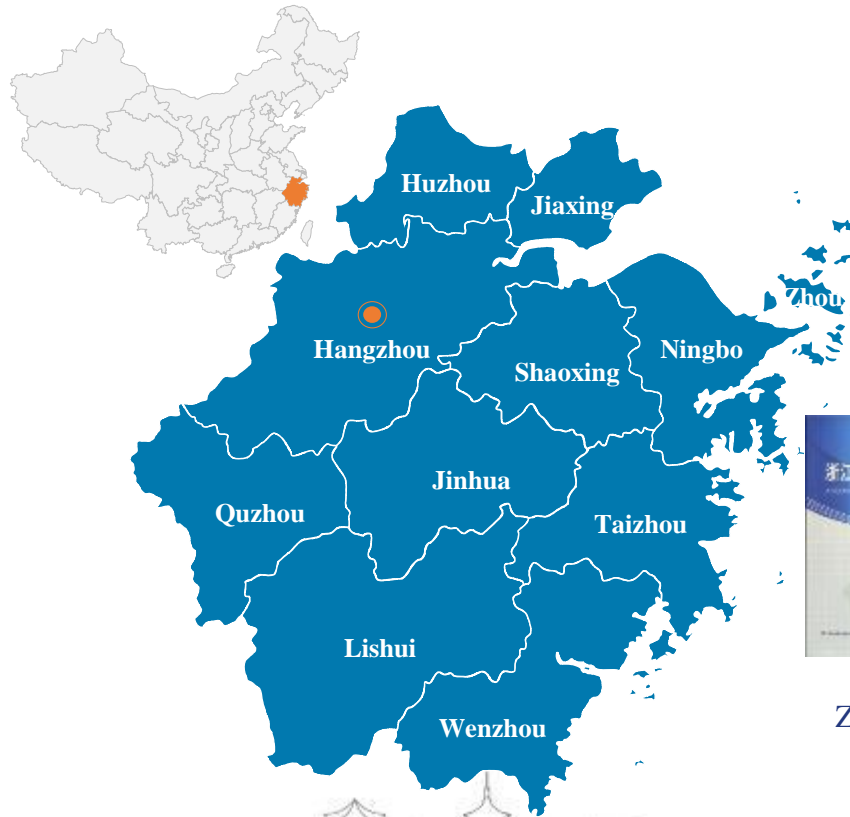




Cancer screening progress in Zhejiang province, China

Xue Li
Zhejiang Cancer Hospital, China

Zhejiang Province



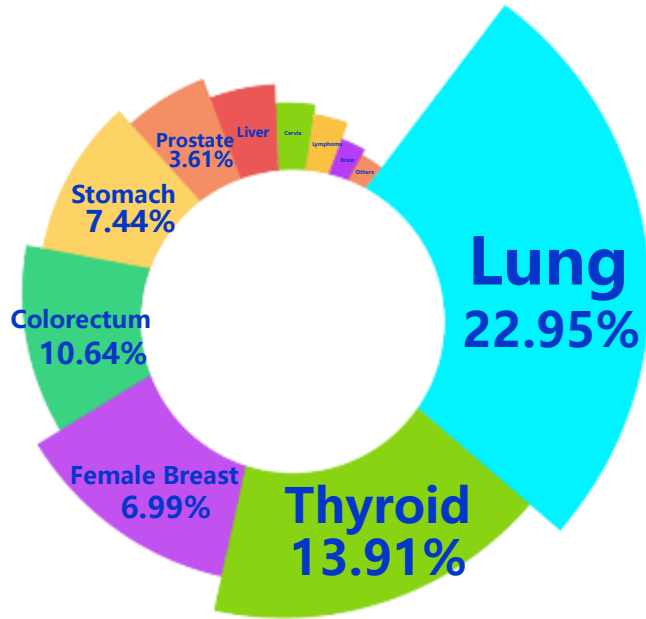
Currently, there are 22 national cancer registry sites in Zhejiang. The high-quality data have been recognized by IARC and included in Cancer Incidence in Five Continents since Vol. 8.



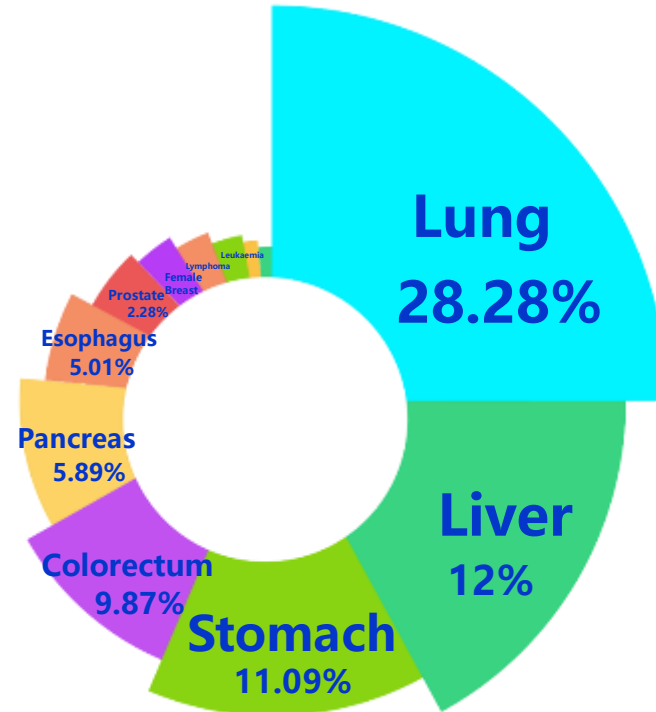
Zhejiang Cancer Registry Annual Report (2015-2022)



