

# The characteristics and methodology of TCM clinical research



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❖ Where am I from?





# The World Federation of Acupuncture-Moxibustion Societies

中文版 English Français Español Deutsch Русский

NGO in relations With World Health Organization

Home News Center Academic Exchanges International Training Exchange Center Level Exam

World Journal of Acupuncture-Moxibustion Acupuncture Standardization International Cooperation Member Societies

## Organization and Structure

- General Assembly
- Executive Committee
- Consultant Committee
- Expert Committee
- Working Committee
- Examination Committee

## Member Societies

## Secretariat

## International Cooperation Platform

Prof. Liu Baoyan, WFAS Executive Member, attende... 09-7-16

[Online regis](#)

4~7.November 2009 • The European Parliament • Strasbourg/France

## The 7<sup>th</sup> World Acupuncture Congress of WFAS and General Assembly

## News Center

[more](#)



(Argentina) Argentine Civil Acupuncture and Traditional Chinese Science Association

- The Mainland Promotion Confe... 09-9-29
- Prof. Deng Liangyue Meets Dr... 09-8-26
- 10 Japanese Students in WFAS... 09-8-22
- Prof. Liu Baoyan, WFAS Execu... 09-7-16
- Hong Kong Acupuncture Associ... 09-7-6
- Nguyen Tai Thu , director of... 09-6-17



## Join us for Membership

Constitution of WFAS

[GO](#)

Application Form for WFAS Membership

[GO](#)

Introduction of WFAS Membership

[GO](#)

E-mail of Secretariat

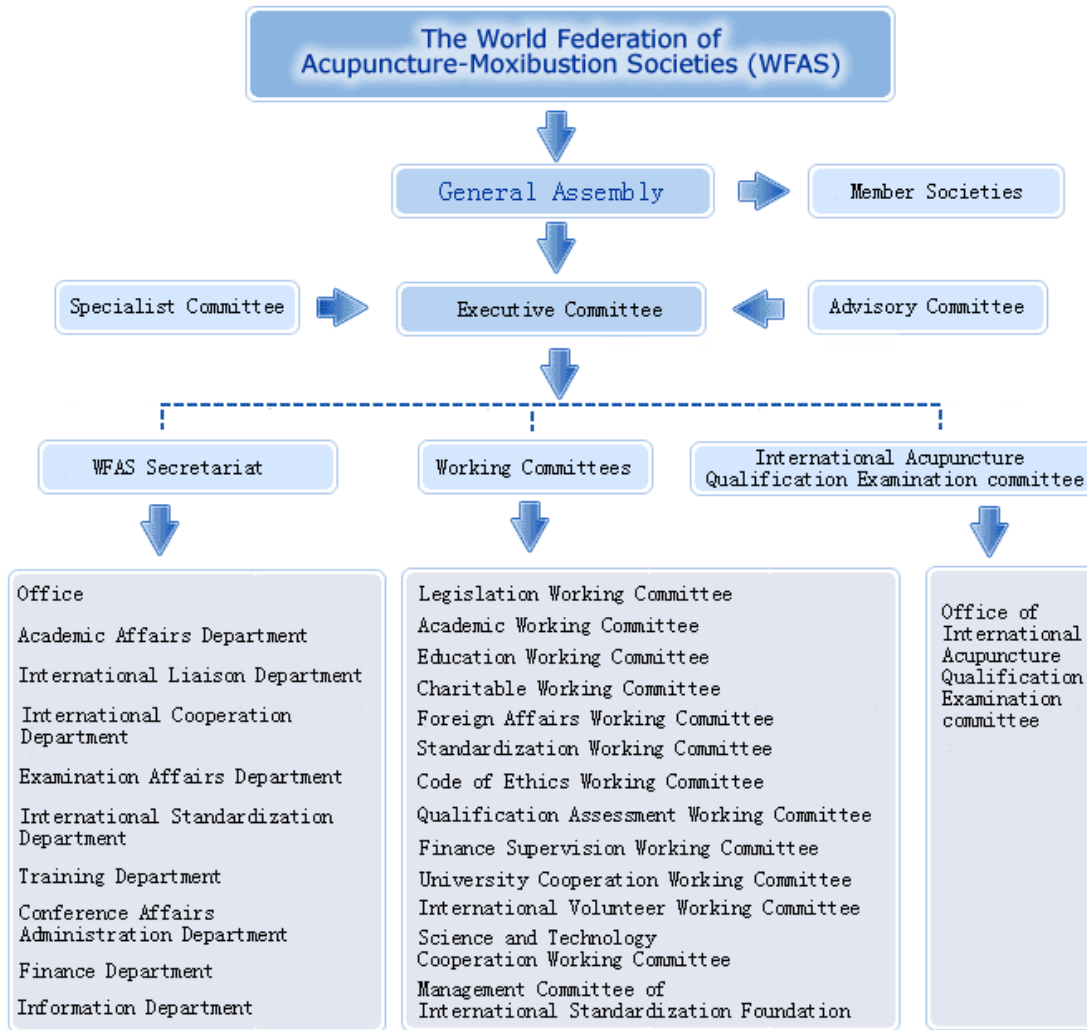
[GO](#)

