



Cancer Control

HEALTHY TAIWAN 2024

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OCT 7, 2024

Outline

1

The Policy for cancer control

2

Cross-department collaboration on cancer prevention and treatment

3

Reform of drug pricing system

4

Using digital reform to support the collection and analysis of real-world data (RWD)

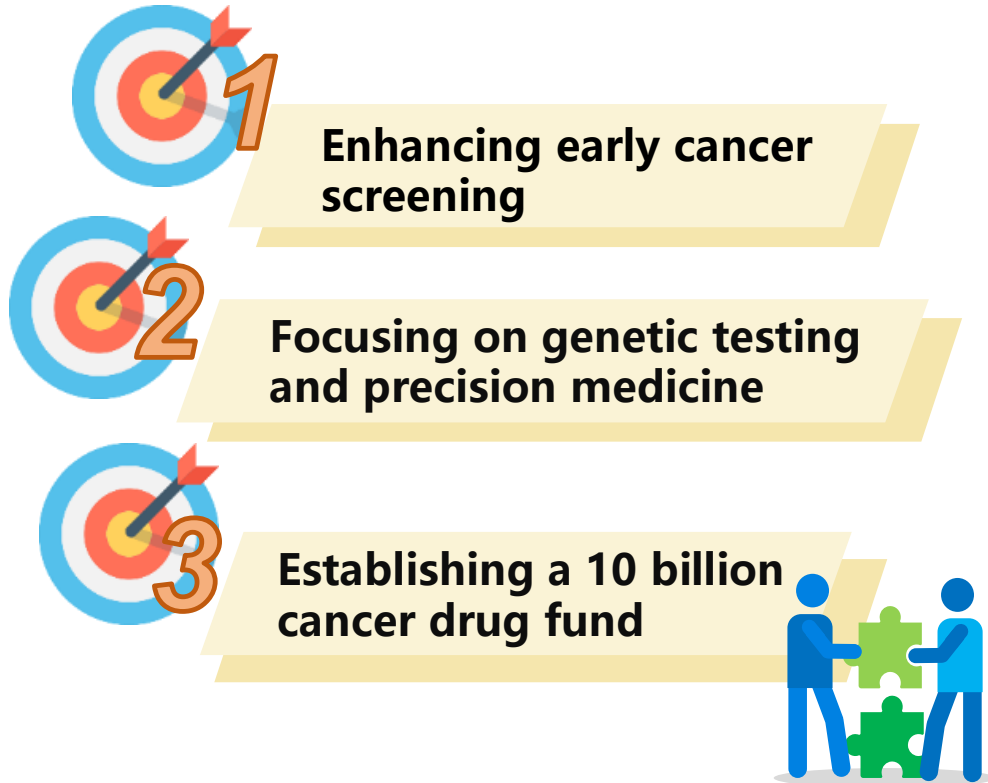
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Conclusion



The Policy for Cancer Control

Cancer Prevention Programs: 2030 cancer mortality is projected to decrease by 1/3