• Cancer incidence and mortality in Zhejiang



Incidence



Mortality



•Efficacy of cancer screening

Screening: Checking for disease when there are no symptoms, using simple and quick techniques

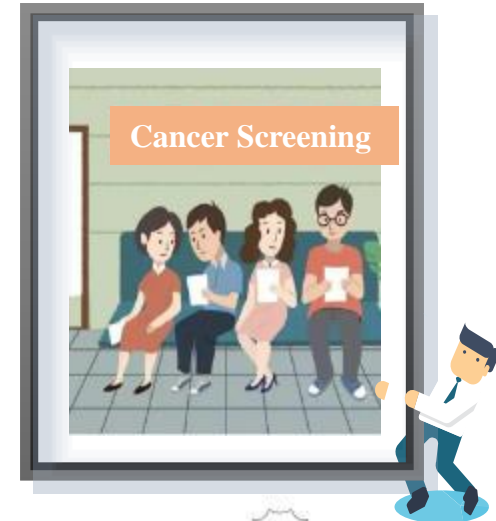
Cancer screening

- Population to be screened
- Type of recruitment: organized vs. opportunistic

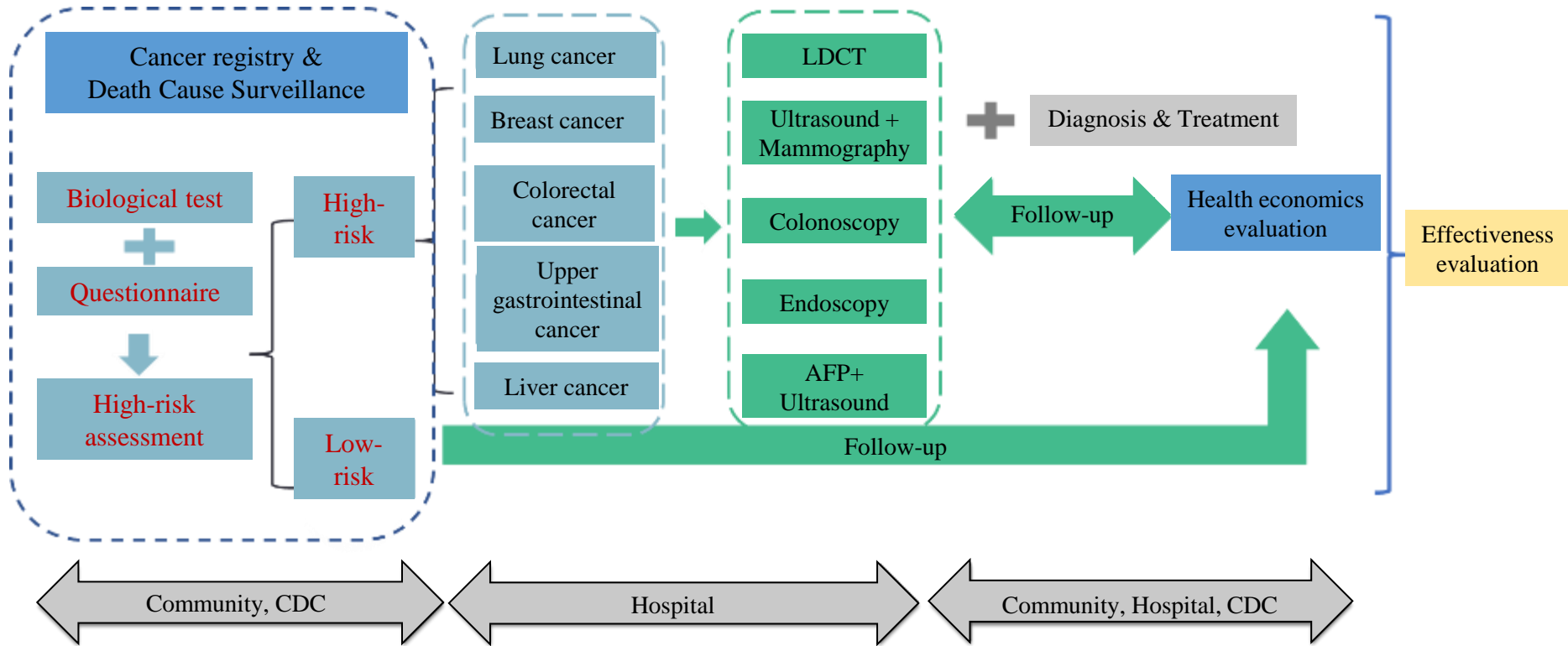
Recommendations on cancer screening



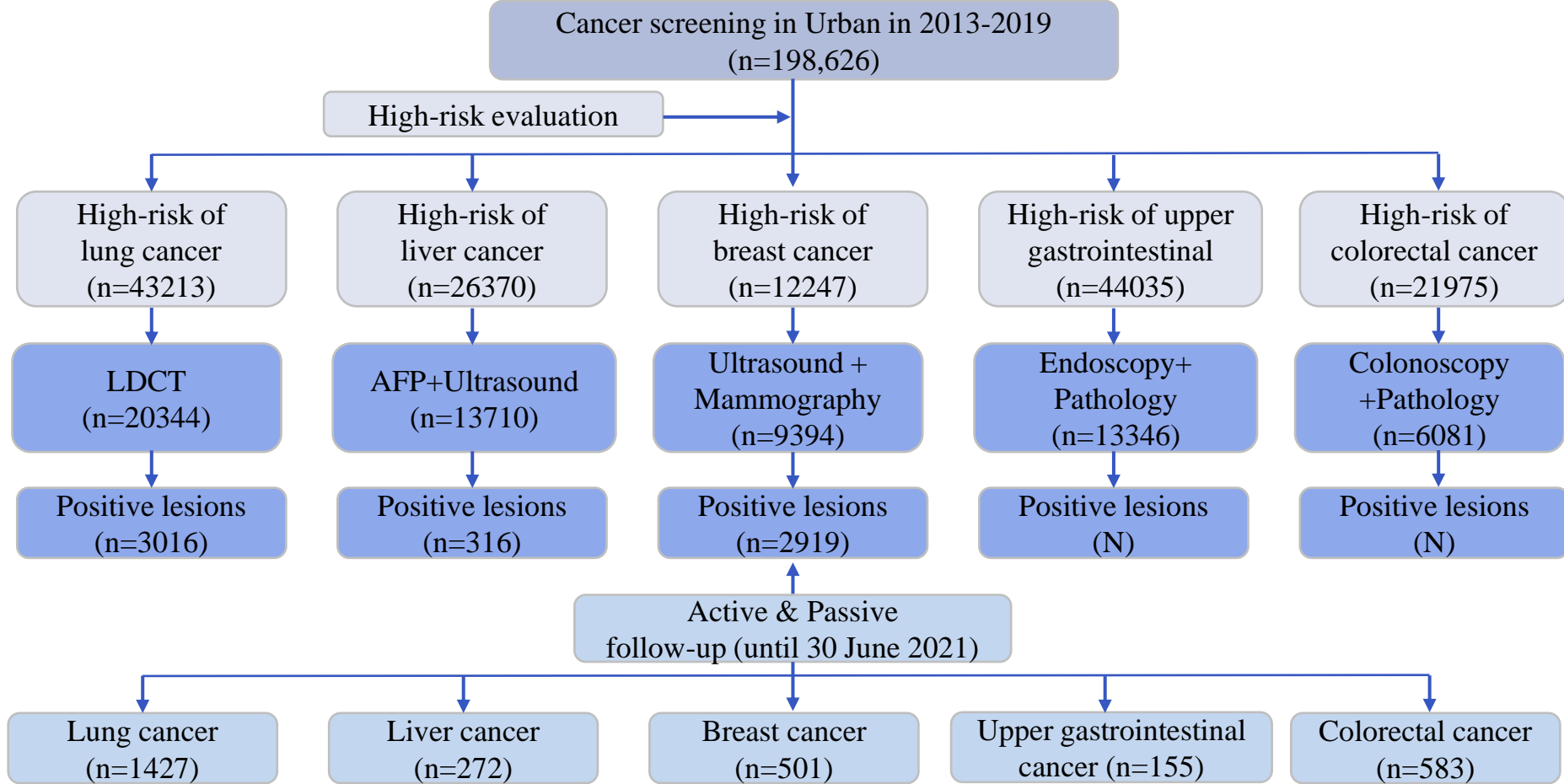
Grade	Recommendations	Cancer
A	Effective, recommended screening	Colorectal cancer Cervical cancer
B	Possibly effective, suitable screening	Lung cancer (high-risk populations) Breast cancer



• Cancer Screening Program in Urban China (CanSPUC)