## Hot Academic Issues

Dr Margaret Chan to be WHO's next Director-



# Vice-chairman of the World Federation of Acupuncture-Moxibustion Societies (WFAS)



- Founded in 1987
- 1998: formal non-government relationship with WHO
- 73 member societies
- 70,000 acupuncturists
- 44 countries



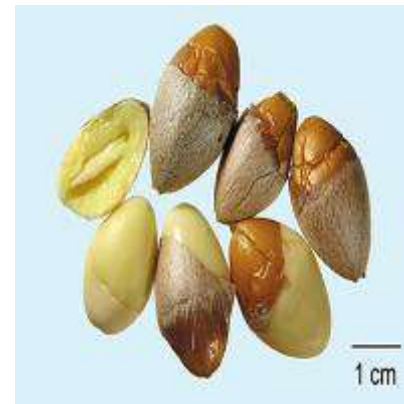
# The WFAS General Assembly and the 7th World Acupuncture Congress



# Outline



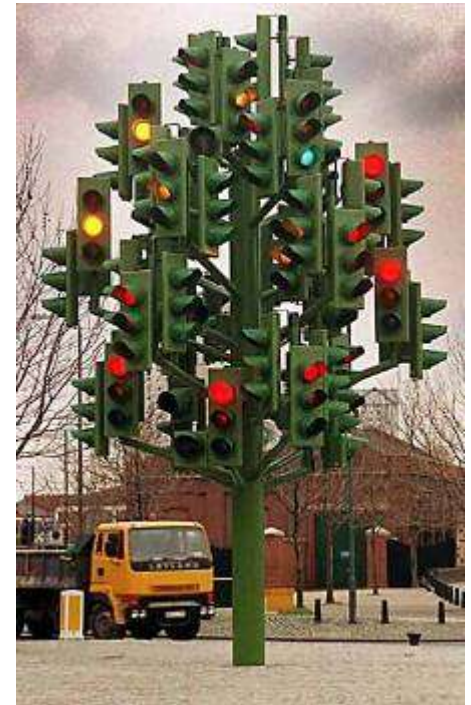
1. The character of TCM
2. The approaches of TCM clinical research
3. The technological system of integration between TCM clinical practice and research action



# The character of TCM



1. patient-centered theory
2. based on clinical practice
3. integrating clinics and research
4. step-by-step methodology

