chance Index: a new tool for optimizing patient access to innovative drugs
  - Objectives: to report time-lags between European Marketing Authorisation (EUMA) and French Pricing and Reimbursement Decision (FPRD) for **12** recent innovative anti-cancer drugs and to quantify the corresponding patient absolute loss of chance
  - The time-lags between EUMA and FPRD ranged from 7.4 months (enzatulamide) to 29.9 months (cabazitaxel)
  - The overall ALOC ranged from 9 to 799 medical events



Gavini F, Sarkozy F, Jouan-Flahault C, Fumoleau P.
A Loss of Chance Index:
a New Tool for Optimizing Patient Access to Innovative Drugs.
Value Health. 2015 Nov;18(7)

Barriers to implementation of innovation in daily practice (3)

- **Potential barriers regarding the management of my institution**

1. Practice environment (organisational context)
   - Financial disincentives; e.g., lack of reimbursement, huge investment with a business not stabilized plan
   - Organisational constraints; e.g., lack of time
   - Perception of liability; e.g., risk of formal complaint

2. Prevailing opinion (social and professional context)
   1. Standards of practice; e.g., usual routines Vs. innovation
   2. Opinion leaders; e.g., key persons not agreeing with evidence
   3. Medical training; e.g., obsolete knowledge
   4. Advocacy; e.g., by pharmaceutical companies
   5. Information overload; e.g., inability to appraise evidence

Steps to promote innovation in daily practice (1)

- Ce … ter at
- 20… ts (3…
- Ra…

HÔPITAUX

		ACTIVITÉ	NOTORIÉTÉ	AMBULATOIRE	CHIRURGIE RÉPAR.	INDICE DE GRAVITÉ	CHIMIOTHÉRAPIE	RADIOTHÉRAPIE	PET-SCAN	NOTE / 20
1er	Institut Curie (CLCC), Paris	3665	81 %	18 %	302	28,2	●	●	●	18,87
2e	Gustave-Roussy (CLCC), Villejuif (Val-de-Marne)	1366	75 %	17 %	181	30,9	●	●	●	18,84
3e	Centre Léon-Bérard (CLCC), Lyon (Rhône)	983	60 %	28 %	185	29,6	●	●	●	18,79
4e	Inst. Cl.-Regaud (CLCC)/IUC, Toulouse (Hte-Garonne)	1114	60 %	35 %	103	29	●	●	●	18,76
5e	Ctre Georges-François-Leclerc (CLCC), Dijon (Côte-d'Or)	863	49 %	24 %	75	31,1	●	●	●	18,72
6e	Institut Bergonié (CLCC), Bordeaux (Gironde)	1179	45 %	21 %	201	29	●	●	●	18,70
6e	Hôpital européen Georges-Pompidou, Paris	446	63 %	28 %	183	35,4	●	●	●	18,70
8e	Inst. du cancer de Montpellier, Montpellier (Hérault)	1234	51 %	25 %	197	28,2	●	●	●	18,67
9e	Hôpital Saint-Louis, Paris	725	55 %	7 %	138	35,7	●	●	●	18,43
10e	ICO centre Paul-Papin (CLCC), Angers (Maine-et-Loire)	764	22 %	38 %	69	28,8	●	●	●	18,27
11e	ICO R.-Gaudducheau (CLCC), St-Herblain (L.-Atlantique)	821	39 %	28 %	153	27,6	●	●	●	18,26
12e	Ctre Eugène-Marquis (CLCC), Rennes (Ille-et-Vilaine)	747	41 %	31 %	116	28,2	●	●	●	18,17
13e	Hôpitaux universitaires, Strasbourg (Bas-Rhin)	585	40 %	9 %	86	31,5	●	●	●	18,04
14e	Centre Oscar-Lambret (CLCC), Lille (Nord)	1026	37 %	13 %	139	26,4	●	●	●	18,03
15e	Institut Jean-Godinot (CLCC), Reims (Marne)	495	57 %	10 %	38	33,3	●	●	●	17,97
16e	Inst. Paoli-Calmettes (CLCC), Marseille (B.-du-Rhône)	961	45 %	19 %	73	26,1	●	●	●	17,93
17e	Ctre Antoine-Lacassagne (CLCC), Nice (Alpes-Maritimes)	650	20 %	13 %	80	29,6	●	●	●	17,90
18e	Centre François-Baclesse (CLCC), Caen (Calvados)	754	35 %	16 %	87	28	●	●	●	17,89
19e	Ctre Henri-Becquerel (CLCC), Rouen (Seine-Maritime)	618	45 %	28 %	69	32,1	NR	NR	NR	17,75
20e	Ctre J.-Perrin (CLCC), Clermont-Ferrand (Puy-de-Dôme)	747	57 %	2 %	85	30,1	●	●	●	17,68