Cross-department Collaboration on Cancer Prevention and Treatment

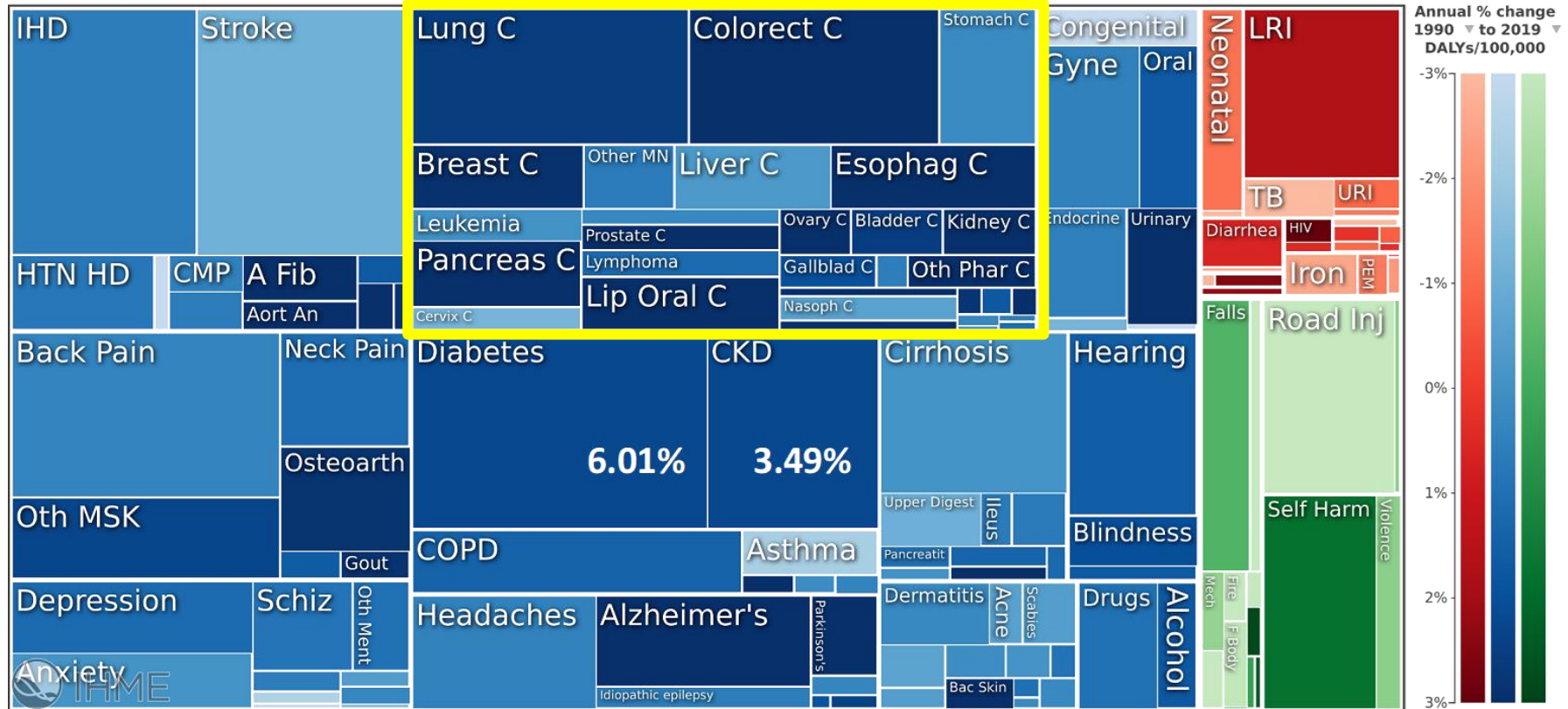
Disease Burden and Care Quality

Disability caused by cancer increasing gradually in Taiwan

DALYs by Cause in Taiwan, 2019

Taiwan
Both sexes, All ages, 2019, DALYs

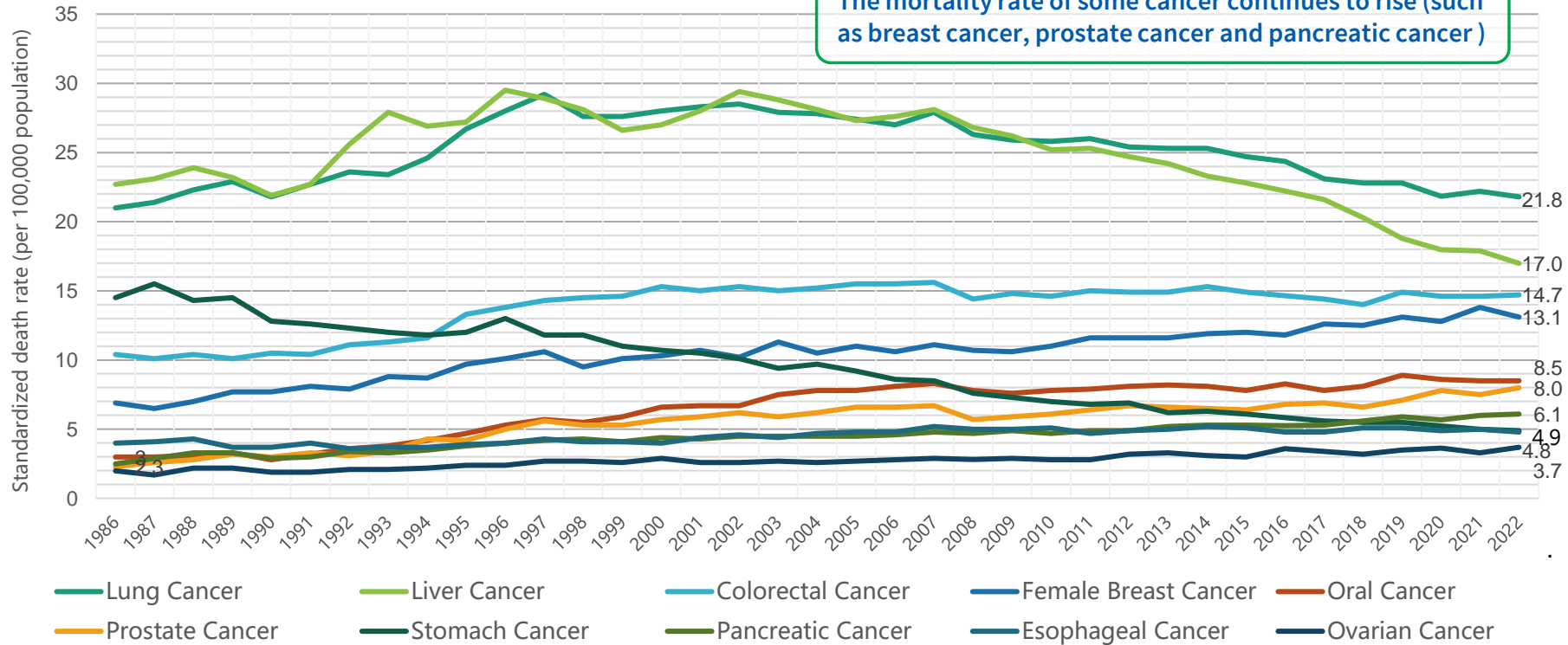
Global Burden of Disease Study 2019
(data origin: <https://vizhub.healthdata.org/gbd-compare/>)





Trends in Standardized Mortality Rate of the Top 10 Cancers in Taiwan

The mortality rate of some cancer continues to rise (such as breast cancer, prostate cancer and pancreatic cancer)

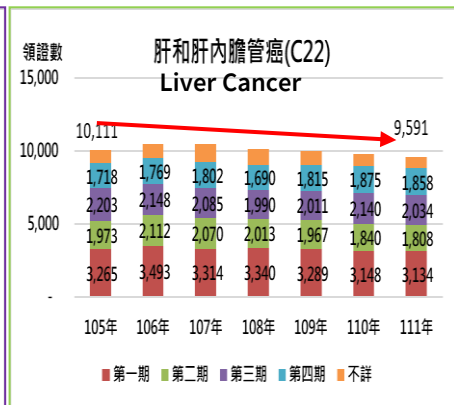
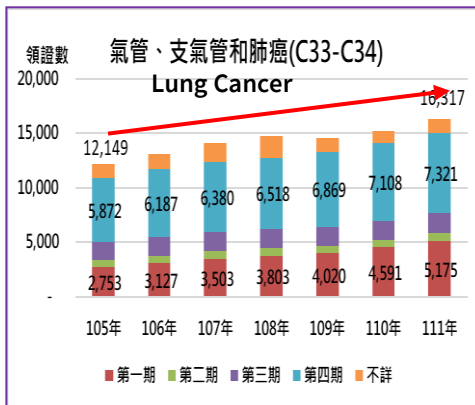