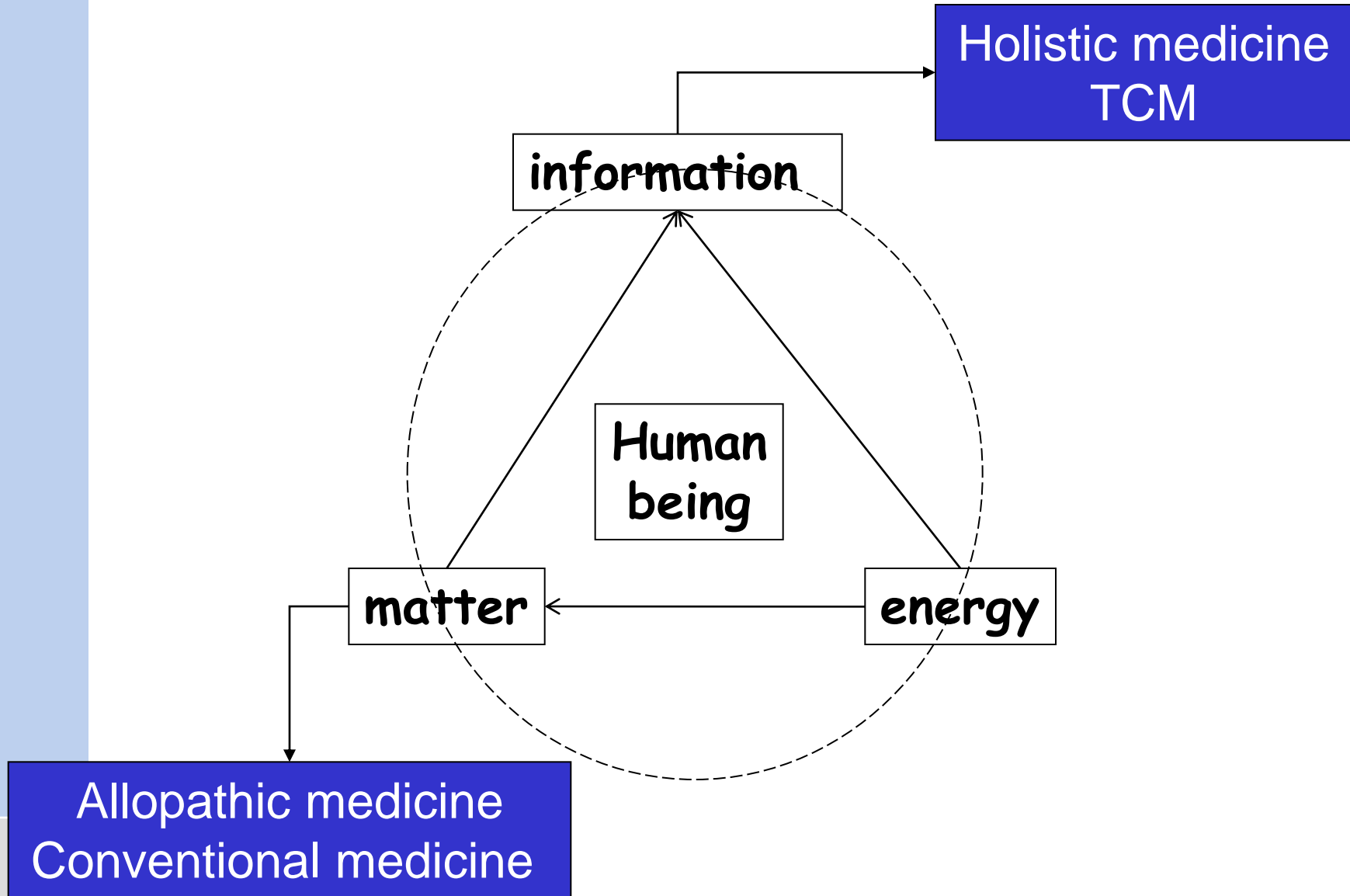




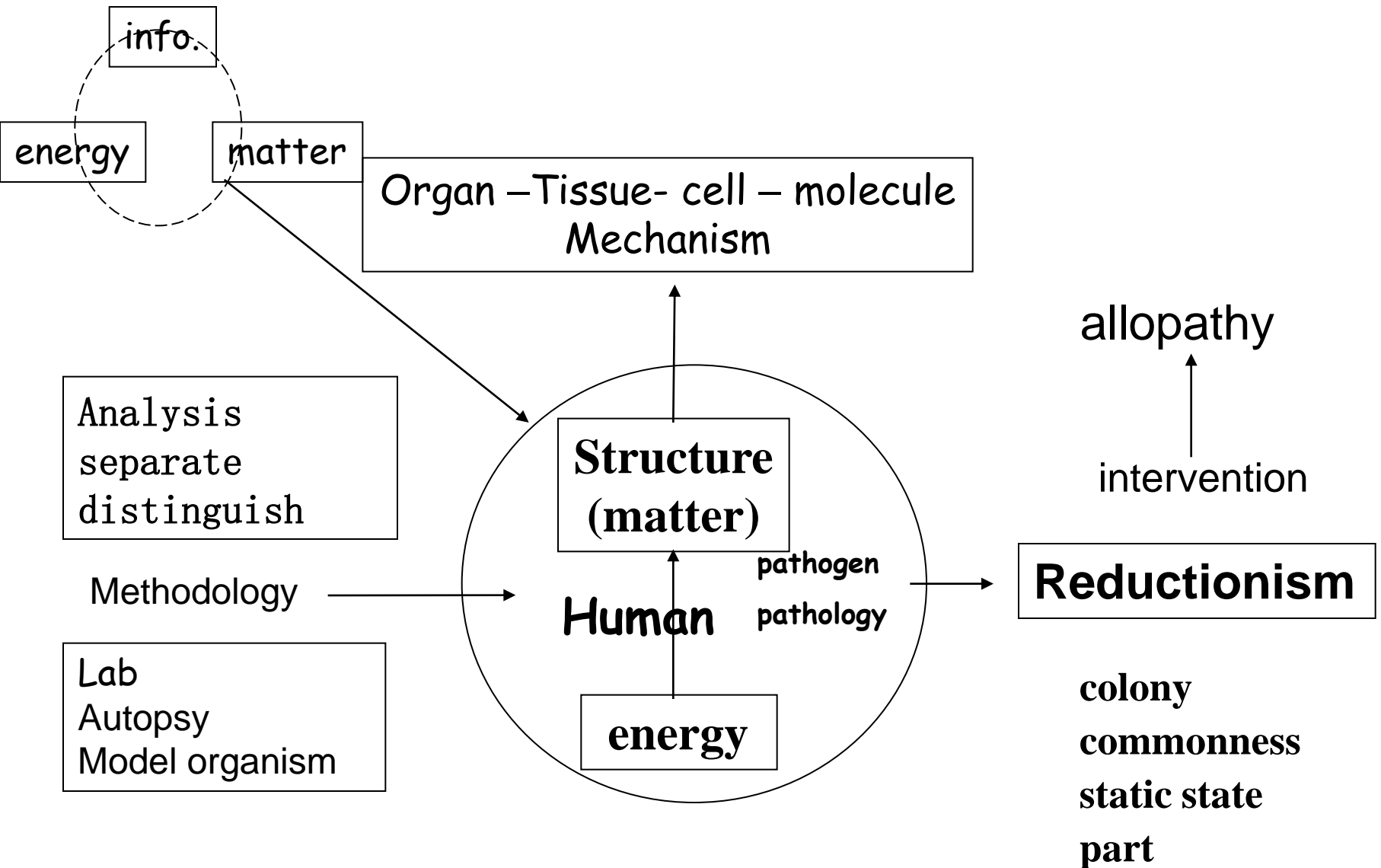