• Cancer Screening Program in Urban China (CanSPUC)



•LDCT screening effectively reduces lung cancer and all-cause mortality among smokers

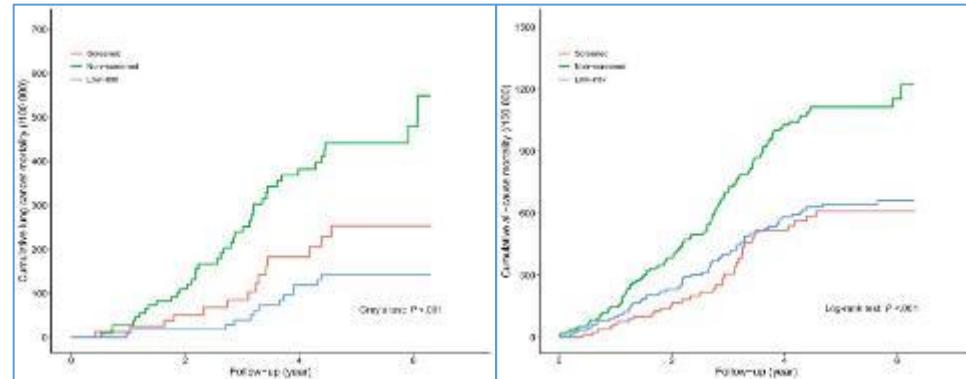
◆ 2013-2018 year, 121 534 participants

- **Smokers: 30 079**
- **Non-smokers: 91 455**
- **Median follow-up 5.1 years**

◆ Main findings

- **High risk rate: Smokers>Non-smokers**
- **LDCT compliance rate: Smokers<Non-smokers**
- **Early stage lung cancer: Smokers<Non-smokers**
- **Smokers: LDCT screening is effective**
- **Non-smokers: needs more evidence**

Group	No.	High risk rate	LDCT compliance rate	Early stage lung cancer
Smokers	30079	62.6%	41.9%	60.3%
Non-smokers	91455	6.0%	66.3%	80.3%



