

# **China Clinical Research Network Development**

Introduction of China Tuberculosis Clinical Trial Consortium (CTCTC)

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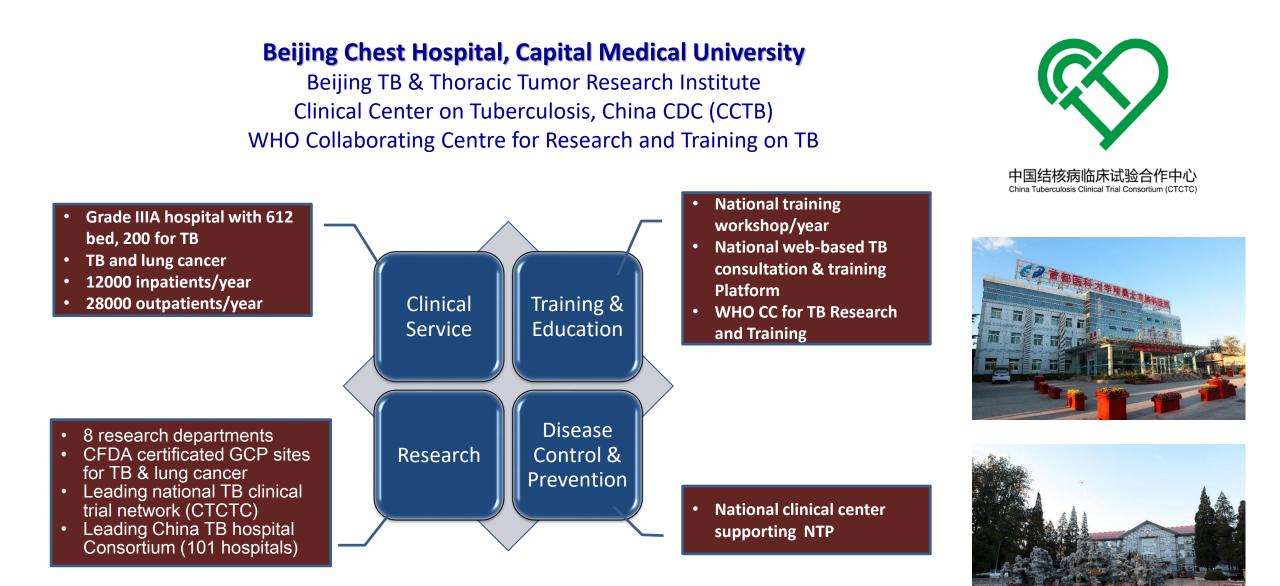
# **CTCTC Begins.....**

#### > Background:

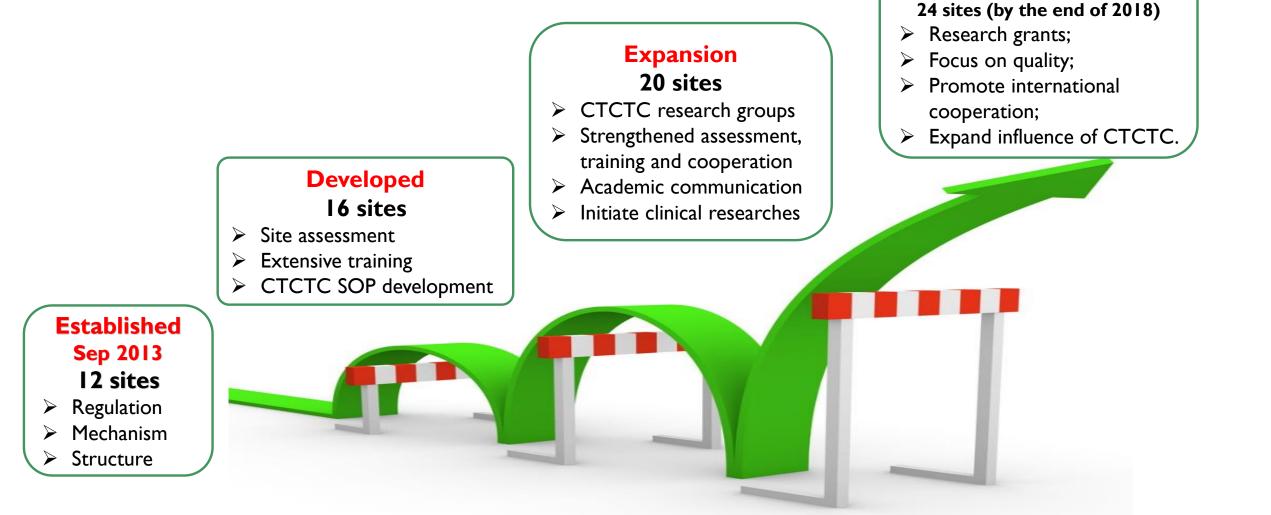
- Rapid development on TB drug and regimen globally.
- High quality clinical trial sites in high burden countries are urgently needed
- > CTCTC established in Sep, 2013 with first 12 CFDA certificated GCP sites.
- The leadership and management of the Consortium is located at Beijing Chest Hospital
- FHI 360 was selected to work with NIAID/DAIDS to support CTCTC network.



