

Engineering Dimensions Ltd.

Introducing cutting edge technology with customized financial solutions for NICRH Bangladesh



DISCLOSURE

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BANGLADESH HEALTHCARE SCENARIO

- Total Area 148,460 Square km (57,320 sq mi)
- Population 163 Million.
- Total GDB \$330 Billion.
- Total 8 Divisions.
- Rural population – 70%.
- Total fertility rate – 2.1.
- Population is doubling in every 25- 30 years.

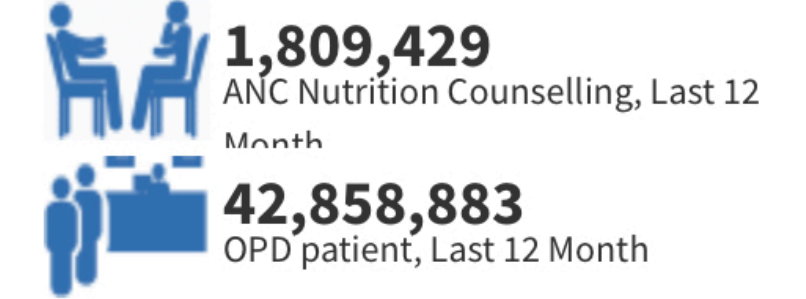
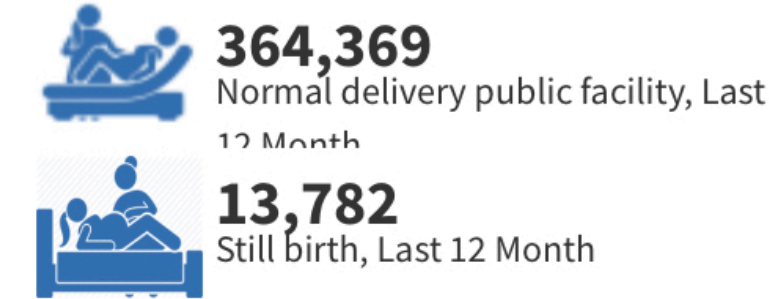
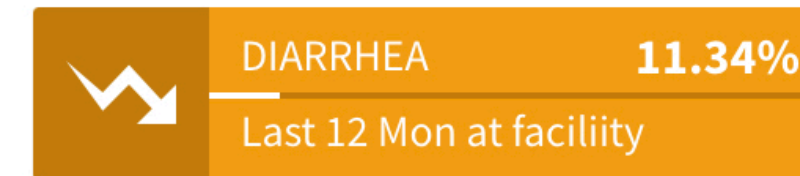
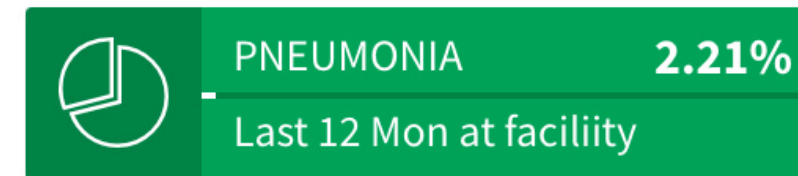
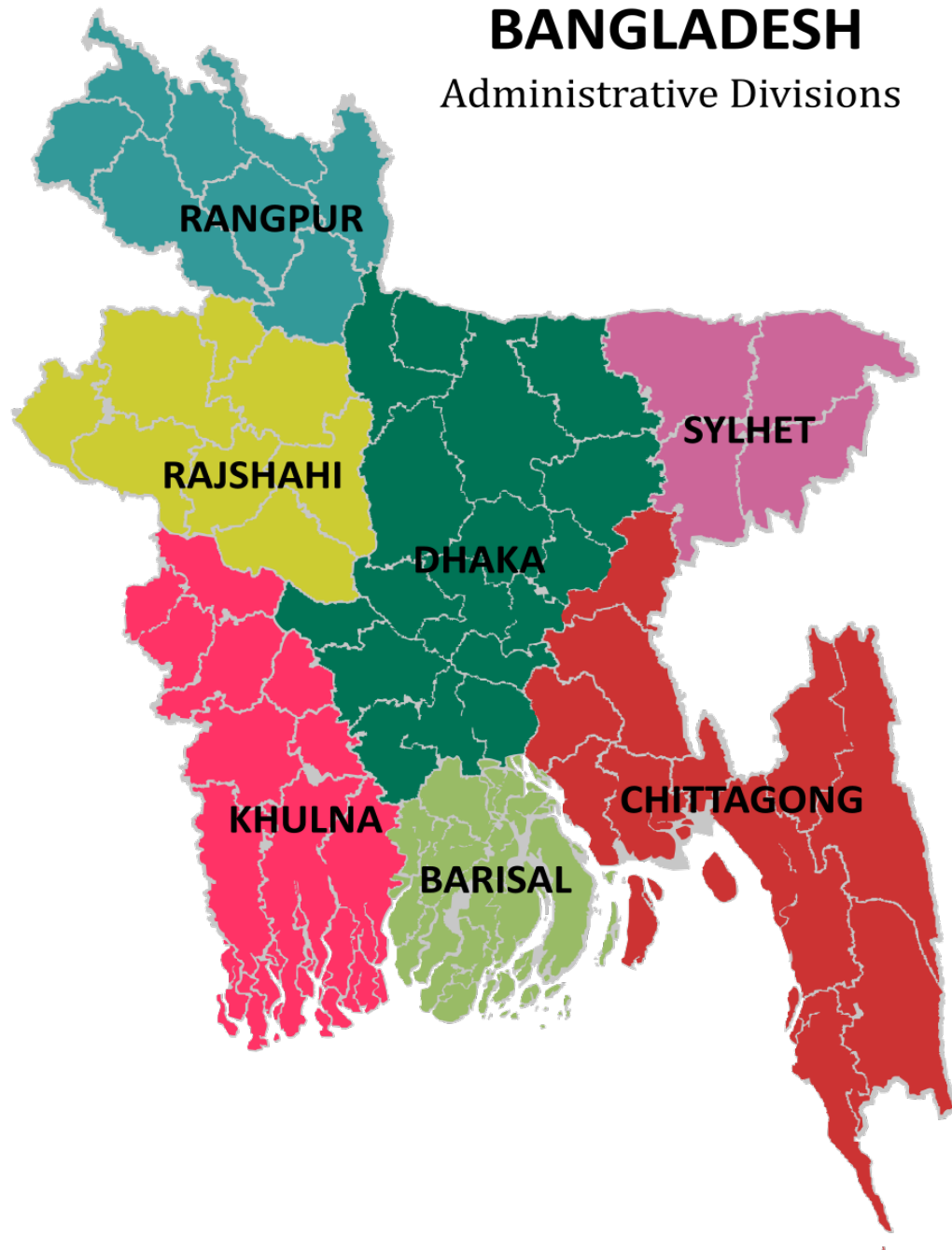
Healthcare Infrastructure – Govt.