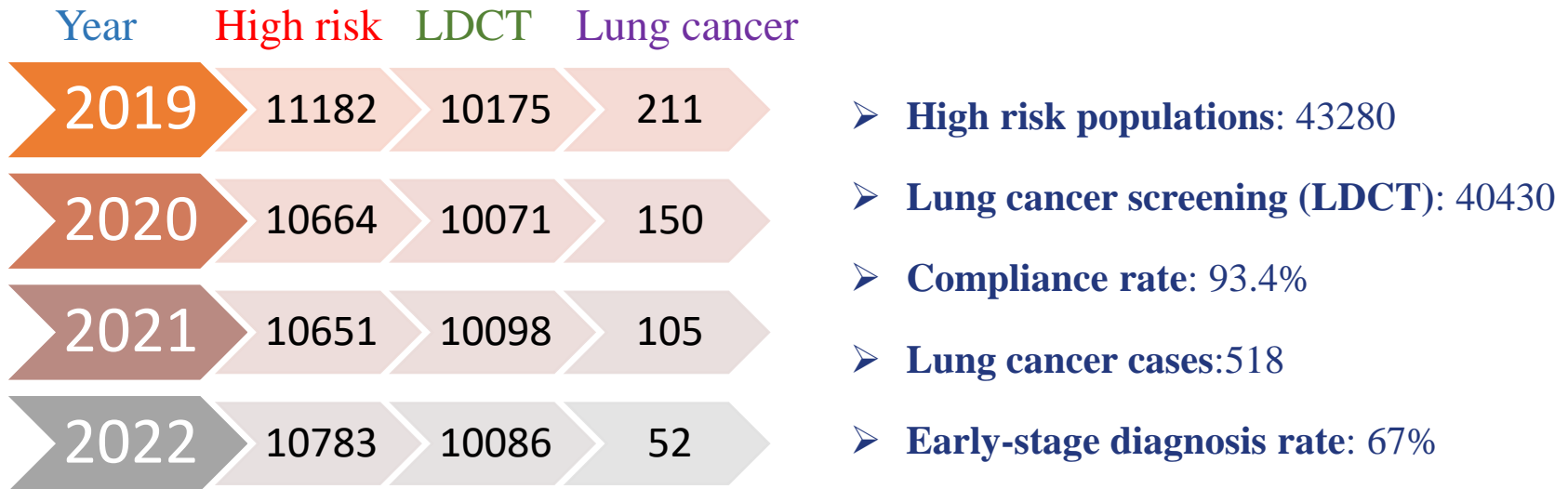
[JMIR Publ: Health Surveill](#), 2023 Feb 5; doi: 10.2196/43086. [Epub ahead of print]

Disparity in lung cancer screening among smokers and non-smokers in China: Prospective cohort study.
Wang L¹, Wang Y^{1,2}, Wang F³, Cao Y⁴, Fang Z⁵, Gao W⁶, Li H¹, Zhu G¹, Chen Y¹, Shi L¹, Du L^{1,2}, Li N¹.

•Lung Cancer Screening in Wenling county

- ✓ **Subjects:** age 50-74 years residents in Wenling county
- ✓ **Techniques:** High-risk evaluation + Clinical screening (LDCT)+ Follow-up

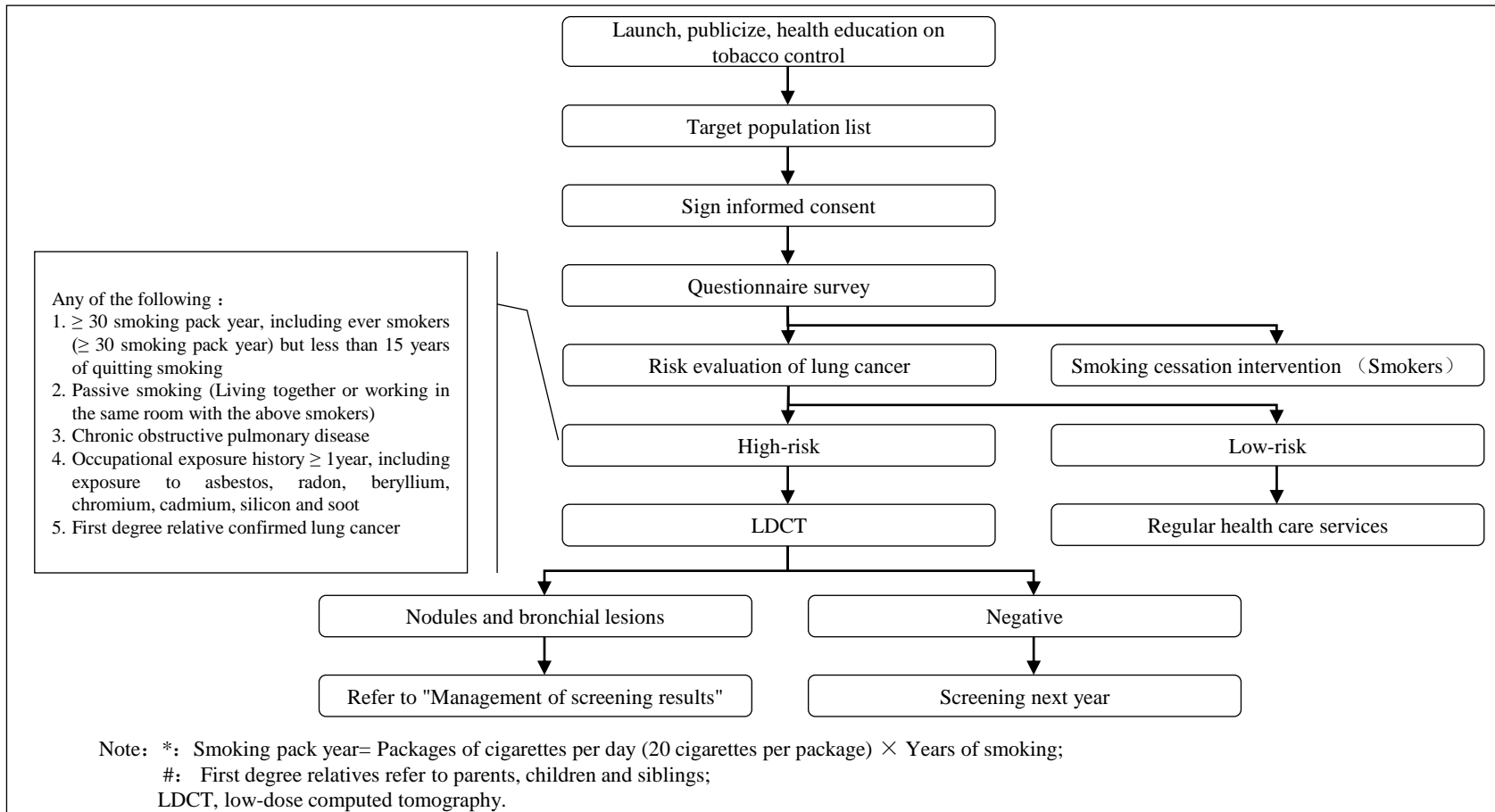
LDCT, low-dose computed tomography.