**CTCTC Vision:** Leading China's effort in conducting high standard clinical research on TB treatment, diagnostics and vaccine, to support evidence based response to TB epidemic.

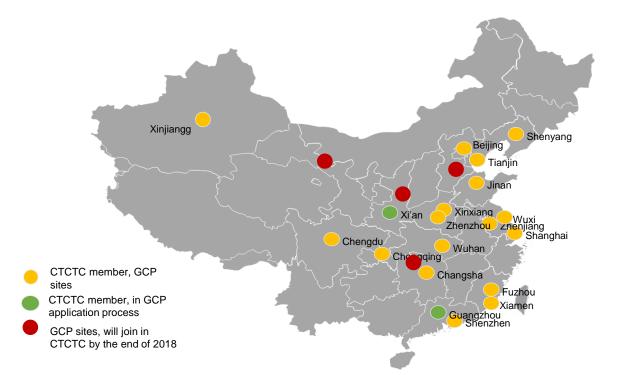


## **CTCTC Development Phases**



**Current and the future** 

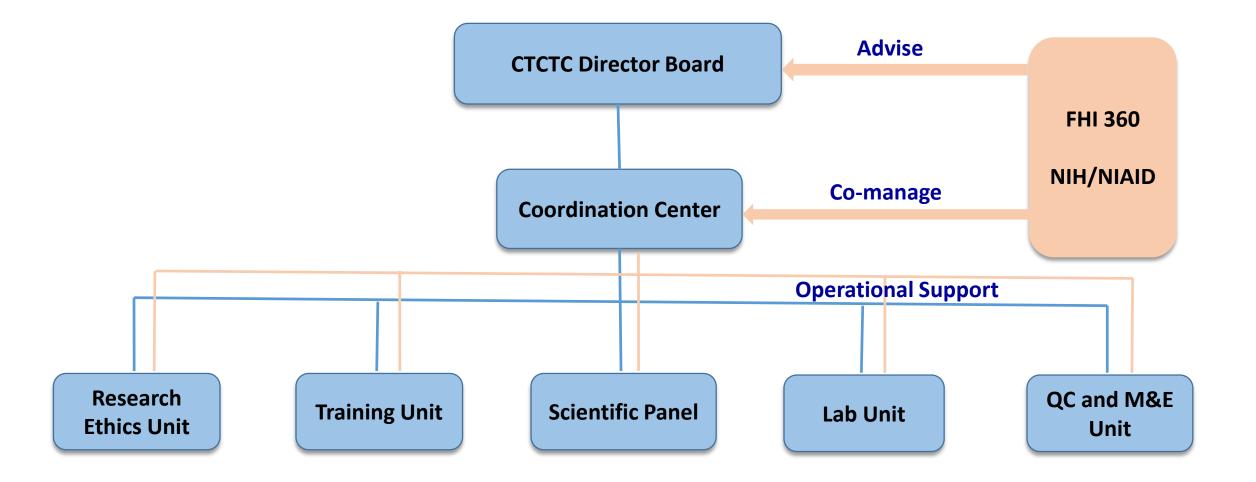
### **CTCTC** member hospitals



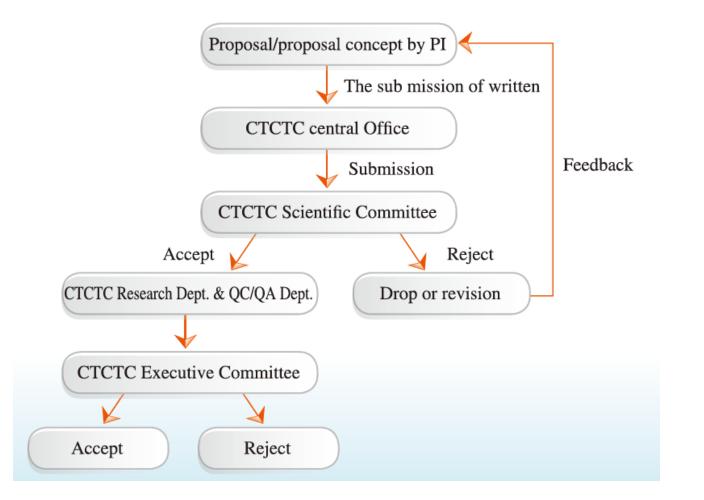
#### **Participating Study Sites** Shenyang Chest Hospital, Shenyang Beijing Chest Hospital, Beijing 2 Tianjin Haihe Hospital, Tianjin 4 Shandong Provincial Chest Hospital, Jinan Shanxi Provincial Tuberculosis Institute, Xi'an (not a CFDA certified site) 6 Xinxiang No. 1 People's Hospital, Xinxiang Henan Provincial Infectious Disease Hospital, Zhenzhou 8 Wuxi No. 5 People's Hospital, Wuxi 9 Zhenjiang No. 3 People's Hospital, Zhenjiang Shanghai Pulmonary Hospital, Shanghai 10 Shanghai Public Health