

IBM Health Corps



ChemoQuant: A new tool to assist with quantifying chemotherapy requirements

November 2, 2016
Paris, France



ACS and CHAI seek to implement a comprehensive and large-scale program to transform the oncology market in Sub-Saharan Africa, vastly increasing access for cancer prevention, treatment, and care.

This program consists of four fundamental objectives:

- 1) **increase access to affordable chemotherapy and radiotherapy** by organizing the oncology market to create lower prices and consistent supply;
- 2) **increase access to quality cancer care at hospitals** by optimizing the utilization of human resources, creating partnerships with international centers of excellence, and strengthening procurement and stock management processes;
- 3) **create an enabling environment** at the national level, supporting governments to develop the policy, regulatory, and financial framework in which access to cancer treatment can expand. These objectives are laid out below, along with the key challenges and the ACS/CHAI approach in Ethiopia and Nigeria; and
- 4) **increase the prevention and early diagnosis of cancer** by designing and rolling out an affordable, scalable cervical cancer screen-and-treat and breast cancer screening program.

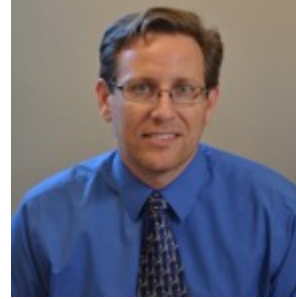
- IBM Health Corps is a global pro bono program focused on tackling health disparities.
- Partner with health organizations across the world, contributing the time and expertise of teams of IBM experts for three weeks on the ground.
- Uses IBM cognitive tools and analytics to help partner organizations expand health access and services, and improve health systems and outcomes.

IBM Health Corps ACS Team



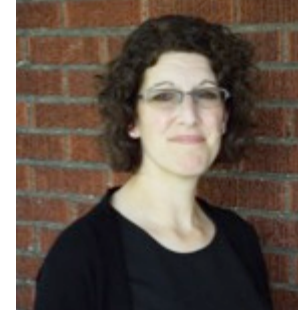
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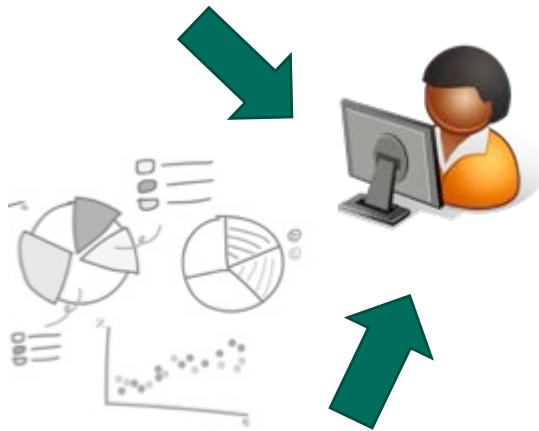
ChemoQuant – Solution Overview

1

Identify forecast need:

- Breast
- Cervical
- Colorectal

NCCN, WHO or local guidelines



2

Convene
Workshop



Specify in ChemoQuant:

- Patient distribution (# of patients per cancer)
- Cancer characteristics – how presenting
- Regimens – treatments needed
- Drug Settings – amount of treatment

A screenshot of the ChemoQuant software interface showing the 'Patient Distribution by Cancer' table. The table has columns for Cancer, Original Number of Patients, Updated Number of Patients, and Actions. The data is as follows:

Cancer	Original Number of Patients	Updated Number of Patients	Actions
Breast	998	998	Sort / Clear
Cervix uteri	1,615	1615	Sort / Clear
Colorectum	435	435	Sort / Clear
Kaposi sarcoma	1,499	1499	Sort / Clear