Follow-up until 31 December 2022.

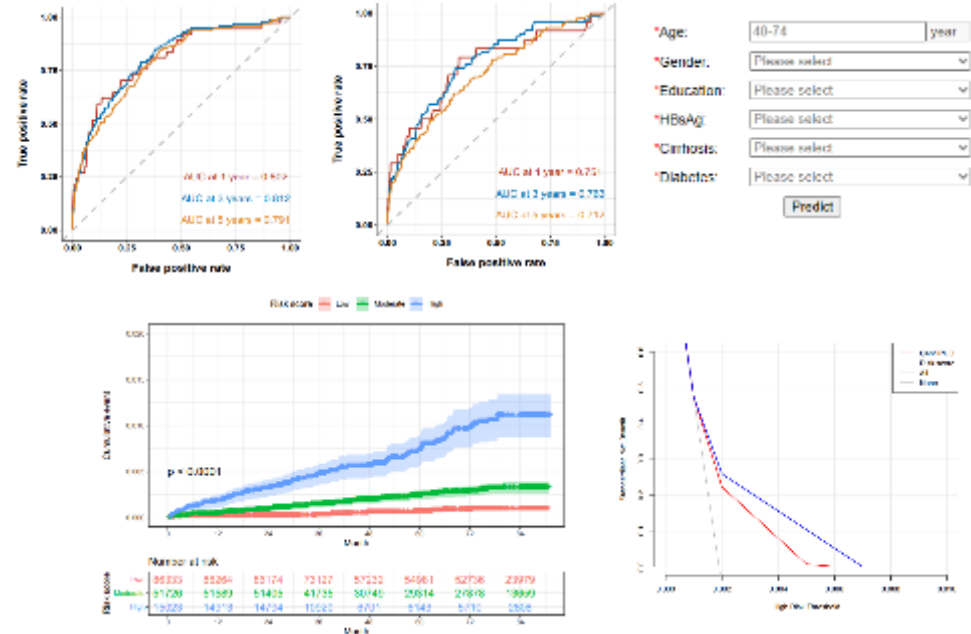


• Explore population-specific lung cancer screening in Zhejiang



Development of a Prediction Model and User-Friendly Risk Score for Self-assessment and High-Risk Population Selection in Liver Cancer Screening

Variable	N	Hazard ratio	p
Age	86212	1.06 (1.04, 1.08)	<0.001
Sex			
Female	48460	Reference	
Male	37752	3.41 (2.44, 4.78)	<0.001
Education			
Low	29096	Reference	
Medium	48712	0.84 (0.61, 1.15)	0.273
High	8404	0.37 (0.17, 0.78)	0.009
HBsAg			
Negative	22982	Reference	
Positive	3684	3.84 (2.38, 6.19)	<0.001
Unknown	59546	1.04 (0.73, 1.49)	0.830
Cirrhosis			
No	85608	Reference	
Yes	604	11.93 (7.46, 19.09)	<0.001
Diabetes			
No	78818	Reference	
Yes	7394	1.59 (1.08, 2.34)	0.019



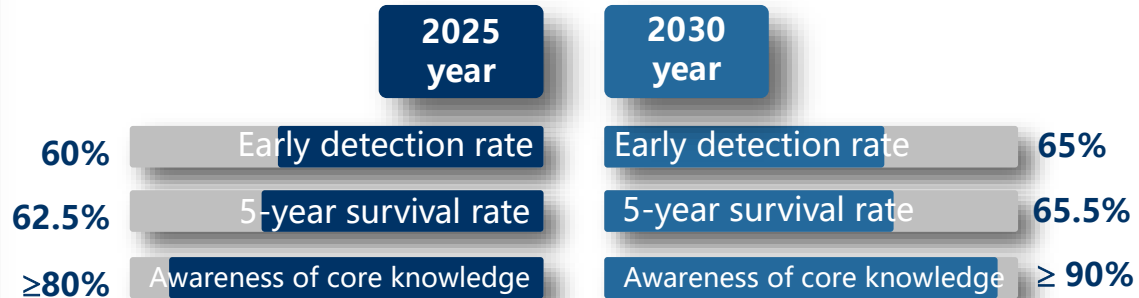
HBsAg, hepatitis B surface antigen.