- 35 Medical College
- 7 Specialized Hospitals
- 1 University Hospital
- 64 District Hospital
- 436 Upazilla Health Complex
- 8 CMH (Combined Military Hospital)
- 5 Police Hospital
- 9 Dental College

Healthcare Infrastructure – Private

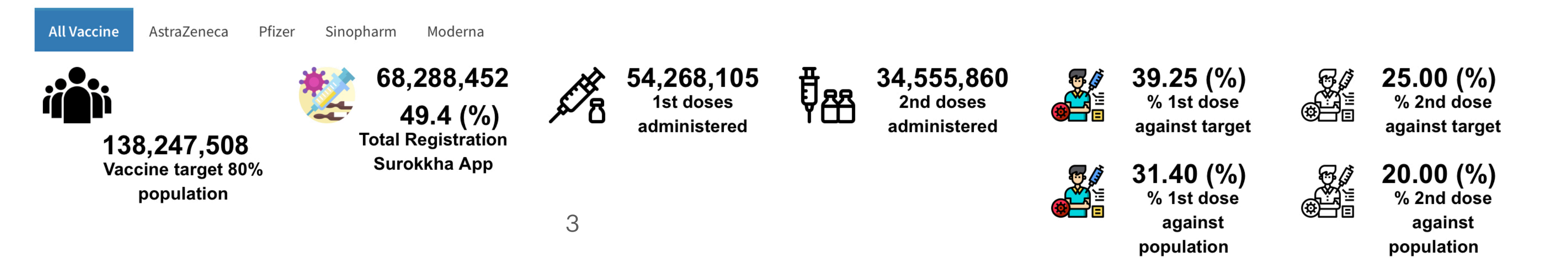
- 38 Medical College
- 26 Large Specialized Hospitals
- 400 + Mid level Diagnostics Center & Hospitals.
- 20,000 ++ Small Clinics