Stage of Cancer Diagnosis Determines Survival Rate

Survival rate data for various types of cancer by stage

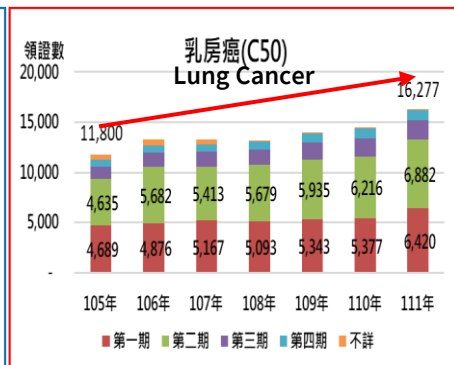
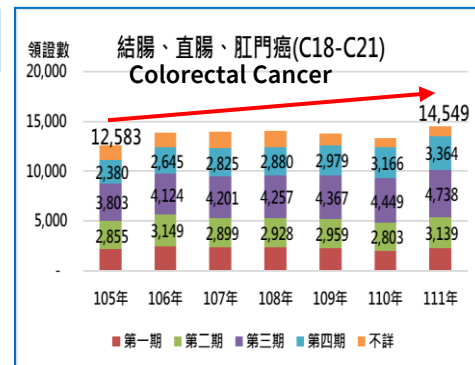
(Sources : Cancer Registration Data (Carcinoma in situ incl.) - HPA (2017 to 2021))

Phase	Cervical Cancer	Oral Cancer	Female Breast Cancer	Lung Cancer	Colorectal Cancer
Stage 0	99.6	76.0	>99.9	>99.9	93.4
Stage 1	91.5	85.3	>99.9	94.6	92.7
Stage 2	73.6	75.2	95.6	62.1	83.3
Stage 3	55.4	61.3	80.5	33.2	71.1
Stage 4	22.5	38.3	39.4	13.1	15.4



Proportion of newly diagnosed cancers in stage 4

Year	2016	2017	2018	2019	2020	2021	2022	2023
Cervical Cancer (C53-C54)	8%	8%	8%	9%	9%	11%	10%	10%
Oral Cancer (C00-C06, C09-C10, C12-C14)	35%	34%	34%	35%	36%	39%	41%	39%
Female Breast Cancer (C50)	6%	5%	6%	6%	7%	7%	7%	7%
Colorectal Cancer (C18-C21)	19%	19%	20%	21%	22%	24%	23%	23%



Cancer Prevention and Control Strategy

Health Promotion

- Tobacco Control
- Betel Nut Control
- Alcohol Addiction Treatment
- Health Promotion Nutrition



Evidence-based Screening

- Screening for 4 major cancers
- Low-Dose CT Screening
- Hepatitis virus Screening
- Helicobacter pylori (HP) Screening



Preventive Treatment

- HPV Vaccine
- Hepatitis B Treatment
- Hepatitis C Eliminate
- HP Eradication



Early Diagnosis

- Quality Improvement
- Follow-Up of Lung Cancer Screening



Precision Treatment

- Next-Generation Sequencing (NGS)
- Targeted Therapies
- Immunotherapy
- Genethrapy
- Minimally Invasive Surgery
- Value-Based Payment





Expanding Screening Criteria and Services since 2025

Broaden the Age Range for Screening Services

- ✓ **Colorectal Cancer** : 50-74yrs→45-74yrs 、 40-44yrs with a Family History
- ✓ **Cervical Cancer** : ≥ 30 yrs→ ≥ 25 yrs women
- ✓ **Breast Cancer** : 45-69yrs→40-74yrs women
- ✓ **Lung Cancer** : Heavy Smokers (≥ 30 pack/day years→ ≥ 20 pack/day years) & Family History (parents, children, and siblings)
- ✓ **Stomach Cancer**: Expanding HP Stool Antigen Testing to 45-74yrs

Adjust Screening Fee

- ✓ **Colorectal Cancer** : 200→400 NTD/case
- ✓ **Cervical Cancer** : 430→630NTD/case
- ✓ **Oral Cancer** : 130→250NTD/case

Adding Screening Tools

HPV : 35yrs 、 45yrs 、 65yrs

Low-Dose CT (LDCT) Program

Initiate LDCT screening since 2022.07.01

Health Promotion Administration

- Promote early lung cancer detection, with a subsidy of **NT\$4,000 (US\$130) per case, once every 2 years**
- The subsidy is for high-risk groups for lung cancer.

With the family history of lung cancer

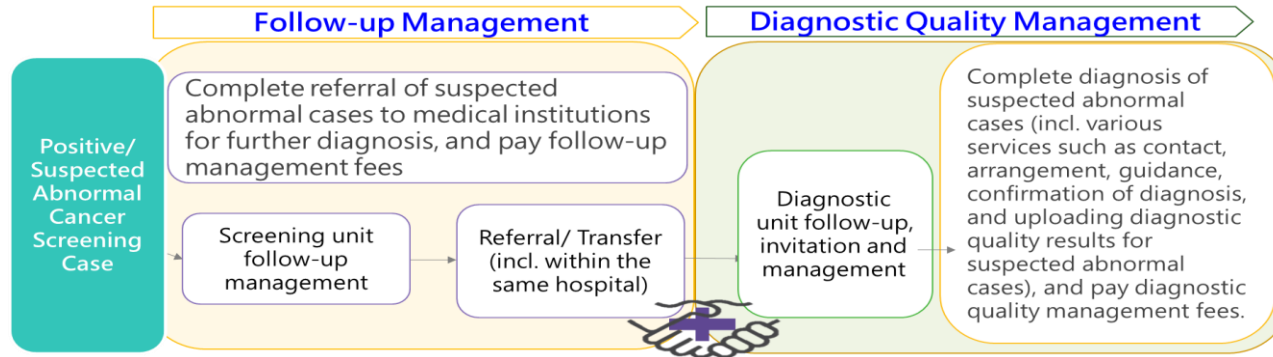
- ✓ Men aged **50-74**
- ✓ Women aged **45-74**
- ✓ And parents, children, or siblings who have had lung cancer