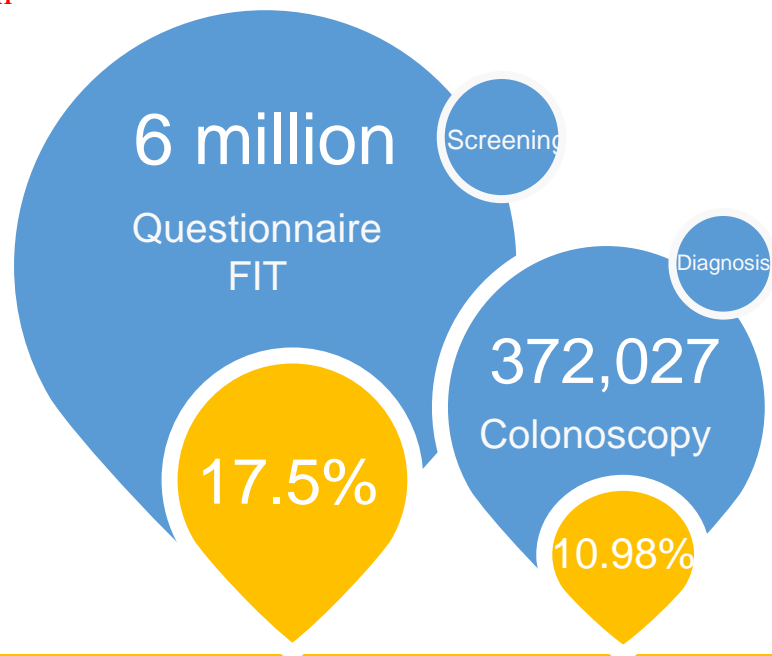
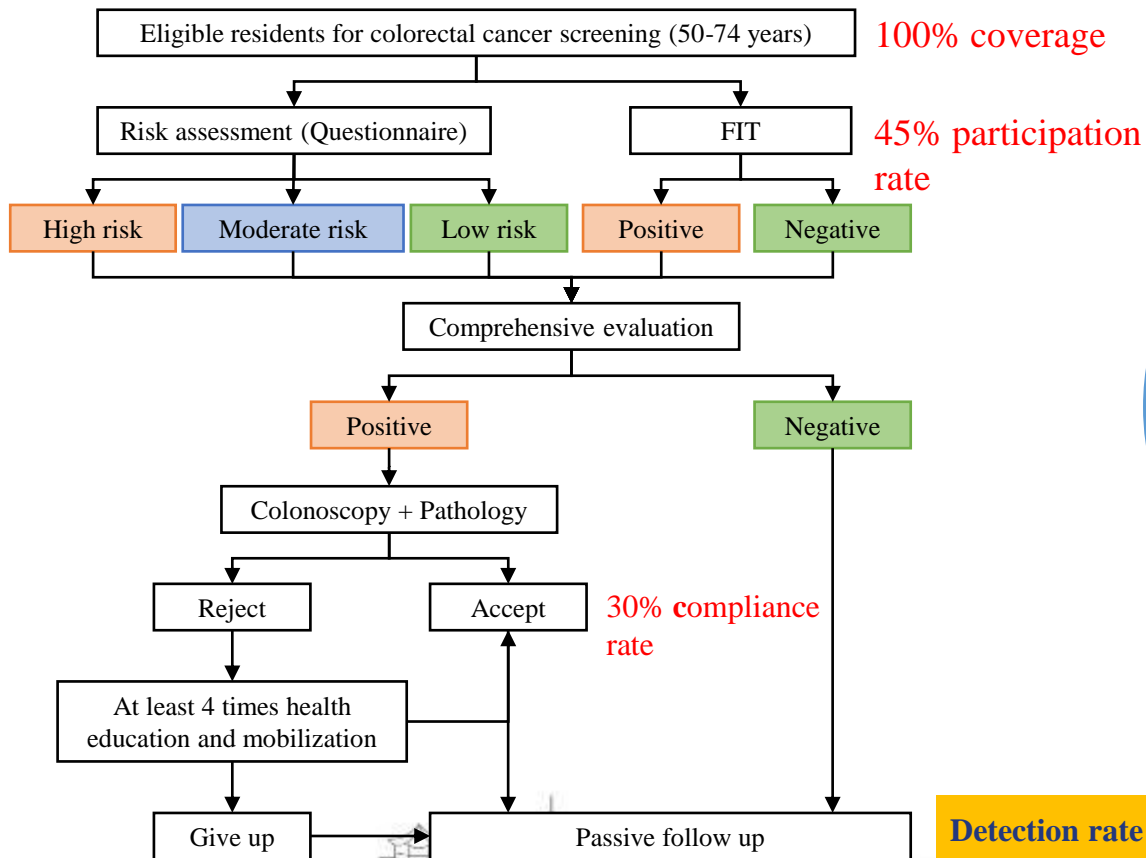
Colorectal Cancer Screening in Zhejiang

Aims:

- 16 million residents aged 50-74 years (2020-2024 first round)
- Improve the ability of standardized diagnosis and treatment of colorectal cancer
- Popularize healthy lifestyles and strengthen residents' awareness of cancer prevention knowledge
- Reduce incidence and mortality