# **Patient-centered theory**

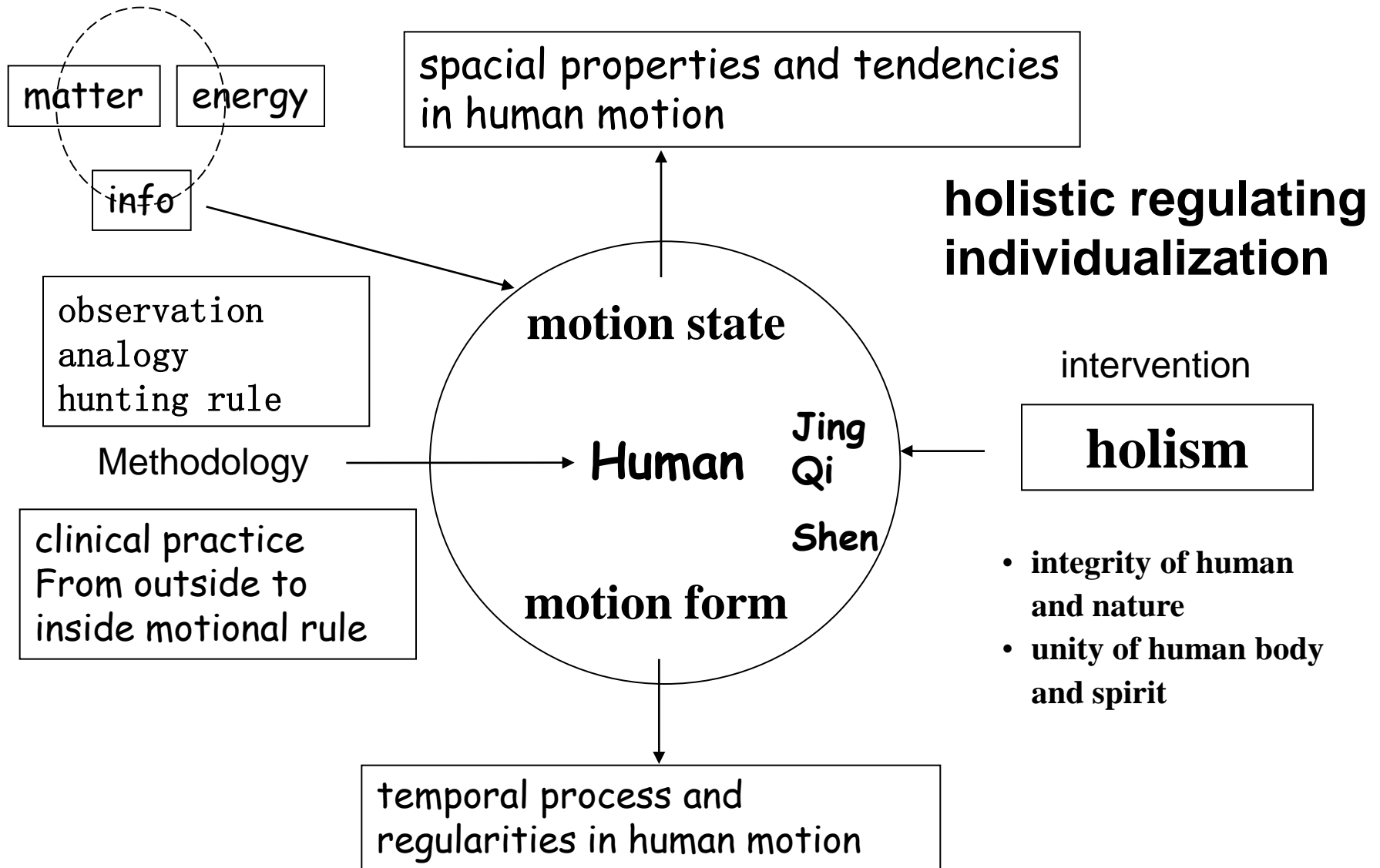
# Allopathic medicine and holistic medicine



