

BACKGROUND

In our hospital, a dermatologist required us to produce **skin tests** (and more precisely patch tests) with **cytotoxic** and **anti-HER2 antibody** agents (docetaxel, pertuzumab, trastuzumab) in order to evaluate the hypersensitivity of a patient who developed a photosensitive dermatosis after a second cycle of chemotherapy.

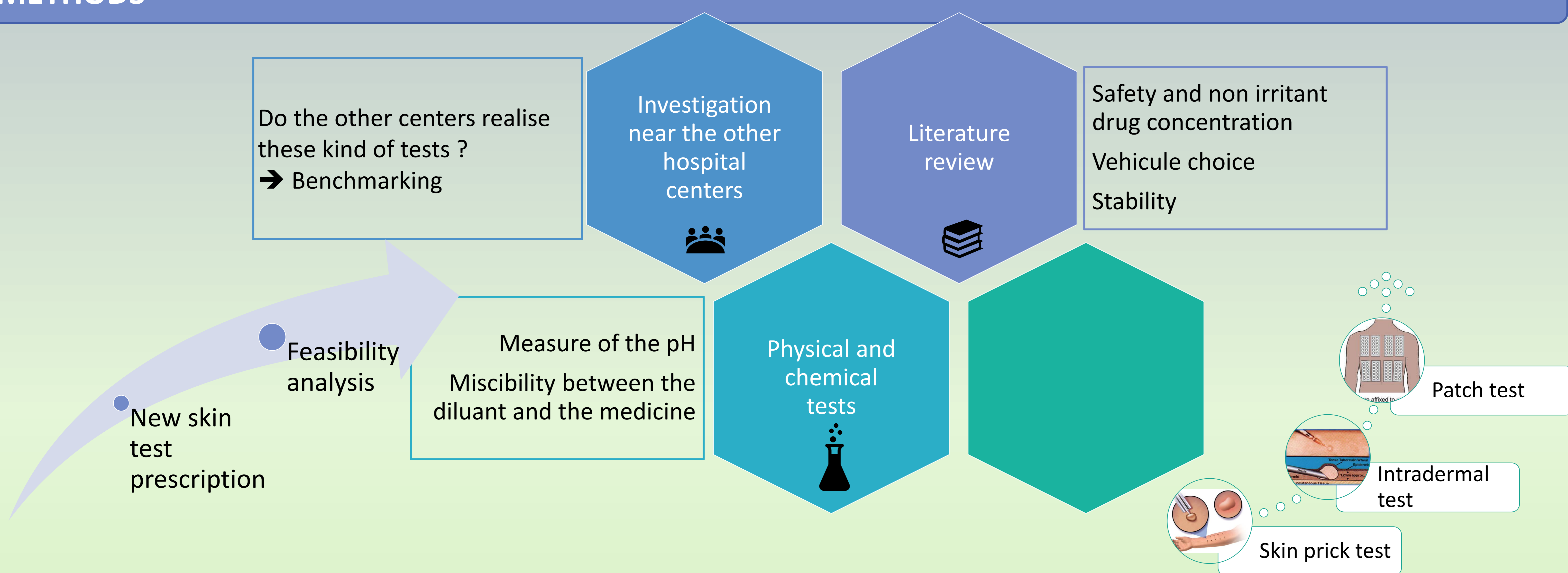
Key points of drug hypersensitivity reactions :

- ✓ unpredictable
- ✓ 15% of adverse drug reactions (ADR)
- ✓ drug allergy or non-immunological drug hypersensitivity reaction
- ✓ immediate reactions (manifestations within 1-6 hours following drug intake) or delayed reactions (manifestations several hours to days later)

PURPOSE

Because of lack of data about skin tests with cytotoxic agents, the aim of this project was to realize a feasibility study for the production of skin tests preparations with these three molecules.

METHODS



RESULTS

Literature review

- pH drug must be superior to 6 and inferior to 9
- Excipient used for patch tests preparation : petroleum jelly in most of publication (or water)
- Drug concentration : 10% of pure active drug or 30% if commercialized form is used
- Positive control : histamine or codeine phosphate
- Negative control : 0,9% saline
- No stability data

Barbaud et al. 2007

Investigation near the other hospital centers

- Preparation realized in clinical services in most of the time
- 3 hospital centers : only prick tests
- 1 hospital : prick, IDR, and patch tests but mainly for platinum salt

Physical and chemical tests

- Docetaxel is too acid (pH drug pur = 3 ; diluted with 0,9 percent sodium chloride drug pH = 4) ❌
- Docetaxel immiscible with water
- pH of trastuzumab and pertuzumab = 7 ✅
- pH of the diluant = 7
- Trastuzumab and pertuzumab miscible with petroleum jelly

Skin tests performed :

- ✓ Docetaxel → prick test
 - ¼ dilution
 - Sterile preparation in syringe
- ✓ Trastuzumab and pertuzumab : patch tests
 - 30% petroleum jelly
 - Vertical laminar airflow hood
- ✓ Conservation : 1 day (2-8°C)

CONCLUSION

The literature deals mainly with platinum agents, and more often with skin prick tests and intradermal tests. We were confronted with the difficulty to have poor data to face the request of the dermatologist. Moreover, according to the literature, cytotoxic patch tests commonly reveal false negative results. This activity in routin needs the development of a local thesaurus and an economic study because of its expansive cost.