Steps to promote innovation in daily practice (2)

- **Access to innovation for patients with breast cancer: how to speed it up?**
- 1/ Focus on unmet need
  - Invest in researching patients needs, in different subtypes with a view to developing a broad picture of patients priorities
  - Focus the research along the whole pathway of care, including how the care is organized, delivered and evaluated
  - Looking at issues during diagnosis, treatment, care and after treatment
  - Including patients as early as possible in the research innovation process

Steps to promote innovation in daily practice (2)

- **Access to innovation for patients with breast cancer: how to speed it up?** 1/ Focus on unmet need

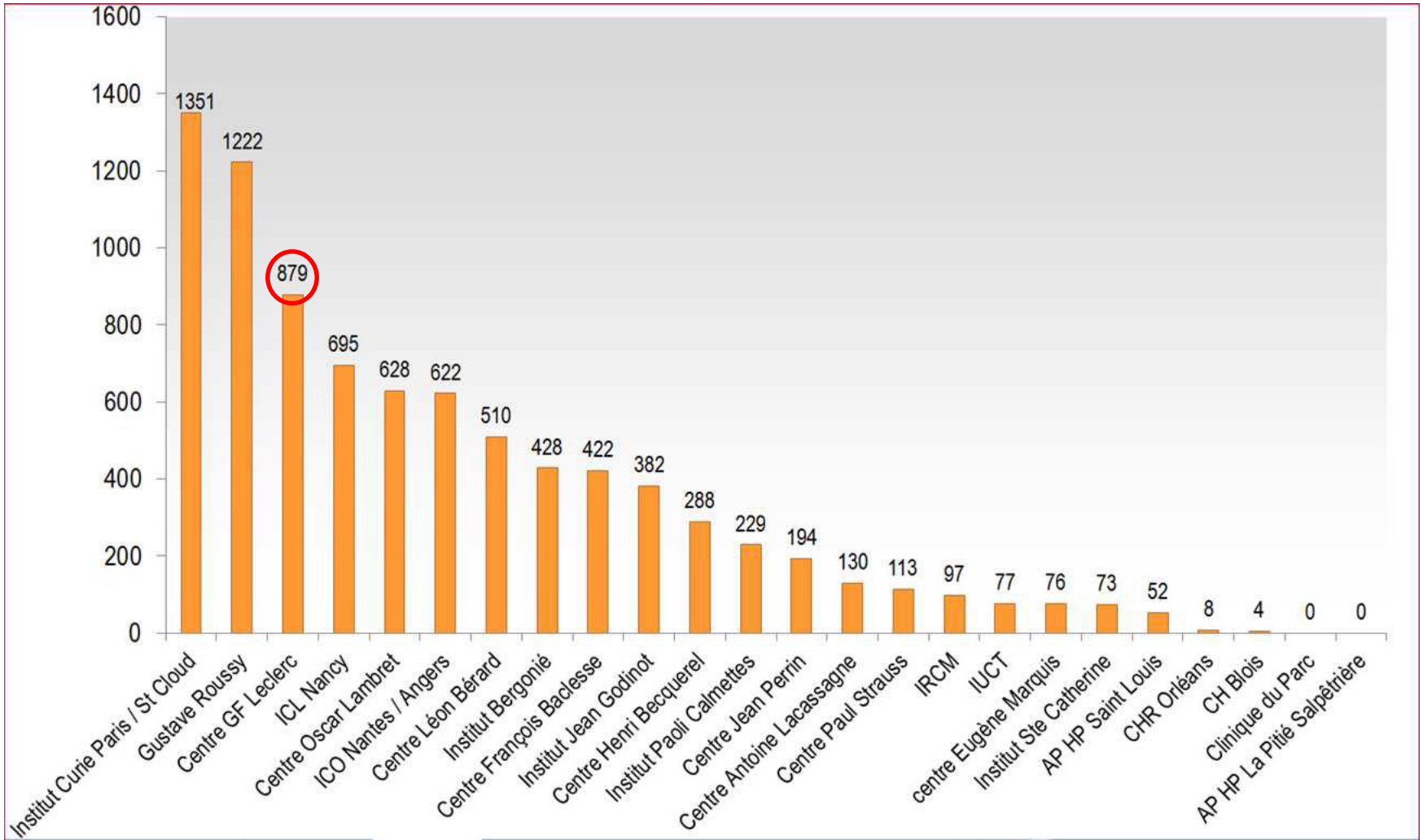
1.1 Patients included in clinical trials