# Allopathic medicine (conventional medicine)



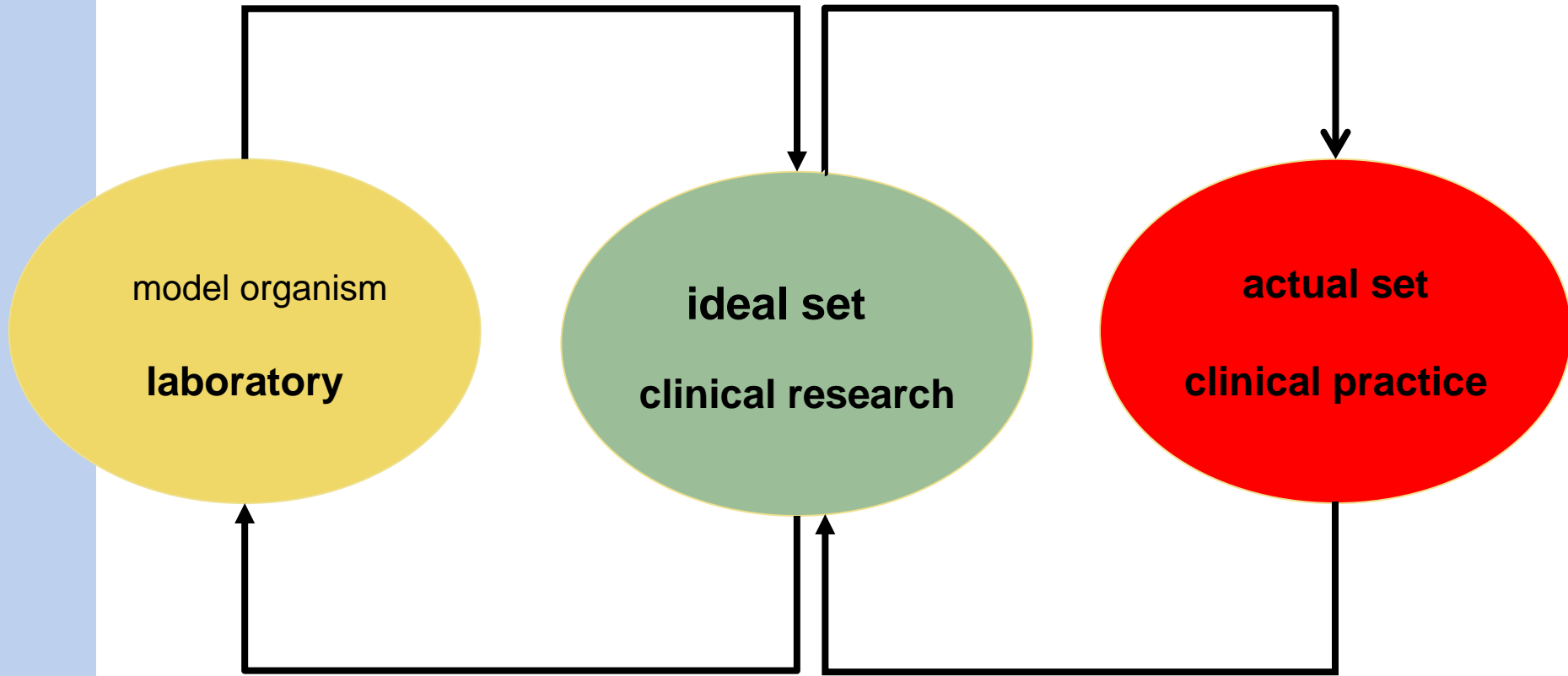
# Holistic medicine (Traditional Chinese Medicine)