3

Comprehensive, dynamic
reporting

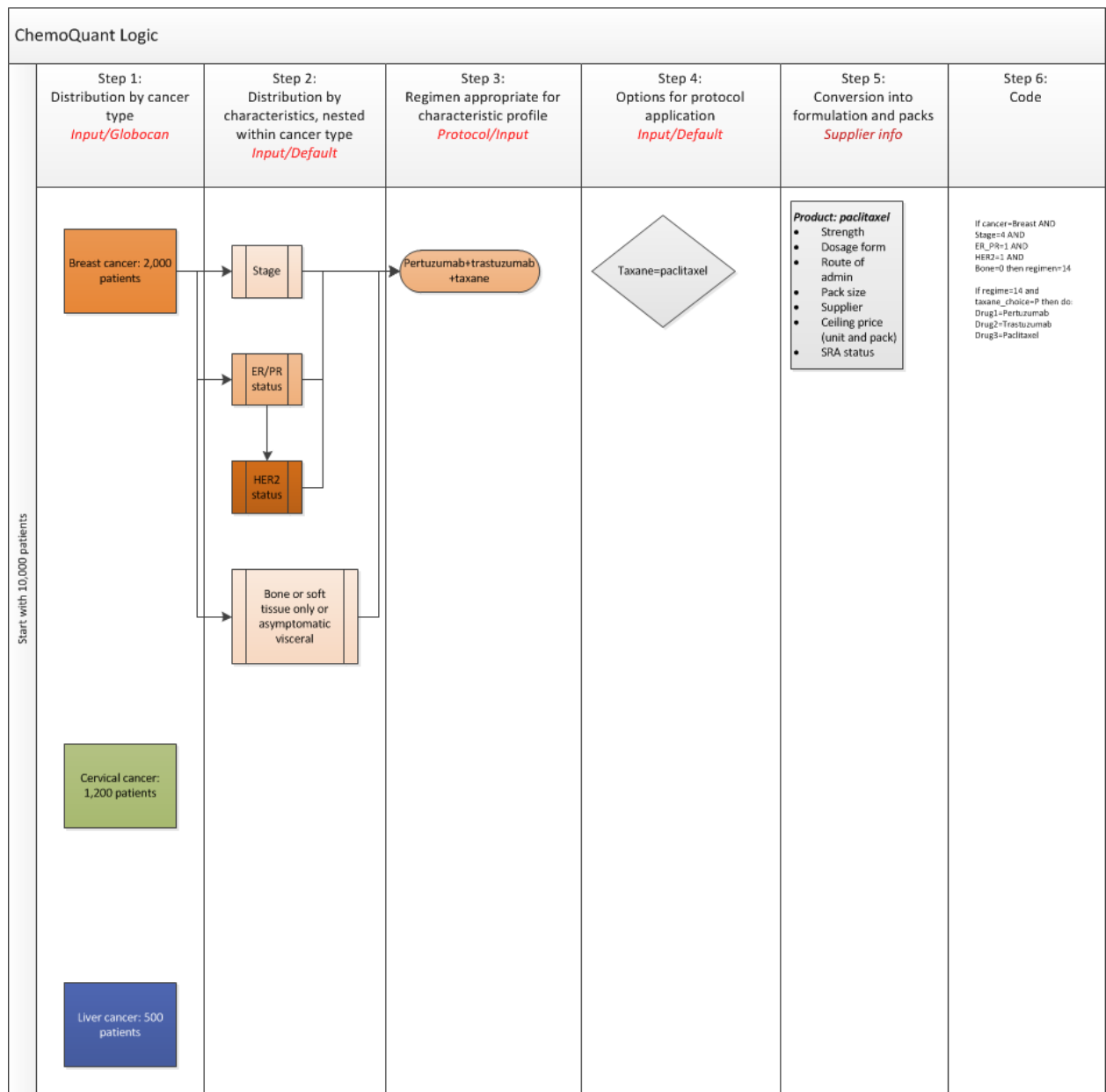
- Procurement List
– basic drug listing
- Drug by Cancer
- Drug by Manufacturer