•Colorectal Cancer Screening in Zhejiang



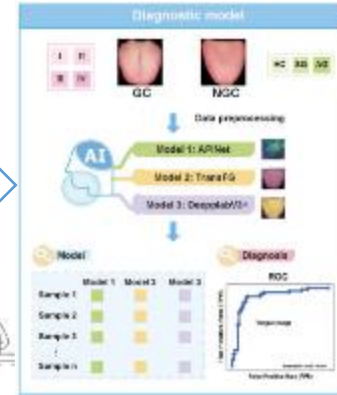
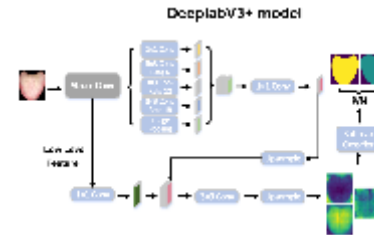
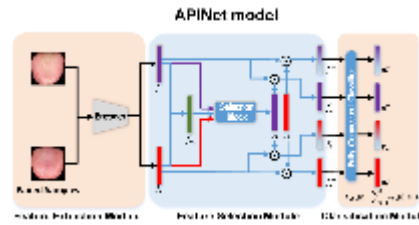
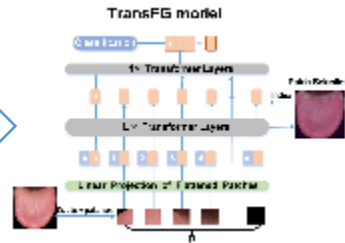
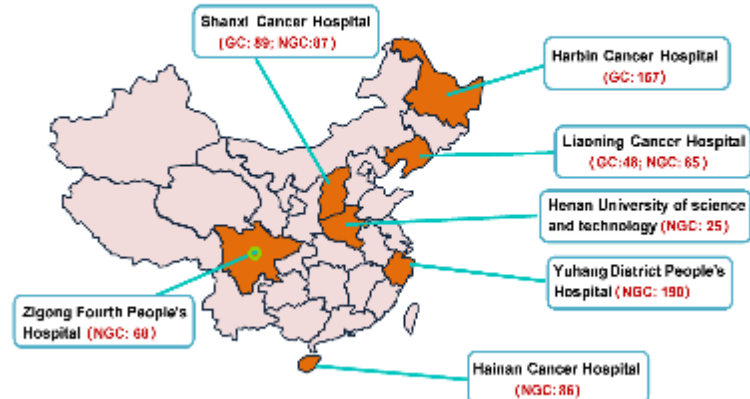
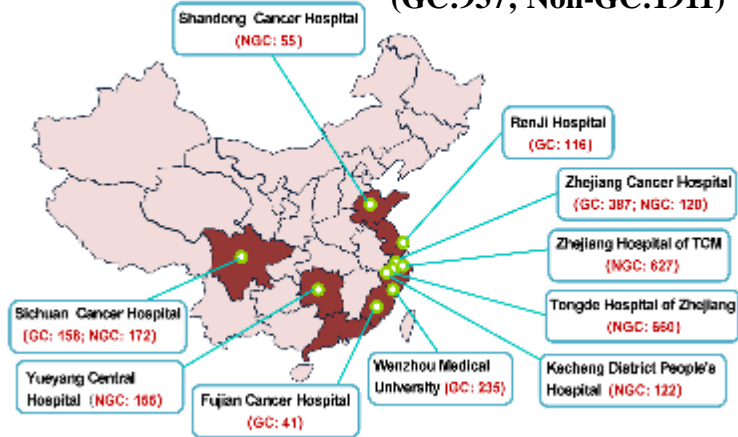
Detection rate: Colorectal cancer(0.96%), Advanced adenoma(10.02%)

Development of a tongue image-based machine learning tool for the diagnosis of gastric cancer

ClinicalTrials.gov NCT01090362

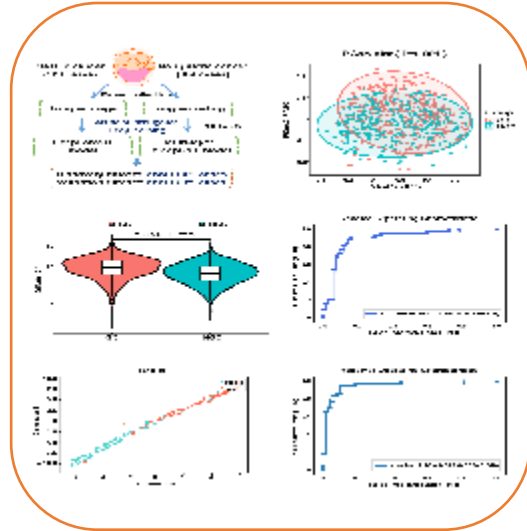
Training and internal validation dataset
(GC:937; Non-GC:1911)

Independent external validation dataset
(GC:294; Non-GC:521)