Clinical Center, Shanghai 11 Chengdu Public Health Clinical Center, Chengdu 12 Chongqing Tuberculosis Institute, Chongqing 13 Wuhan Institute for TB Control, Wuhan 14 Changsha Central Hospital, Changsha 15 16 Fuzhou Pulmonary Hospital, Fuzhou The 1st Affiliated Hospital of Xiamen University, Xiamen 17 Guangzhou Chest Hospital, Guangzhou (not a CFDA certified site) 18 Shenzhen No.3 People's Hospital, Shenzhen 19 20 Xinjiang Chest Hospital, Urumuqi



## **CTCTC** Structure



# **Decision Making Mechanism**



### Communication mechanism

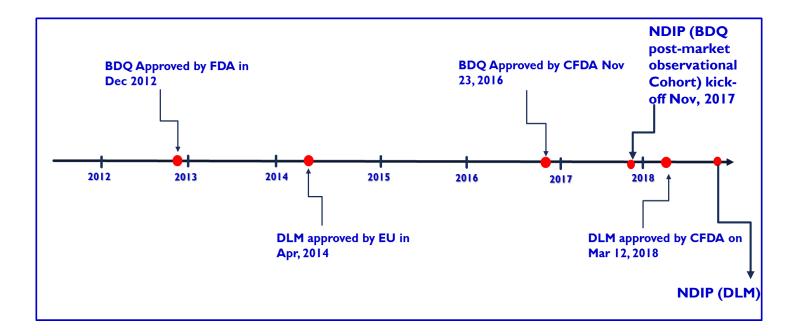
- Face to face meeting:
  - Managerial: I/year, at China National TB Hospital annual meeting
  - Academic: I/year, at China CMA-TB annual meeting
  - Training workshop: 3-4/year in the beginning, and current I/year with specific focus
- Webinar meeting/training: I/month
- CTCTC quarterly update, and annual report