OR

Heavy smokers

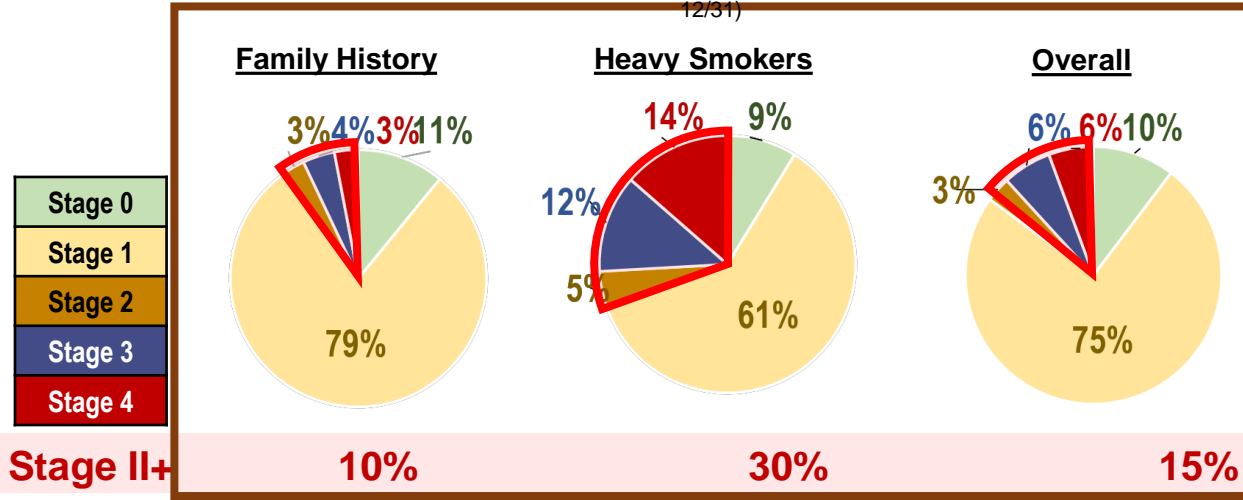
- ✓ Aged **50-74**
 - ✓ With a smoking history of **30-pack/day years*** or more (**reduced to 20-pack/day years** from 2025.01.01)
 - ✓ Currently smoking or quit within the last 15 years
- *Pack/day Years: Daily packs smoked multiplied by total years smoked

- Since July 2022, the NHIA has launched a **quality improvement program** to encourage medical institutions to **track cases** with abnormal screening results for 5 cancers and **complete the diagnosis** through insurance benefits.
- The total investment in 2023 was **NT\$517 million (equivalent to US\$15.86 million)**.
- The follow-up rate for lung cancer in 2023 was **52.3%** achieving the target set (40%) for 2023.

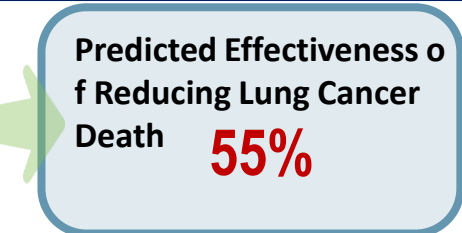
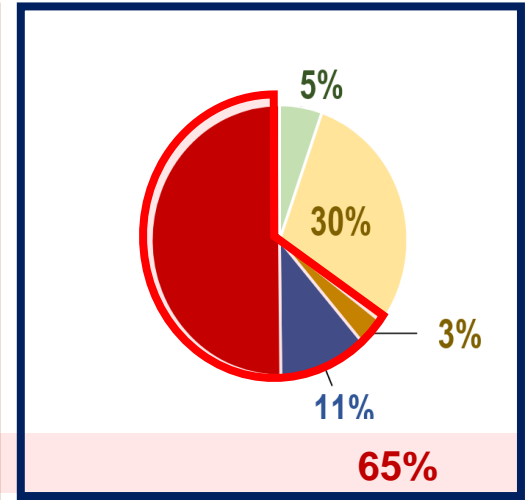


Reduced the Advanced LC and Death

Stage Distribution of Nationwide LDCT Screening (2022/7/12-2023/12/31)

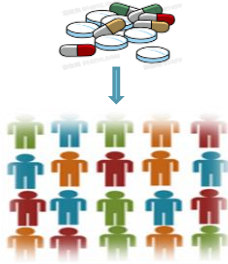


Stage Distribution Before Nationwide Program, 2021

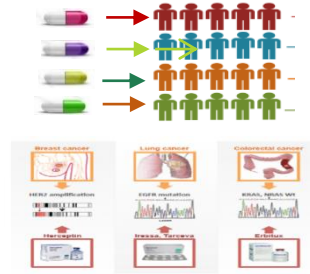


Facilitating Precision Cancer Care in NHI

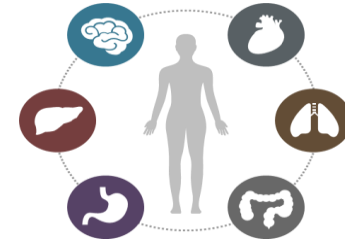
Universal Application



Precision Medicine with Targeted Therapy



Precision Health



Frost & Sullivan's Visionary Healthcare program, 2017

Escalating the coverage of concomitant medications testing

Concomitant tests have been provided for genetic testing in leukemia, breast cancer, lung cancer and colorectal cancer, etc.