	2008	2009	2010	2011	2012	2013	2014	2015
%	11.5	18.3	23	21	20	21	18.5	19.9

- 45/650 employees dedicated to translational & clinical research

Steps to promote innovation in daily practice (2)

- **Access to innovation for patients with breast cancer: how to speed it up?** <u>1/ Focus on unmet need</u>



Steps to promote innovation in daily practice (2)

- **Access to innovation for patients with breast cancer: how to speed it up?** 1/ Focus on unmet need

1.2 Innovation in loco regional treatment

- Personalized surgery – de-escalation
  - Breast-conserving therapy
    - In multifocal breast tumors
    - Oncoplastic procedures – neoadjuvant treatment
    - After recurrence (previously treated with radiotherapy)
  - Improved surgery by better localization techniques
  - Sentinel lymph node procedure after neoadjuvant treatment for patients with metastatic lymph node involvement before

- Quality of life
  - Reconstructive surgery: DIEP
  - Ambulatory surgery
  - Hypofractionated Radiotherapy / per operative radiotherapy

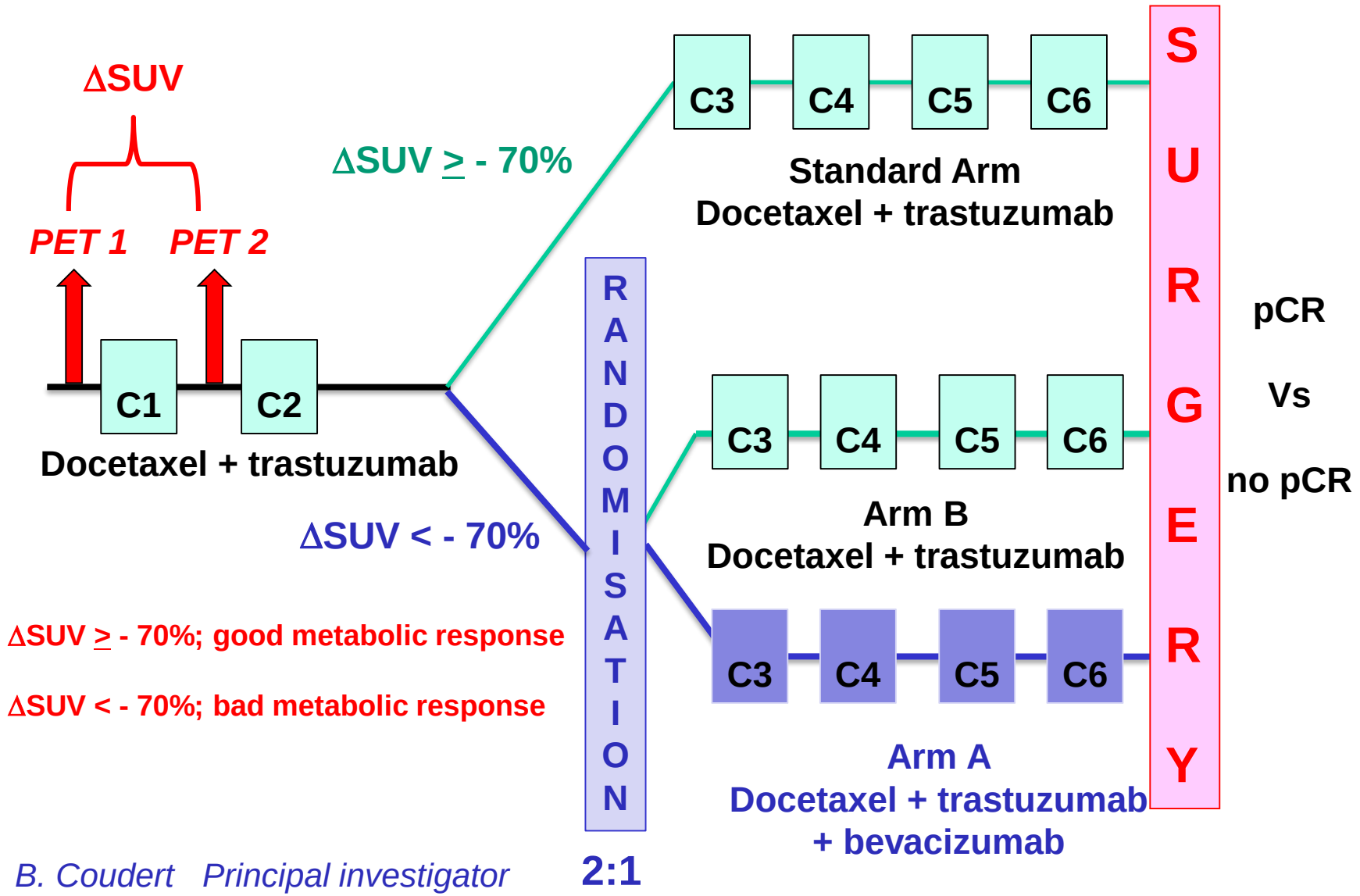
Steps to promote innovation in daily practice (2)

- **Access to innovation for patients with breast cancer: how to speed it up?** 1/ Focus on unmet need