# **On-going Studies**

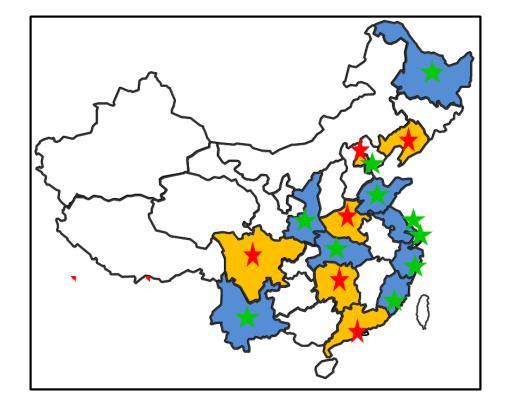


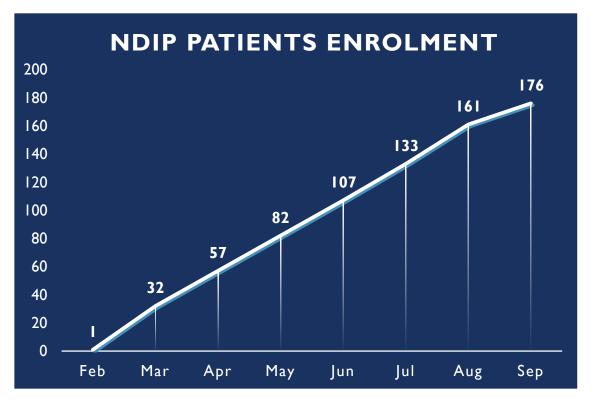
**S - E - M - S** 





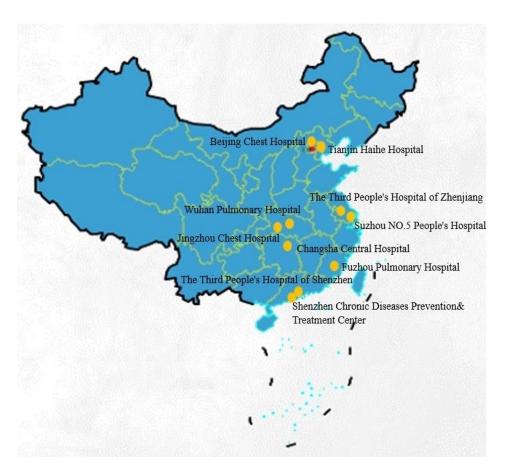
#### NDIP (BDQ) Sites and Patients Enrolment





### **On-going Studies: RePORT-CHINA**

- Joined RePORT international in Jan 2017
- I0 selected sites in RePORT-China
- 93 qualified cases enrolled for Cohort A, and 896 specimens collected
- Funded locally from BJ municipal government and IATB
- Key partnerships are NIH and FHI 360



## On-going Studies: CTCTC Research Grants for Young Investigators: RI (2017)

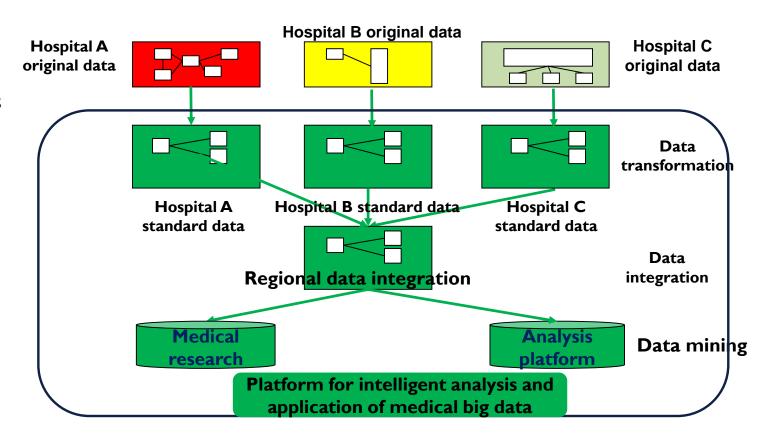
Leading site	Research topic
Chengdu Public Health Clinical Center	Clinical features of tuberculosis complicated with HIV and viral hepatitis: a retrospective study
Ningxia No 4 People's hospital	The synergy effect of cycloserine (CS ) on the therapy of tuberculosis in vitro
Shenyang Chest Hospital	Evaluation of the diagnostic value of GeneXpert MTB/RIF test in urinary tuberculosis of HIV(-) population
Beijing chest hospital	Evaluation of Xpert MTB/Rif test on centrifugal cerebrospinal fluid in the diagnosis of tuberculous meningitis
Jingzhou Chest Hospital	The synergy effect of cycloserine (CS) on the therapy of tuberculosis in vitro
Shanghai pulmonary hospital	Effects of isoniazid and rifampicin MIC on therapeutic efficacy of primary MDR-TB
Shanghai Pulmonary hospital	A novel lymphocyte transformation test in the diagnosis and prognosis of anti-TB drug induced hypersensitivity
Changsha Central hospital	The risk of extensive drug-resistant tuberculosis transmission in China.——Interview and Location of 20 patients with extensive drug-resistant tuberculosis.