# The different approaches of development

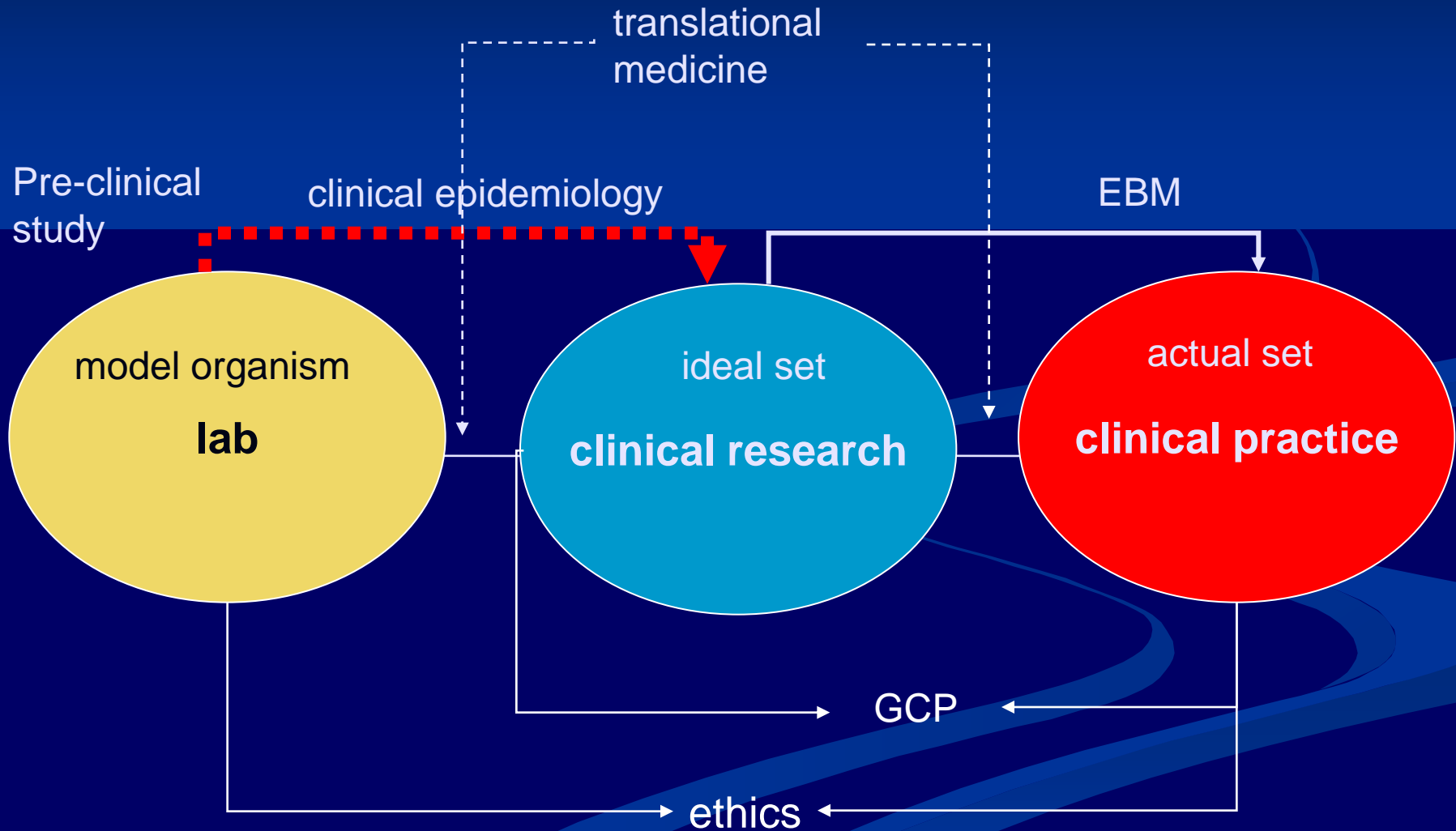


## Allopathic medicine



Holistic medicine  
TCM

# The clinical methodology of allopathic medicine



# Characters of basic elements of TCM CE

要素	从实验室—临床研究	从临床实际—临床研究
干预措施 I	单一；与操作者分离；活性成分清楚	复合；依赖于操作者；活性成分不清楚
干预效果 O	确切、清晰、重复性好	笼统、模糊、个体性强
人群 P	根据疾病诊断标准确定	根据干预措施确定
对照 C	明确、与安慰效应容易区分	不明确、与安慰效应难于区分
场所 S	理想条件、影响因素控制严格	实际条件、混杂因素难以完全控制
时间 T	统一规定、全部等齐	难以统一规定、缺失较多

