

# Diagnosis support.

## Need

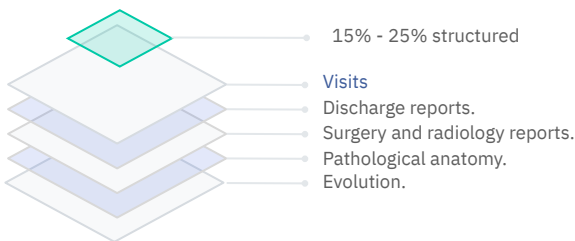
A support tool for early breast cancer detection, based on the following criteria:

- ✓ Women, more than 45 years old.
- ✓ Other specific risk factors: first or second-degree relatives with breast cancer diagnosis, overweight, sedentary lifestyle, smokers, non-healthy eating habits.
- ✓ Presence of unfrequent symptoms: itch, reddening of breasts, back pain, pain and sensitivity in underarms.

## Problem.

### Plenty of information, lack of data.

Most clinical information in millions of health records is in unstructured format, ie text.



Mentioned risk factors and symptoms are in visit notes. This means that they are "buried" under this 75%-85% unstructured information, being ignored and leading to late diagnosis.

## Solution

### Natural Language Processing



1

Electronic Health Records.  
Including text.



2

Natural Language Processing identifies all clinical concepts.



3

Structured Database through NLP Coded.

## Result



- ✓ Recurring queries are run upon structured database.
- ✓ Patients that comply with criteria are selected.
- ✓ Doctors receive an alarm and decide if selected patients require additional examination.

## Benefits

In a year, 500 patients with probability of breast cancer diagnosis were found.

Earlier diagnosis and treatment.

Data security guaranteed.