1.3 Innovation in functional imaging

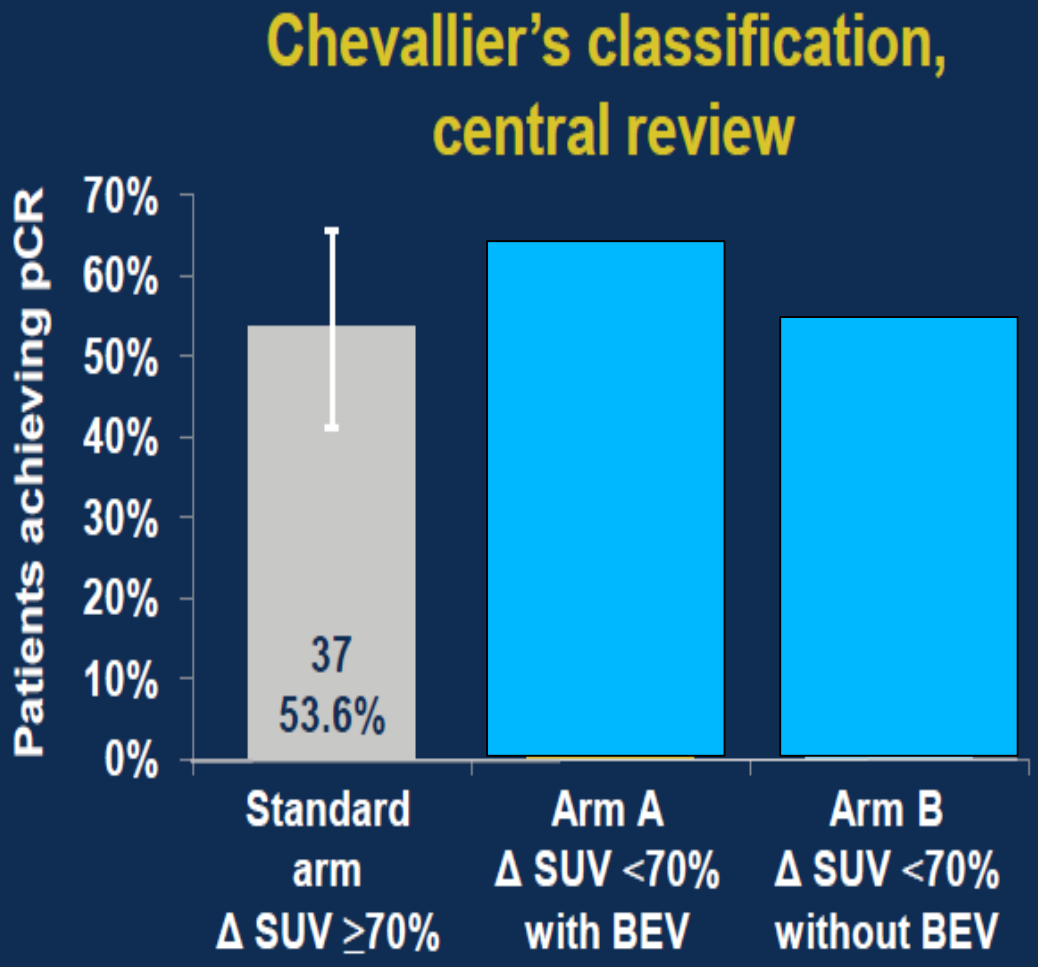
AVATAXHER

- **Methods**; Neoadjuvant setting HER2+



B. Coudert Principal investigator

AVATAXHER: Primary objective (ITT)