Enhancing Precision Medicine and Appropriate Medication

- Collecting patients' treatment outcomes, referencing RWE results, and adjusting the scope of reimbursement
- Inviting experts and professional associations to revise the clinical treatment guidelines

Integrating medical information with AI interpretation to enhance cancer treatment effectiveness

NGS Payment-May 2024

◆ Assisting in Precision Cancer Treatment Medication

14 Solid Tumors and 5 Hematologic Cancers

◆ Establishing Taiwan as a "Biotech Island"

Combining Application Fee Reporting Data & Real-World Clinical Data (RWD) to Evaluate the Accuracy of Genetic Testing and the Effectiveness of Targeted Drug Therapies

NGS Payment Methods : Fixed Payment Based on Panel Size

BRCA½ Genetic Testing

} 10,000 points

litter panel (≤ 100 Genes)

} 20,000 points

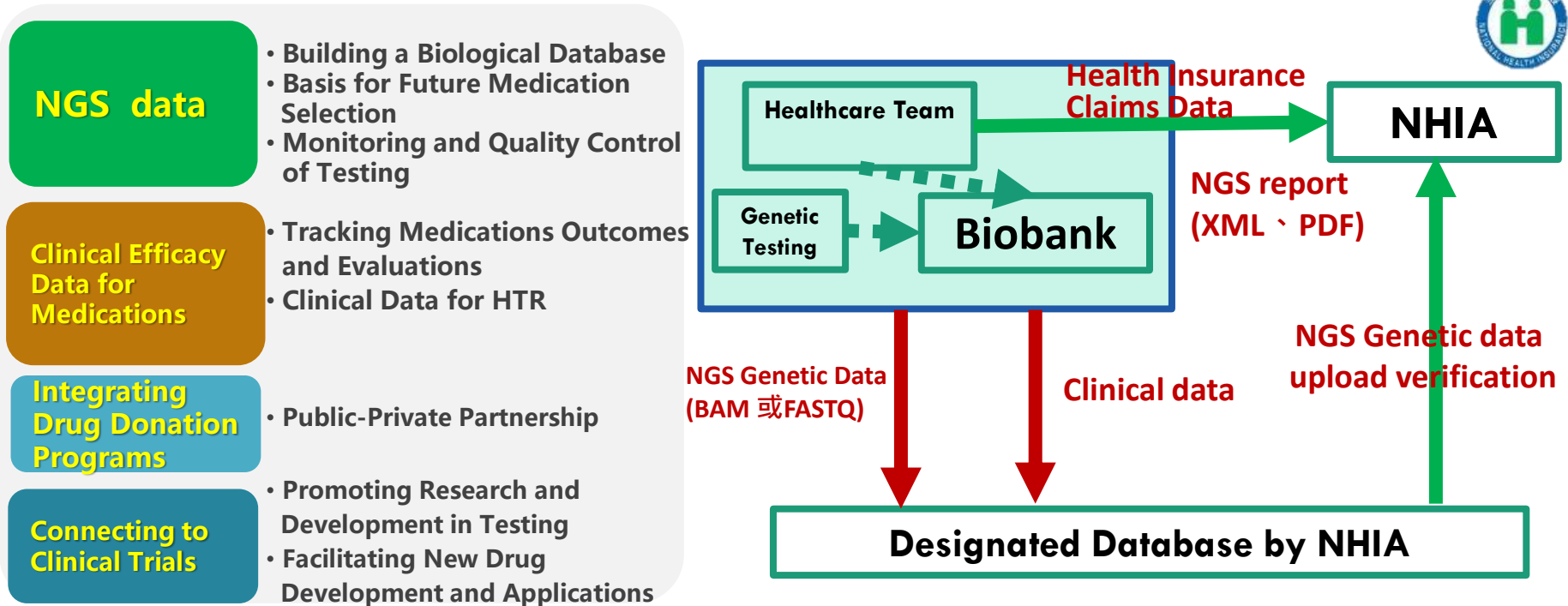
Big panel (> 100 Genes)