BANGLADESH
Administrative Divisions



COVID-19 Dynamic Dashboard for Bangladesh

National Statistics **Weekly Dashboard** **Hospital Information** **Vaccination**



SI	Facility type	Bed occupancy rate
1	Specialty Postgraduate Institute & Hospital	92.98
2	Medical College Hospital	146.20
3	District Hospital	146.07
4	Upazila Health Complex	85.28

CANCER IN BANGLADESH

Numbers at a glance

Total population

164 689 383

Number of new cases

156 775

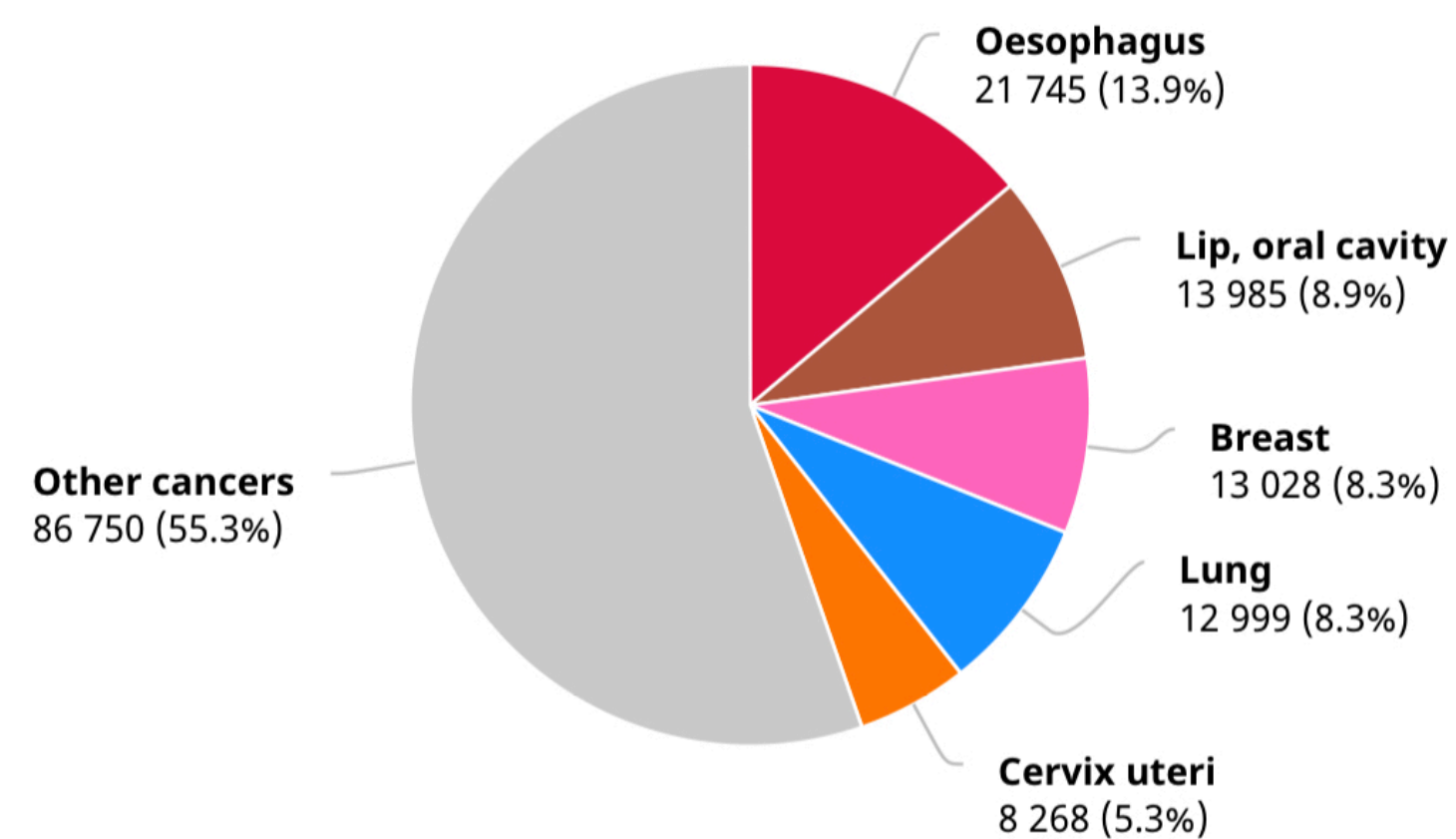
Number of deaths

108 990

Number of prevalent cases (5-year)