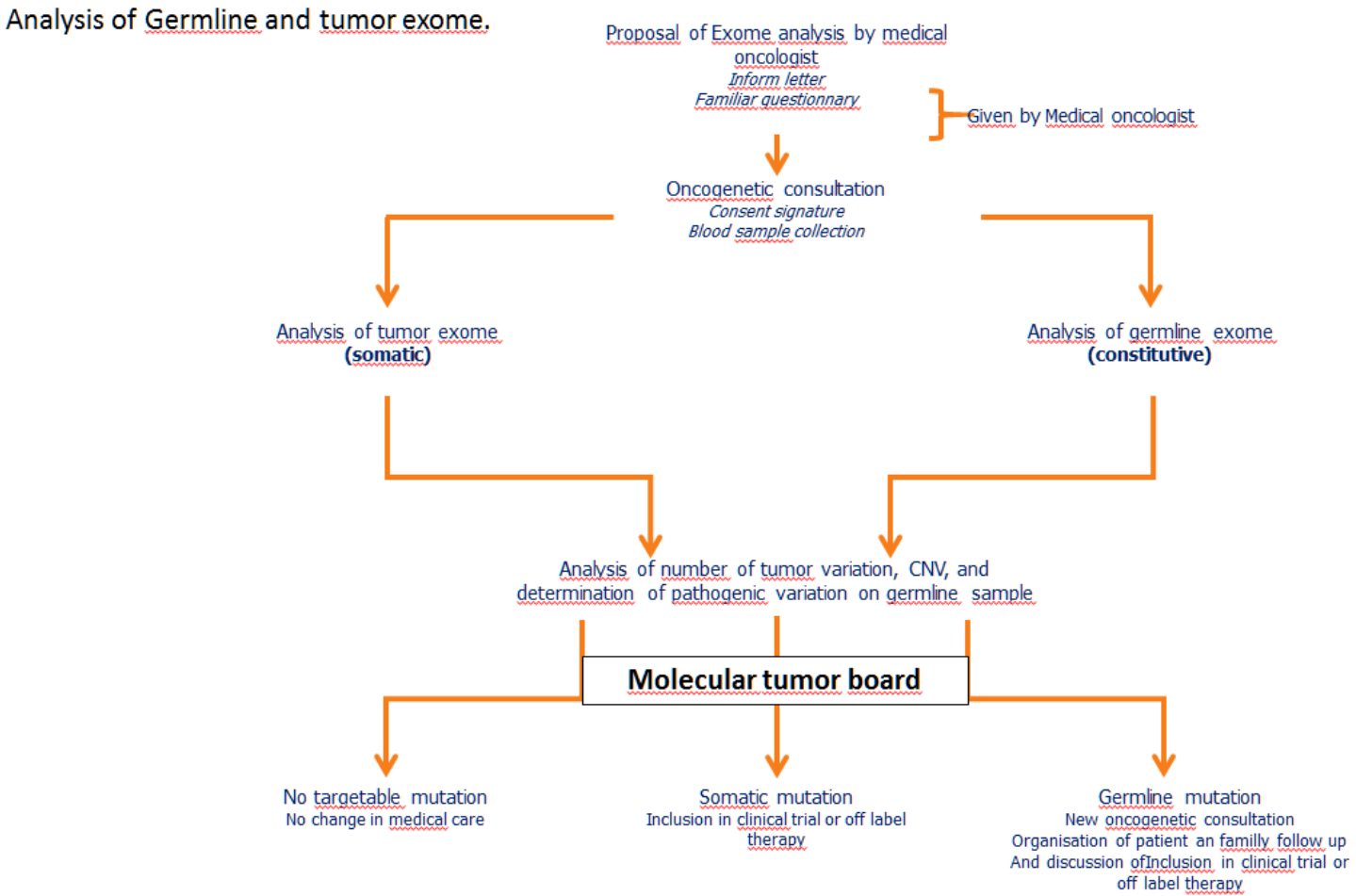


CI, confidence interval; pCR, pathological complete response

Steps to promote innovation in daily practice (2)

- **Access to innovation for patients with breast cancer: how to speed it up?** 1/ Focus on unmet need

1.4 Clinical application of genomic sequencing technologies



Steps to promote innovation in daily practice (3)

- **Access to innovation for patients with breast cancer: how to speed it up?**
- 2/ Promote an innovation culture
  - 2.1 Develop a system-wide strategy for investment in innovation that fit needs with a joined-up approach involving:
    - people in developing innovation
    - people responsible for developing and implementing cancer strategies/plan and budget (general management)
    - payers who take decision to reimbursement
    - institutions (regional council, INCa..) and charitable trusts who take decision for funding investments

Steps to promote innovation in daily practice (3)