} 30,000 points

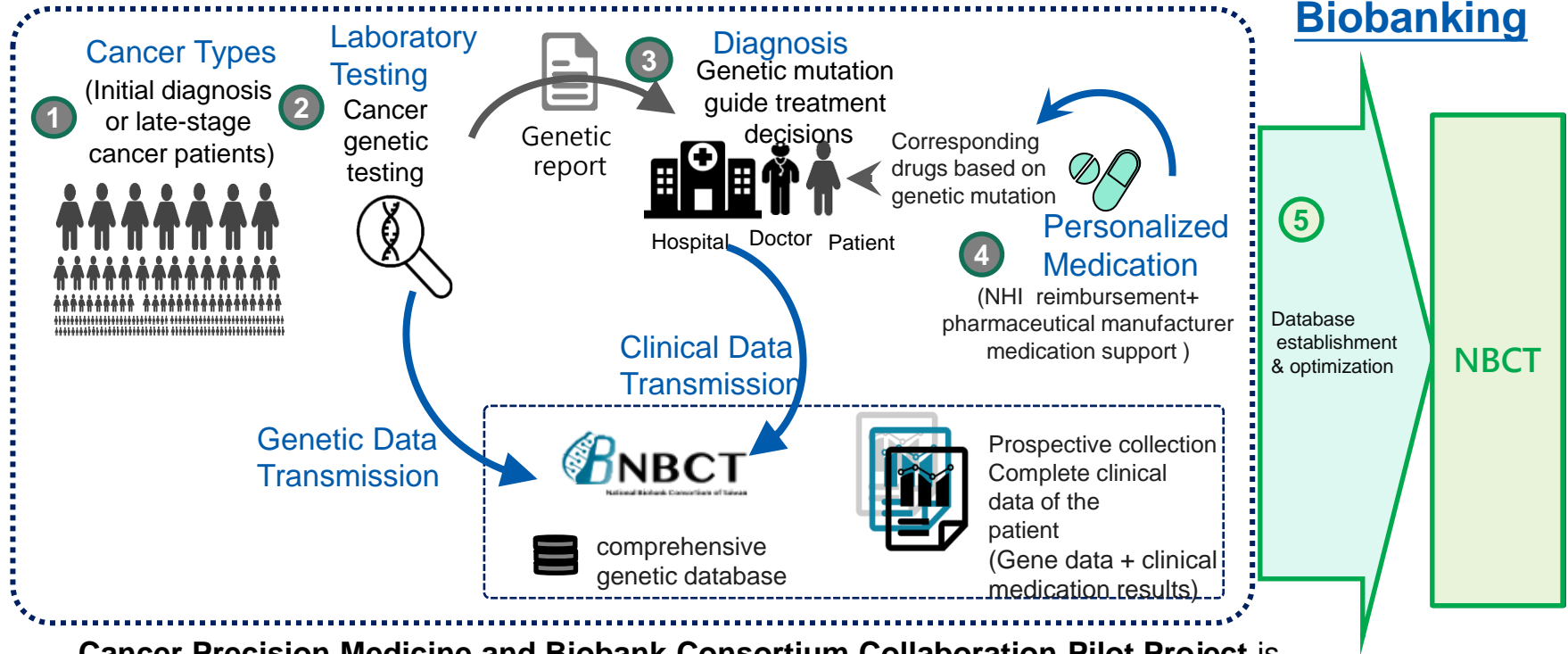
Due to significant price differences in NGS testing, the basic panel will be covered by a fixed health insurance payment. Medical institutions can charge extra based on clinical needs and additional test sites

Planning for NGS Data Integration Platform

Public-Private Partnership (PPP)



Personalized Precision Medicine Eco-System



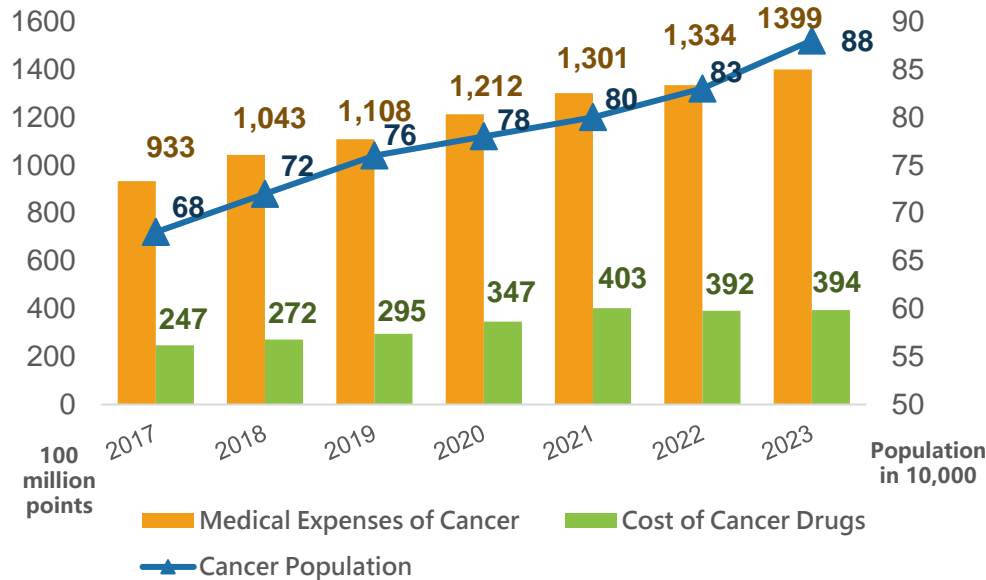
Cancer Precision Medicine and Biobank Consortium Collaboration Pilot Project is the most successful example of **public-private-partnership (PPP)** model in Taiwan.



Reform of The Drug Pricing System

Rapidly Increase of Expenditure on Cancer Treatments and Drugs

- In 2023, there are 880,000 cancer patients, and the expenditure on cancer treatments was 139.9 billion points.
- In 2023, the expenditure on cancer drugs reached 39.4 billion points, of which targeted therapy accounted for the highest (65.9%).
- Average growth rate of cancer drugs from 2014 to 2023 is 9.3%, higher than the global budget.



Types of Cancer Drugs	2023 claim quantity (100 million points)	Percentage
Targeted Therapy (including IO)	259.6	65.9%
Chemotherapy Drugs	82.6	21.0%
Hormonal Drugs	41.5	10.6%
Immunomodulators	6.8	1.7%
Radiopharmaceuticals	3.2	0.8%
Total	394	100.0%

Key Strategies to Accelerate the Inclusion of New Cancer Drugs in NHI

1

Promoting Parallel Review Process

- ✦ Parallel review with the TFDA for specific items since 1/1/2024.
- ✦ Achieve NHI reimbursement **6 months in advance.**

3

Implement Conditional Listing

- ✦ Unmet medical needs but with uncertain efficacy and safety of new drugs.
- ✦ NHIA negotiates with MA holders for diversified risk-sharing, provisional payment for 2 years, and collect real-world data for review.