270 866

Number of new cases in 2020, both sexes, all ages



Total: 156 775

BURDEN OF CANCER

Total population (2019)

163,046,173

Total # cancer cases (2018)

150,781

Total # cancer deaths (2018)

108,137

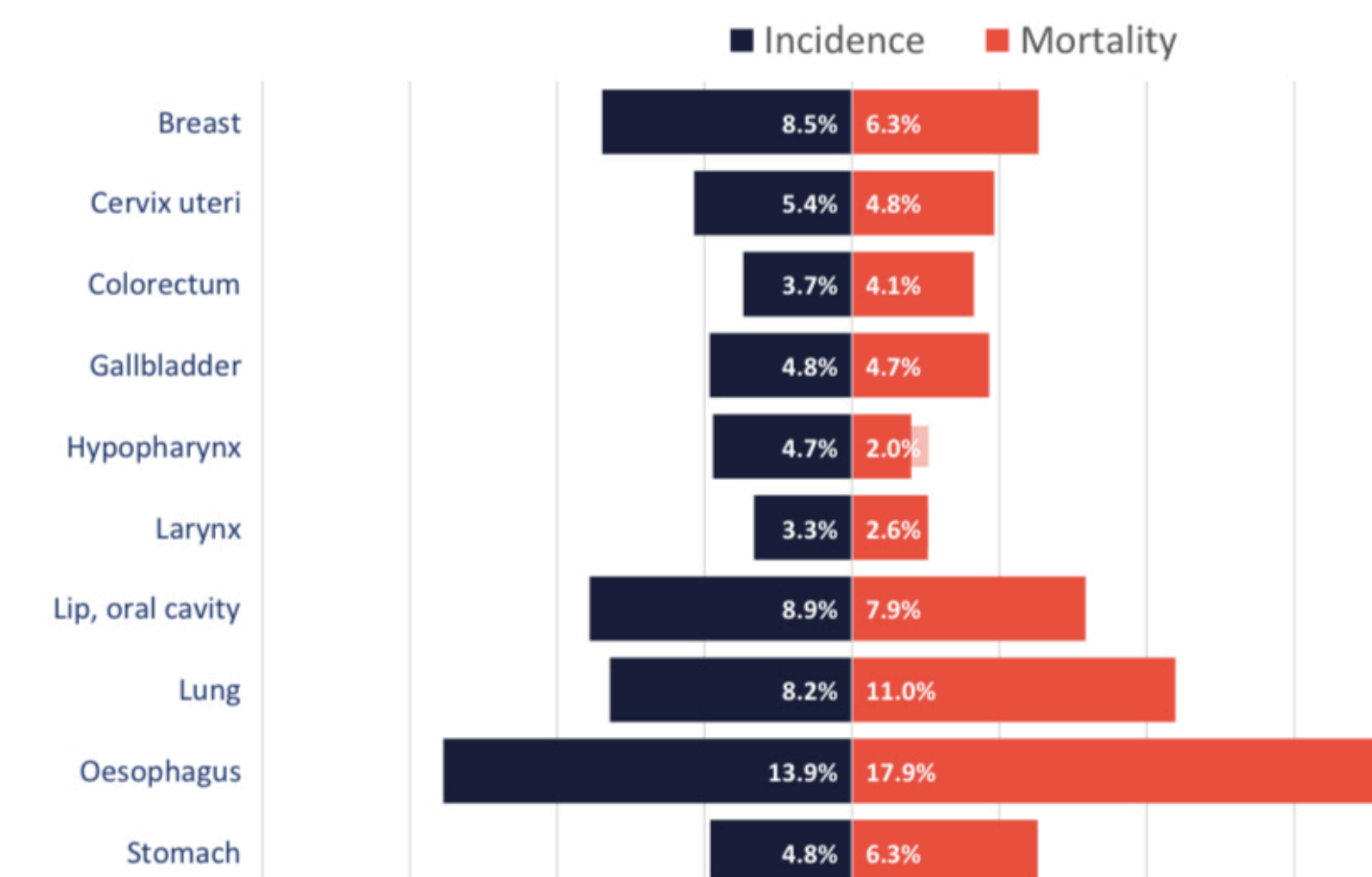
Premature deaths from NCDs (2016)