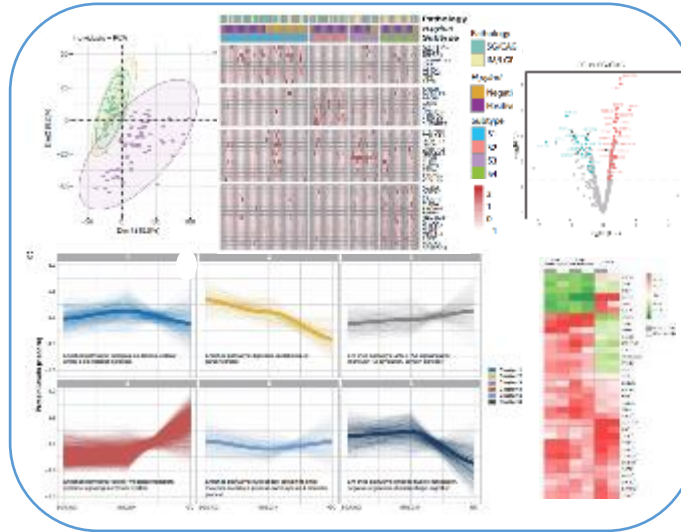


•Multi-omics study of gastric cancer

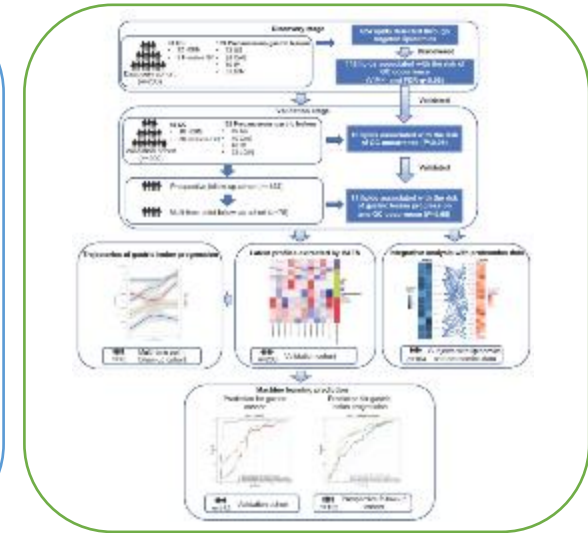
Tongue Coating Microbiomics



Tissue and Urine Proteomics



Blood Metabolomics



EBioMedicine. 2021 Dec;74:103714.

EBioMedicine. 2022 Dec;86:104340.

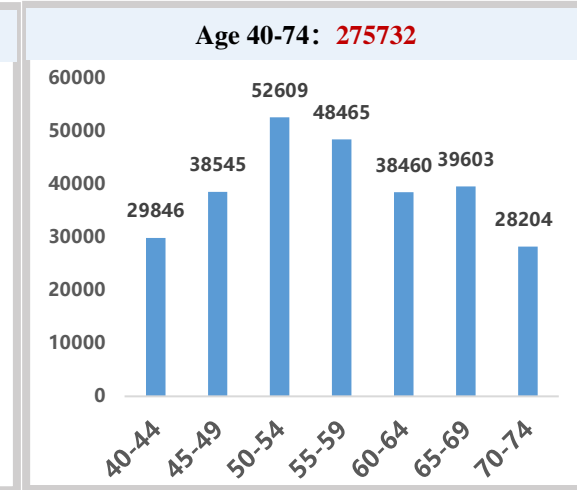
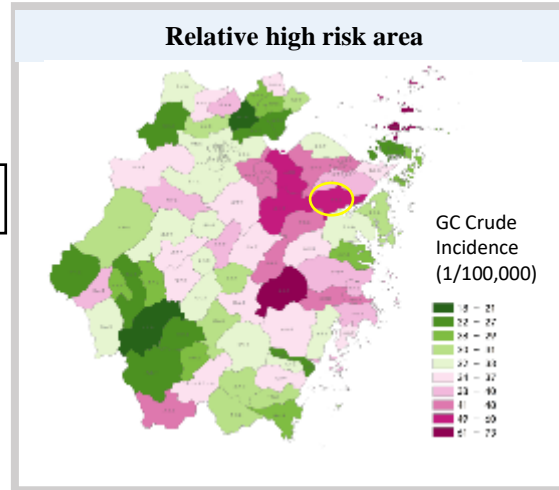
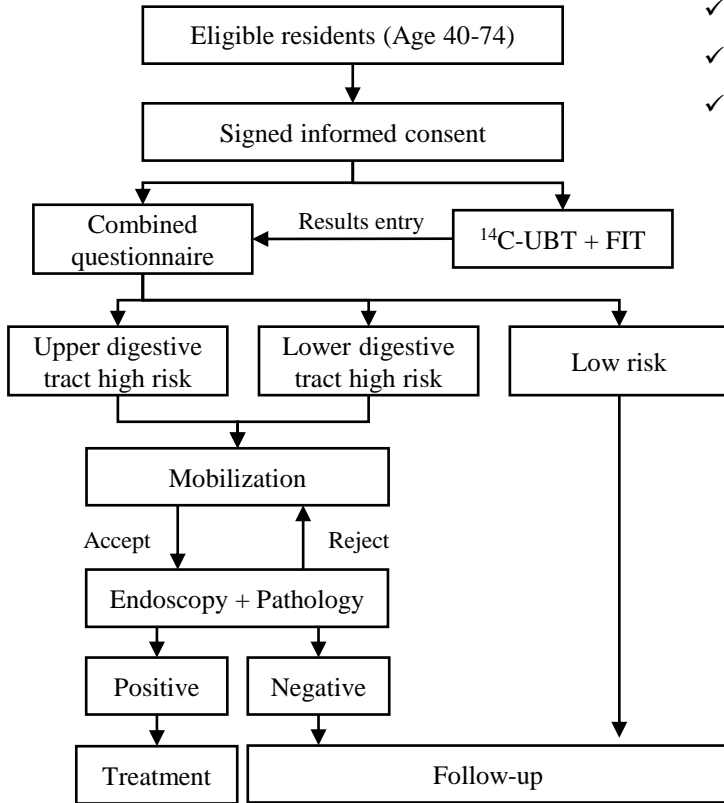
JAMA Netw Open. 2021 Jun 1;4(6):e2114186.

Theranostics. 2022 Jun 6;12(10):4671-4683.



• Promote combined screening mode for digestive tract cancer

- ✓ **Initiate:** 2023 March
- ✓ **Subjects:** Aged 40-74 years old residents in Fenghua county
- ✓ **Techniques:** Risk assessment (Questionnaire + ¹⁴C-UBT + FIT) + Endoscopy + Follow-up



• Connection of screening information platforms

Resident health records system



Clinical treatment



People's government livelihood supervision system

Zhejiang Big Data Development Administration





THANKS FOR YOUR ATTENTION