2

Increase Budget

- ✦ Budget for new drugs.
- ✦ Special funds for conditional listing drugs

4

Establish HTA Dedicated Office

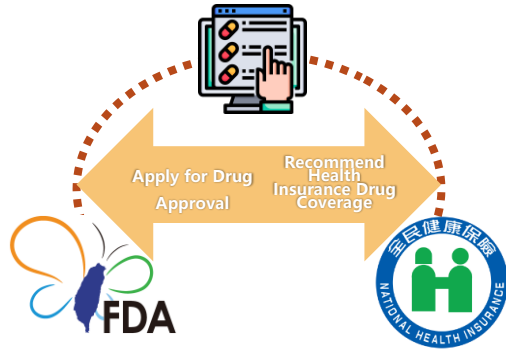
- ✦ The Center for Health Policy and Technology Assessment (CHPTA) office established since 1/1/2024.
- ✦ Establish a incorporated agency "Health Technology Assessment Center" .

5

Establish a Conditional Listing Fund for New Cancer Drugs

- ✦ Advocate a Dedicated Fund Outside the NHI Budget to alleviate the financial burden on cancer patients and serve as a financial buffer for NHI.

Promoting Parallel Review



The Marketing Authorization (MA) holder submits to TFDA and NHIA concurrently

general case

After obtaining the approval letter issued by the TFDA, the MA holder may suggest its inclusion to NHIA.

Registration and market approval

Filing for drug listing

Review

Committee meeting+ PBRs

NHI reimburse

parallel review process

Registration and market approval

Filing for drug listing

Review

Committee meeting

PBRs

NHI reimburse

Reform of HTA Organization

CHPTA 2024.1.1

Center for Health Policy and Technology Assessment



Efficient Review

- Medicines
- Medical Devices
- Healthcare Service Coverage

Diversified, and Innovative Methodologies on Scientific Evidence

Value & Evidence

Deepening International Collaboration

Continuously Cultivate HTA Talent with a global Perspective

Cancer Drug Fund Allocate Budget for New Cancer Drugs/New Indications

Applicable Drugs

Cancer drugs or new indications with unmet medical needs, but still with uncertain clinical benefits or financial impacts, after evaluation, further clinical trials or real-world data collection may be conducted, and new evidence could support the inclusion of these drugs in formal coverage.

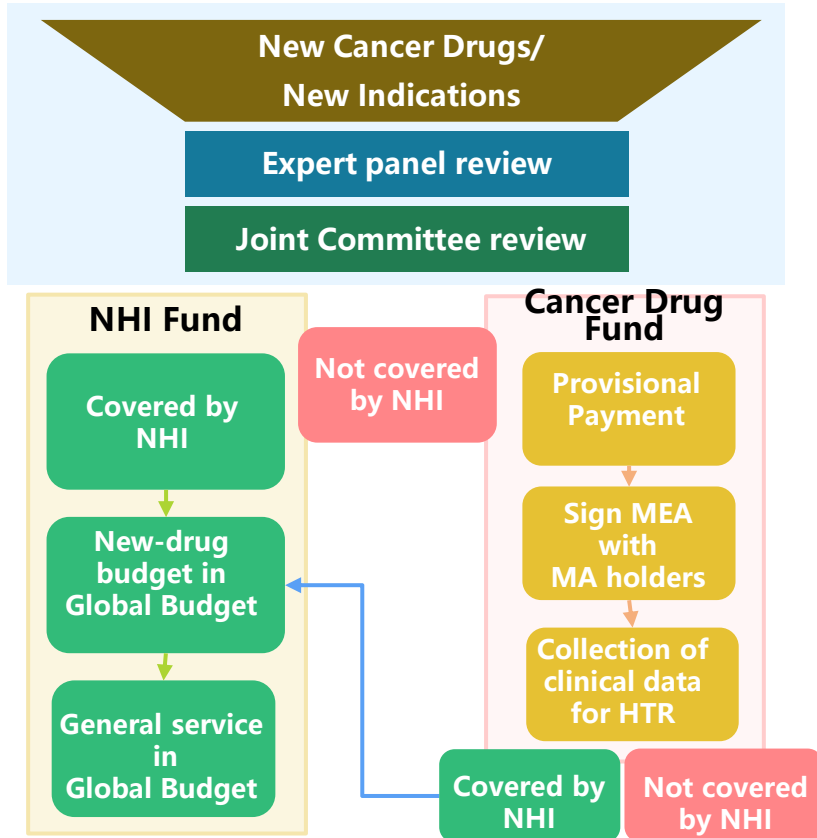
Financial Control

If the expenditure exceeds the budget for the current year, participating companies will bear the excess drug expenses based on their market share.

Benefit Evaluation

Conduct health technology reassessment (HTR) based on collected real world data; if the evaluation is not completed within three years, the contract will automatically expire.

Information Disclosure





Using digital reform to support the collection and analysis of Real-world Data (RWD)

Digital Transformation of Healthcare

Combine the "National Cancer Prevention Program" to establish the cornerstone of smart healthcare