258,368

Cancer as % of NCD premature deaths (2016)

25.9%

Most common cancer cases (2018)



PAFs

(population attributable fractions)

PAF	25.4%	1.1%	17.1%	0.2%	0.0%	2.3%
Tobacco (2017) ^a						
Alcohol (2016) ^a						
Infections (2012) ^b						
Obesity (2012) ^b						
UV (2012) ^c						
Occupational risk (2017) ^a						

^a PAF, cancer deaths

^b PAF, cancer cases

^c PAF, melanoma cases

TYPES OF CANCER



NICRH: NATIONAL INSTITUTE OF CANCER RESEARCH & HOSPITAL

National Institute of Cancer Research & Hospital (NICRH) offers an energetic and dynamic environment and staffed by well trained professionals dedicated to cancer patient management, education and research. This is the only tertiary level center of the country engaged in multidisciplinary cancer patient management. It started its activity in a tin-shade building of Dhaka Medical College Hospital 1982, soon it is shifted to the present location at Mohakhali in 1986. According to a Memorandum of Understanding signed between Ministry of Health and Rotary Club of Dhaka the latter built the Rotary Cancer Detection Unit (RCDU) and the Cancer Institute started working as an outdoor cancer detection unit only. In 1991, 50 bed indoor facilities incorporated. In 1994 the cancer institute renamed as National Institute of Cancer Research & Hospital (NICRH) and first radiation treatment was applied to a patient in 1995 with a Cobalt 60 Teletherapy machine. With provision of support from the Saudi Fund for Development (SFD) the up gradation works of this Institute to 300 bedded Center has been completed. In April 2015 NICRH was upgraded as 300 bed hospital.

Objectives

- To provide quality cancer treatment
- To make a centre of excellence in the country
- To carry out research and disseminate the knowledge and findings
- To establish a nationwide cancer registry system
- To take necessary steps for cancer prevention and control

Activities

- All diagnostic activities- for cancer detection
- All kinds of treatments- surgery, radiotherapy, chemotherapy etc.
- Hospital Based Cancer Registry
- It has formulated National Guidelines for high- quality, cost- effective cancer treatment plan for 4 common cancers of our country.
- Different training programs- for health professionals –histopathologists, gynecologists, nurses, technologists, community leaders etc.
- Organizing tobacco prevention & cessation programmes in the community.
- Participation in national activities- such as observance of World Cancer Day, World Pediatric Cancer Day, No Tobacco Day, Breast & Cervical cancer awareness month and chalking out of special Breast Cancer Screening Campaign in the victory month of December from 2015.
- Telemedicine services
- Publication of NICRH journal
- Palliative care services
- Academic activities

NICRH & ED : COMPLEMENTING HEALTHCARE SOLUTIONS

- ❖ - NICRH is the premier government hospital of Bangladesh providing services to cancer patients
- ❖ - Offers Low cost treatment to cancer patients
- ❖ - Scope: To enhance the patient coverage by additional diagnostic equipment / diagnostic services
- ❖ - Implement Chemotherapy Day care center: To free up beds
- ❖ - To enhance OR experience from Open surgeries to laparoscopic oncology surgeries
- ❖ - To induct more radiotherapy equipment to maximize full body radiation therapy for terminal patients
- ❖ - Patient footfall support Molecular Imaging / molecular lab services
- ❖ - To Induct new technology in terms of Radiation therapy to reduce healthy tissue damage



ENGINEERING DIMENSIONS



PARTNER OF CHOICE: KEY ATTRIBUTES

- ❖ Engineering Dimensions Limited : (ED)
- ❖ - Well versed with understanding of local rules and regulations through commercial projects currently in operation in the territory of Bangladesh
- ❖ - Execution partners and related work force / personnel in place in Bangladesh
- ❖ - Financial Preparedness of ED has been demonstrated through existing projects
- ❖ - USP - Facility Design, Consultation, Turnkey, Sales, Installation, Application training, Service
- ❖ Unique “Pay per Use”, scheme through customized financial & service models for select projects
- ❖ Unique “Facility Design and Turnkey Consultation” are included in scope
- ❖ ED Partners have long established track record in Oncology related medical equipment and service
- ❖ - Established Key Management Personnel with track record of more than 20 years in oncology