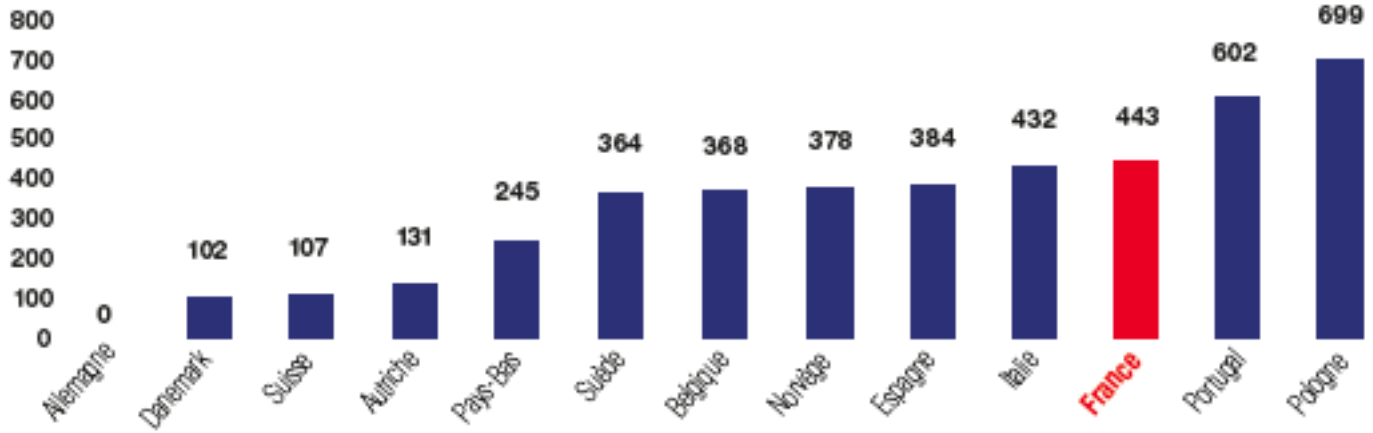
- **Access to innovation for patients with breast cancer: how to speed it up?** 2/ Promote an innovation culture

- CGFL, financial situation, budget 2015: 78 705 325 euros
  - an annual fiscal surplus since 2007
  - despite implementation of innovation in clinical practice
    - NGS
    - high tech accelerators, per operative radiotherapy
    - ambulatory surgery requiring new building
    - functional imaging platform from preclinical to clinical (cyclotron, PET..)
  - decision to delay proton therapy: huge investment with a business not stabilized plan

Steps to promote innovation in daily practice (4)

- **Access to innovation for patients with breast cancer: how to speed it up?**
- 2/ Promote an innovation culture
  - 2.2 Implement patient-centre multidisciplinary meeting, where all professional are treated with equal respect, and teams are expected to be continuously pose the question: how can we do things better (using innovation)?

Time-lags between European Marketing Authorisation (EUMA) and French Pricing and Reimbursement Decision (FPRD)



Délais moyens d'accès au marché des nouvelles entités chimiques ayant obtenu une première autorisation de mise sur le marché entre 2010 et 2013 ; évaluation du délai moyen entre l'obtention de l'AMM et la commercialisation. Source : EFPIA - Patient WAIT Indicator

Steps to promote innovation in daily practice (4)

- **Access to innovation for patients with breast cancer: how to speed it up?** 2/ Promote an innovation culture

- At CGFL, decision to implement these multidisciplinary meetings in order to allow prescription of innovative drugs or genomic signature without reimbursement using:
  - compassionate approach (pharmaceutical companies)
  - temporary use system (ministry of health)
  - FIR: regional funding mainly for genomic signature (Oncotype DX)
  - clinical trials if possible
  - funding from the center itself after a General Manager Agreement (case by case)

  - In any case, the patient will pay for innovative treatments

Steps to promote innovation in daily practice (5)

- **Access to innovation for patients with breast cancer: how to speed it up?**
- 2/ Promote an innovation culture
  - 2.3 invest in the evaluation of innovation: direct costs and indirect financial benefit (CGFL image as an area of innovation inducing an increase of patients)
    - example; per operative radiotherapy (1 Vs. 25 treatment sessions)
  - 2.4 provide training for clinicians in cost-effectiveness evaluation

Conclusions

- **More patients to treat with more innovative treatment but with potentially less resources in the future**
- **To date, integration of innovation in our daily practice is feasible in a French Breast Cancer Center**
- **Evaluation of innovation is necessary**
- **But, we need vision at National and European levels to champion innovation as a goal**
- **Oncologist must have the responsibility to lead innovation to avoid a dominant role from economists, administrators and politicians**