Screening

Diagnosis

Treatment

Track

**Next Generation Sequencing(NGS) and
establish clinical genome database**



**Collecting
claim data of NGS**



**Applying for
proof of major
illness or injury**

**Applying for
pre-review for
cancer drugs**

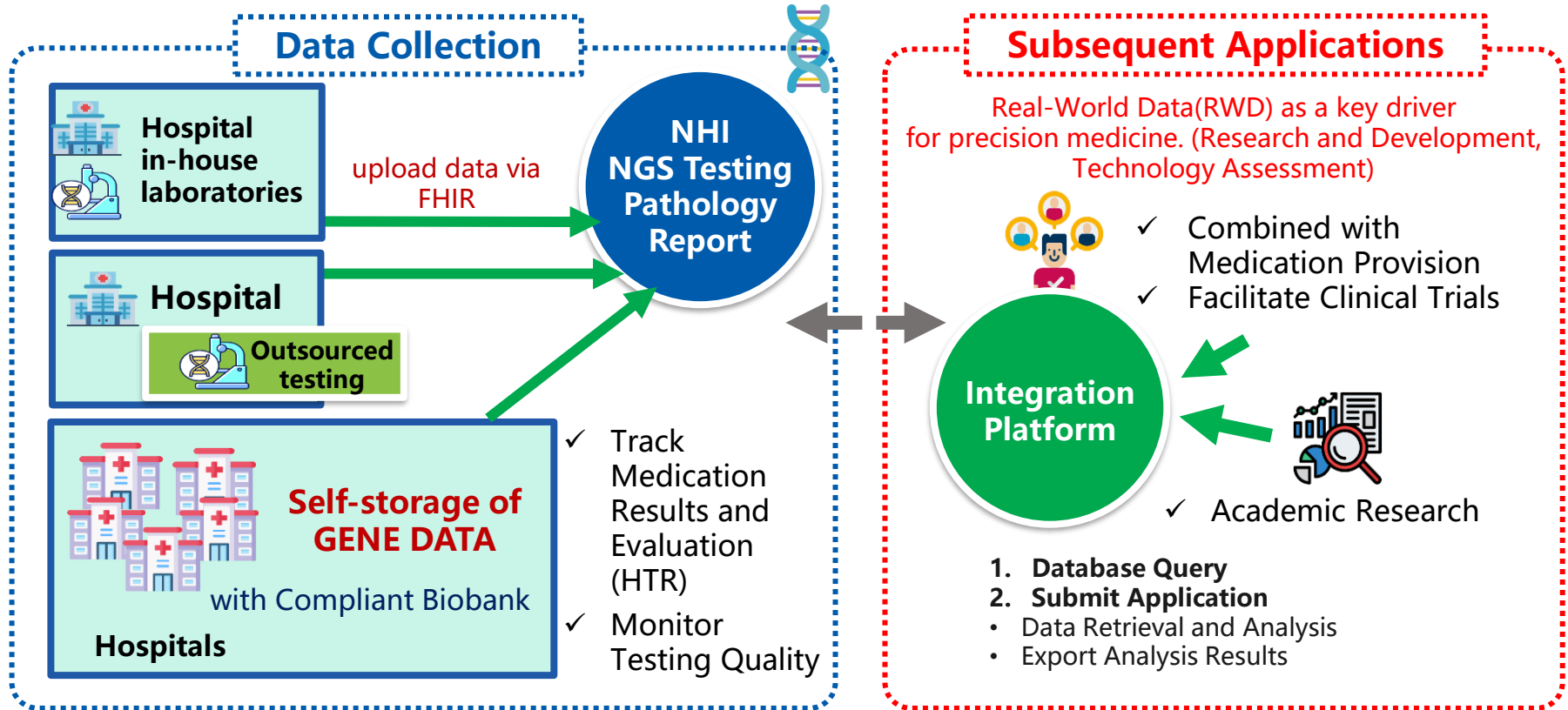
**Tracking the
treatment efficacy
of cancer patients**

Cancer Registry





Application Scenario: NGS Data Collection Platform



Cancer Medicine and the follow-up development of digital transformation

Expand health insurance information standards to align with international standards



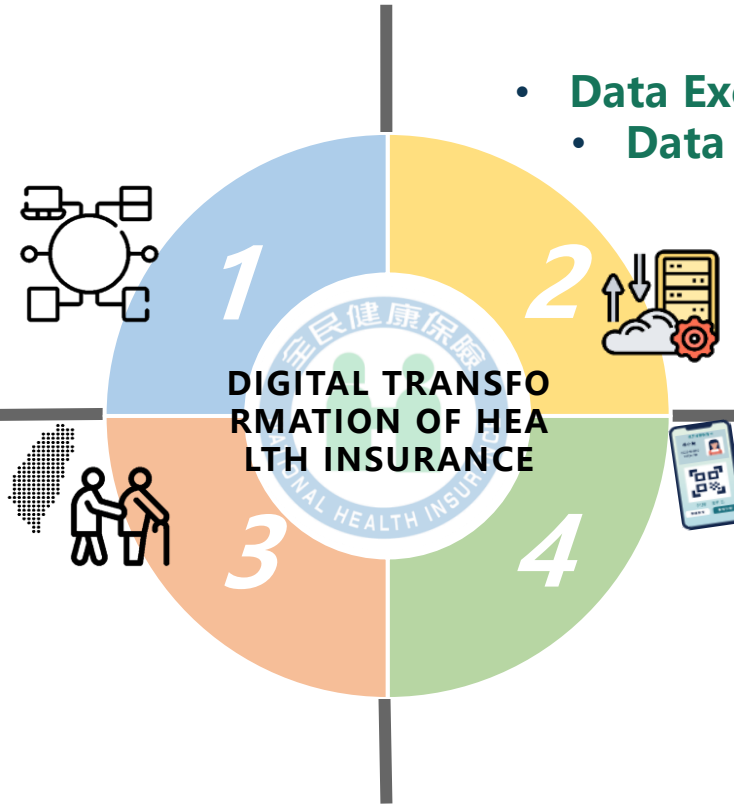
- FHIR Format**
- Data Exchange → Interoperable
 - Data Columns → Resource



Subsequent expansion to other disease modules, such as chronic diseases



Combine with health insurance APP to create health empowerment





Conclusion



Toward Reducing one-third cancer mortality rate by 2030



HEALTH FOR ALL THANK YOU