Product portfolio

Folio 1 - Diagnostic - Hematology - Blood counters



Eurocount Plus

Next Generation 3 Part Hematology Analyzer



Product portfolio

Folio 1 - Diagnostic - Flow Cytometry Solutions



PS-10

Automated sample preparation for clinical flow cytometry



ROTOLAVIT II-S

Automated cell washer for flow cytometry sample preparation

Product portfolio

Folio 1 - Diagnostic - Molecular Diagnostics (OSNA)

OSNA – One Step Nucleic Acid Amplification – is an automated molecular diagnostic assay that analyses the entire lymph node tissue. The reaction is based on rapid nucleic acid amplification technology (RT-LAMP*) to quantify Cytokeratin 19 (CK19) mRNA expression. CK19 is an epithelial cell marker and is normally not present in lymph node tissue. The expression rate of CK19 mRNA correlates with the size of the metastatic foci.



OSNA IN BREAST CANCER

More differentiated information to fine-tune your treatment decision



OSNA IN COLORECTAL CANCER

The best therapy decision relies on accurate staging



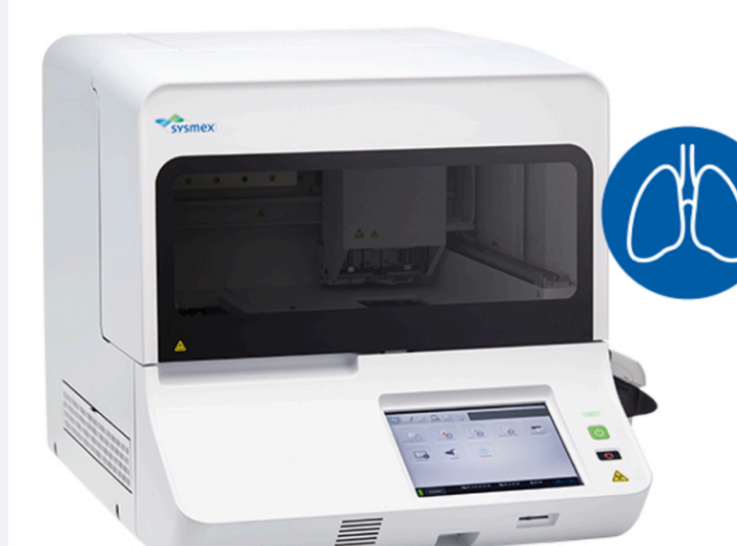
OSNA IN GASTRIC CANCER

Informed decisions for therapy depend on accurate staging



OSNA IN GYNAECOLOGICAL

Lymph node assessment beyond ultra-staging



OSNA IN LUNG CANCER

The best treatment decision relies on accurate staging



OSNA IN PROSTATE CANCER

Choose OSNA to explore a new dimension of nodal staging in prostate cancer

Product portfolio

Folio 1 - Diagnostic - Liquid Biopsy

OncoBEAM™ technology has been the most sensitive technology available by almost factor 20x versus other routine technologies such as PCR (polymerase chain reaction) and conventional NGS (next-generation sequencing). SafeSEQ, the technology building the basis of the new Plasma-SeqSensei™ product line, offers similar sensitivity combined with higher workflow convenience. The sensitivity is achieved by barcoding each sample, thereby reducing error rates by >100x.