Data saved locally or in cloud
Downloaded as Excel

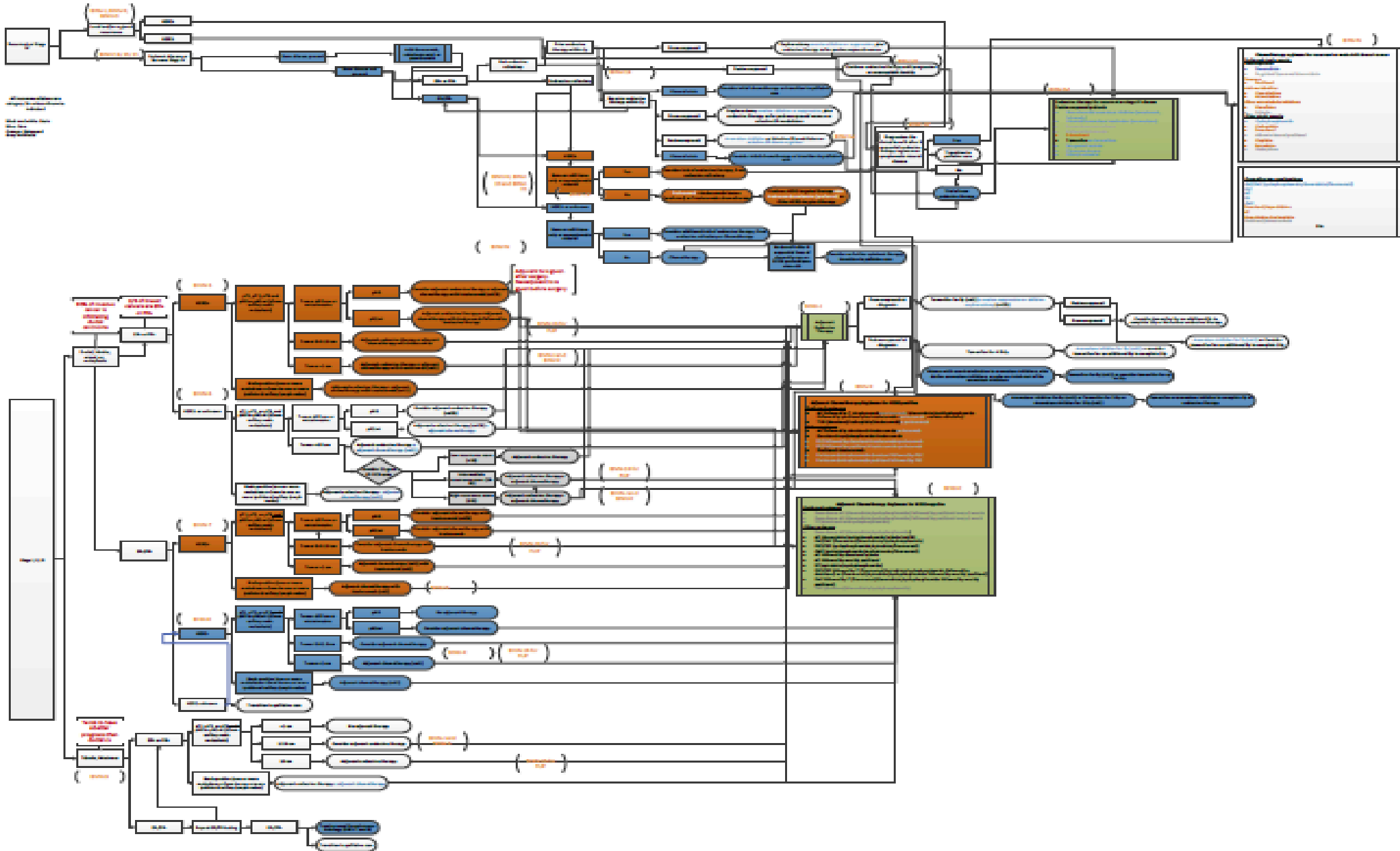
A screenshot of the ChemoQuant software interface showing the 'Procurement List' table. The table has columns for Drug Name, SRA Approved, Strength (mg), and Formulation. The data is as follows:

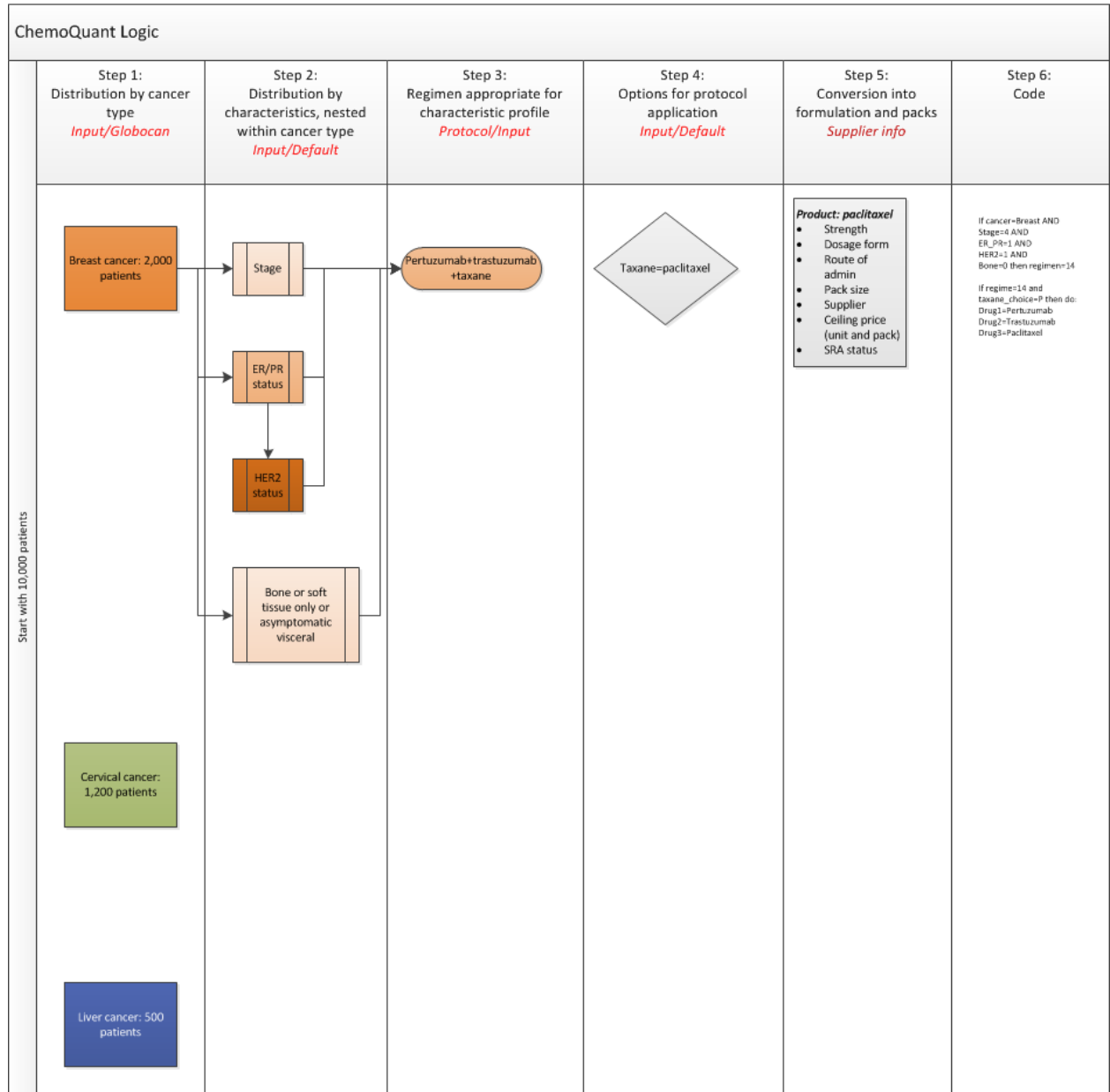
Drug Name	SRA Approved	Strength (mg)	Formulation
Paclitaxel	Yes	100	Vial
Epirubicin	Yes	50	Vial
Docetaxel	Yes	80	Vial
Docetaxel	Yes	20	Vial
Cyclophosphamide	Yes	1000	Vial
Carboplatin	Yes	450	Vial

Tool logic



Logic maps: Cancer type and guideline





Step 1: 14 cancer types

Breast cancer:

- Step 2: 21 buckets
- Step 3: 64 regimens
- Step 5: 136 products

ChemoQuant – Cancer coverage

- Total cancers supported: **14**
- Total guidelines: **22**

Cancer	NCCN	WHO	UCI*
Breast	✓	✓	
Cervix	✓	✓	
Prostate	✓	✓	
Liver	✓		
Kaposi sarcoma		✓	✓
Colon	✓	✓	
Rectal	✓	✓	
Oesophagus	✓		
Stomach	✓		
Lung	✓		
AML	✓	✓	
ALL	✓	✓	
CML	✓	✓	
CLL	✓	✓	

* UCI: Uganda Cancer Institute guidelines

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THANK YOU