## On-going Studies: CTCTC Research Grants for Young Investigators: R2 (2018)

Leading site	Research topic		
Shandong Chest Hospital	Effect of empiric anti-tuberculosis therapy on the PZA resistance in newly diagnosed patients		
Beijing Chest Hospital	Application of Real-time Fluorescence Quantitative Nucleic Acid Amplification (Xpert MTB/RIF) in the Diagnosis of Intestinal Tuberculosis		
Shenzhen No.3 Hospital	Correlation between linezolid serum concentration and drug neurotoxicity		
Beijing Chest Hospital	Study on ototoxicity associated with anti tuberculosis injections (Am, Cpm) in patients with tuberculosis		
Chongqing Public Health Center	Clinical application of overlapping extension PCR fragment sequencing for detection of drug resistance of three kinds of anti tuberculosis drugs		
Tianjin Haihe Hospital	Optimization and evaluation of MALDI-TOF-MS identification method for BactecTM MGITTM 960 liquid culture		
The Fifth People's hospital of Suzhou	Effect of fluoroquinolone exposure on detection of Mycobacterium tuberculosis		

# **On-going** Studies: Hospital data Standardization

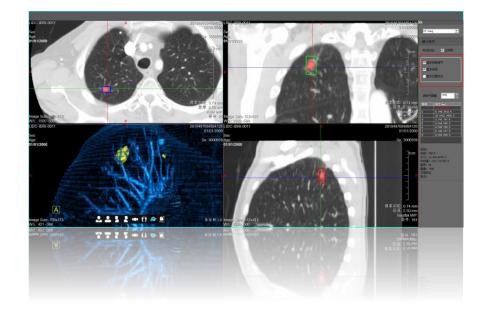
- Hospital data: large amounts, complicated, isolated and more emphasis on application than analysis
- Standardization: first step for application
- Real World Study(RWS): specific application of hospital data standardization
- By 2018: carried out by 6 hospitals



# On-going Studies: Imaging Big Data

- To fill the gap on TB diagnosis at peripheral level: remote medical imaging consultation
- By the end of 2018:
  - to establish a pulmonary TB image center consist of I I TB hospitals and 100,000 pulmonary image database
  - the design of the AI (Artificial Intelligence) image-reading software will have been finished

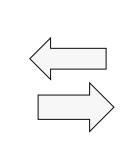
#### Al's prospect encouraging



### On-going Studies: Patient management System









#### For Patients use

- •Remind drug taking and F-U visits
- Monitor adherence
- Provide patients education and patient incentives
- Allow communication between patients and doctors

#### For doctors use

- •Link to TB Aid: monitor patients/answer questions
- Doctors community for technical discussion
- •Doctor's education: on-line training
- Share TB related resources

# Planned Studies

Area	Description of Study	Sponsor	CTCTC sites evolved	Current Status
MDR Treatment	STREAM 2: 6-9 months treatment with/without BDQ	Union	4	Expected start in Nov 2018
MDR Treatment	DLM post-market Observational Cohort	Otsuka	TBD	Expected start in Jun 2019

### Into the future:

#### **Research:**

- New drug & new regimen
- bio-repository
- Big-data
- Research Team Capacity Building
- International coorperation



# Acknowledge:

#### Strong support from NIAID/NIH, FHI 360

Joint efforts of CTCTC member hospitals