PLASMA-SEQSENSEI™ BC RUO KIT

Plasma-SeqSensei™ BC RUO Kit



**PLASMA-SEQSENSEI™ COLORECTAL
CANCER RUO KIT**

Plasma-SeqSensei™ CRC RUO Kit



**PLASMA-SEQSENSEI™ MELANOMA
RUO KIT**

Plasma-SeqSensei™ Melanoma RUO
Kit



**PLASMA-SEQSENSEI™ NON-SMALL
CELL LUNG CANCER RUO KIT**

Plasma-SeqSensei™ NSCLC RUO Kit



**PLASMA-SEQSENSEI™ THYROID
CANCER RUO KIT**

Plasma-SeqSensei™ Thyroid Cancer
RUO Kit

Product portfolio

Folio 2 - Diagnostic - Medical Imaging



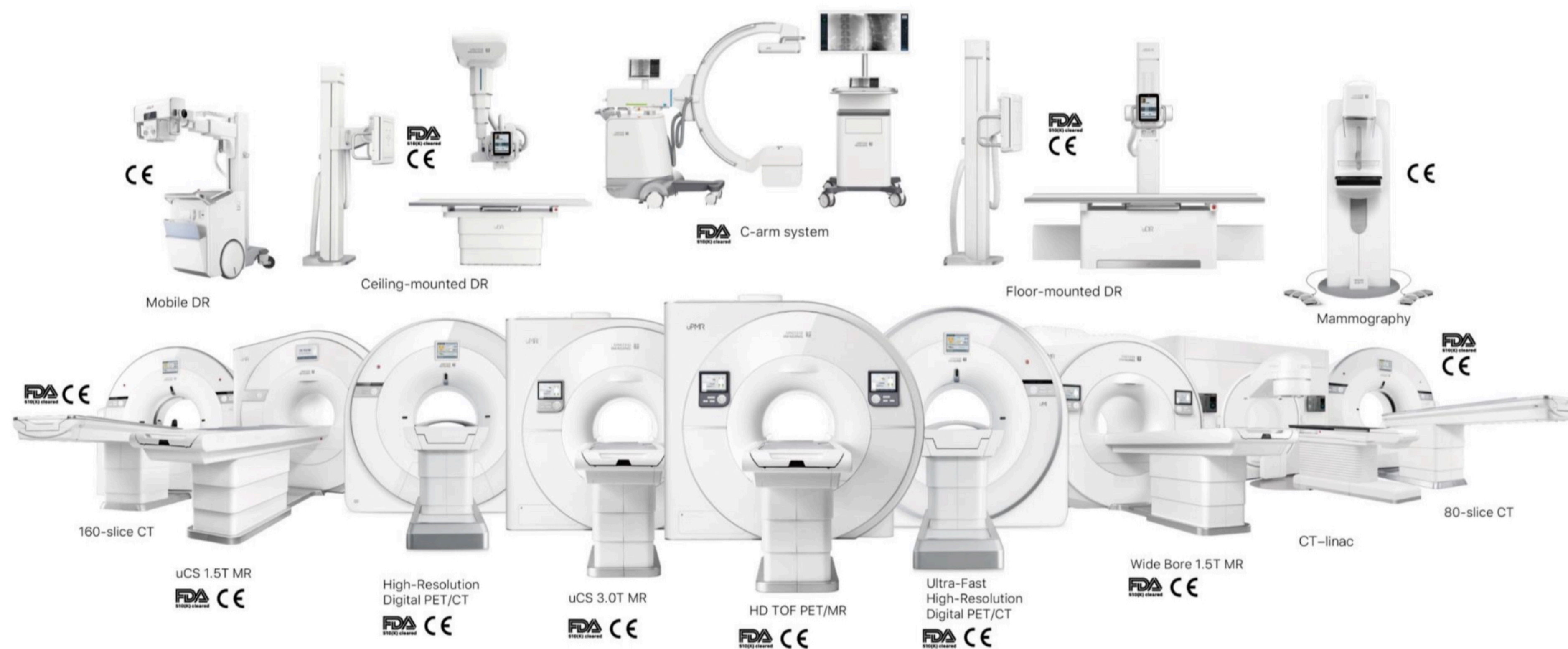
Sonos 12



Xenox C300 & C400

Product portfolio

Folio 2 - Diagnostic - Medical Imaging



Product portfolio

Folio 2 - Diagnostic - Medical Imaging



Xenox DR 500



Fluoroscopy Xenox RF 1000

Product portfolio

Folio 3 - Treatment - Radio-surgery



Product portfolio

Folio 4 - Treatment - Robotic Surgery



SURGEON CONSOLE

Your surgeon sits at the console, controlling the instruments while viewing your anatomy in high-definition 3D.



PATIENT CART

Positioned alongside the bed, the patient cart holds the camera and instruments that the surgeon controls from the console.



VISION CART

The vision cart makes communication between components possible and supports the 3D high-definition vision system.

Product portfolio

Folio 5 - ER Essentials - (OT Support systems)



Ventilator - MMR 9892



Syringe Pump - SPN58



Multi-parameter patient monitor Mac30

Product portfolio

Folio 6 - End stage Renal disorder - Stand-alone Dialysis center



Technical & Financial support for stand alone dialysis center's - (Operational preparedness)

ENGINEERING DIMENSIONS - PARTNERS / ASSOCIATE



AD Global



INTUITIVE





Thank You