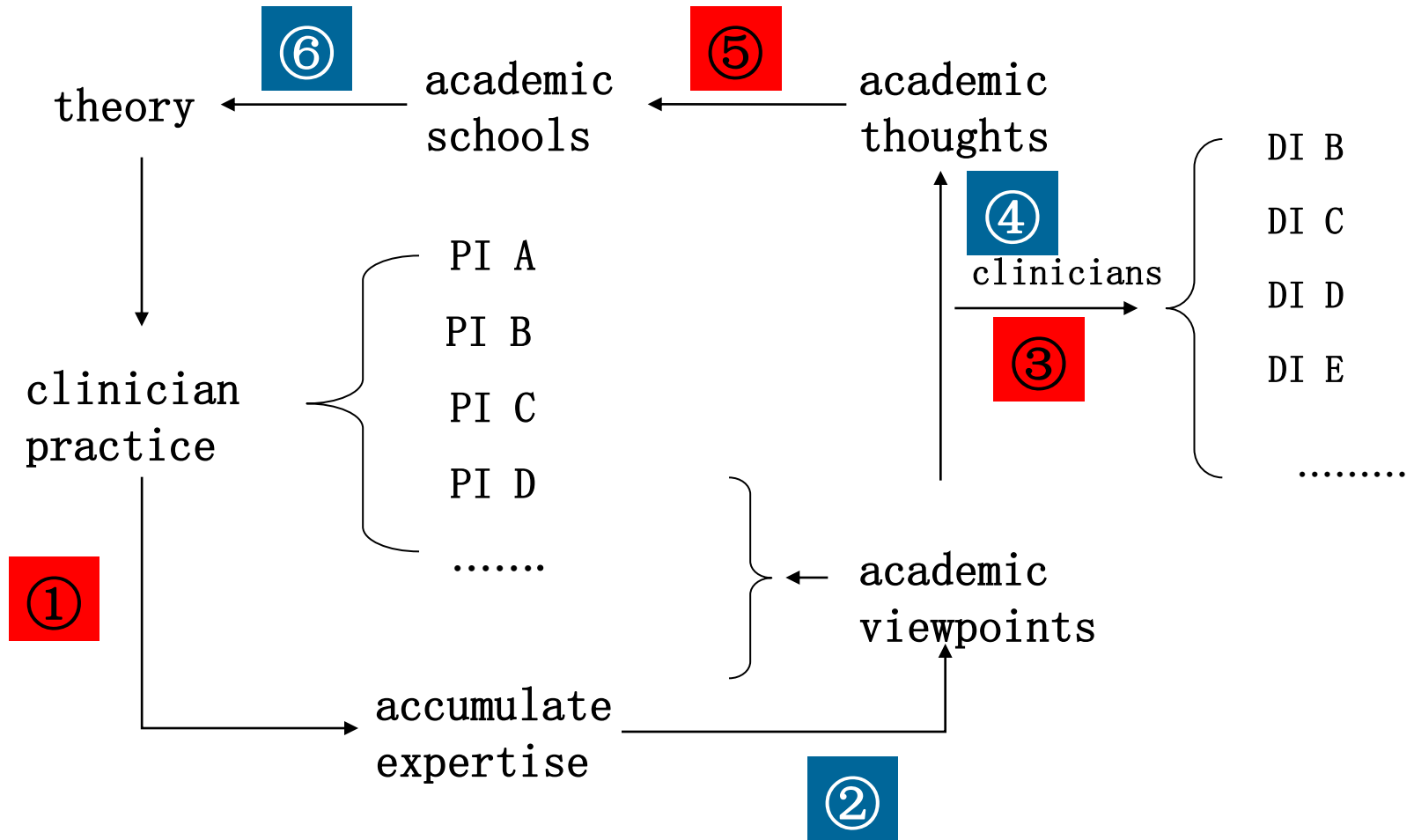
- TCM CE is patient-centered and clinical therapeutic effect-oriented. It is a process from clinical reality to clinical research step by step. The major method used is observation alternating with verification, qualitative research in combination with quantitative research.







**The train of thought and method of  
a unified clinical and research  
technological system**

# Clinical practice and research alternately



 clinical practice

 clinical and basic research

# The unified clinical and research technological system



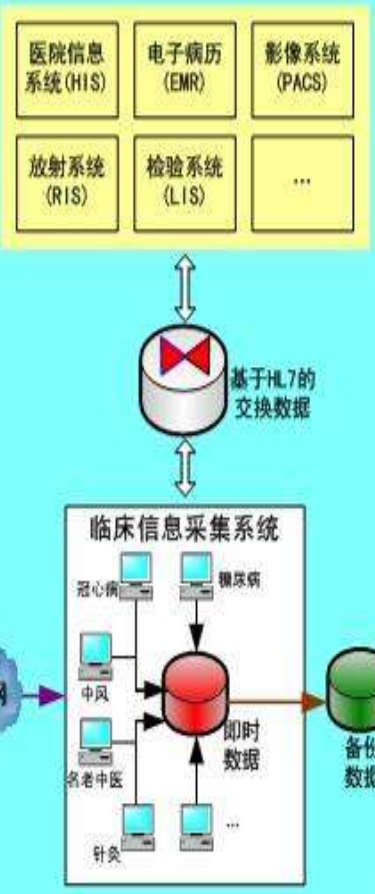
## 数据采集

## 数据转储

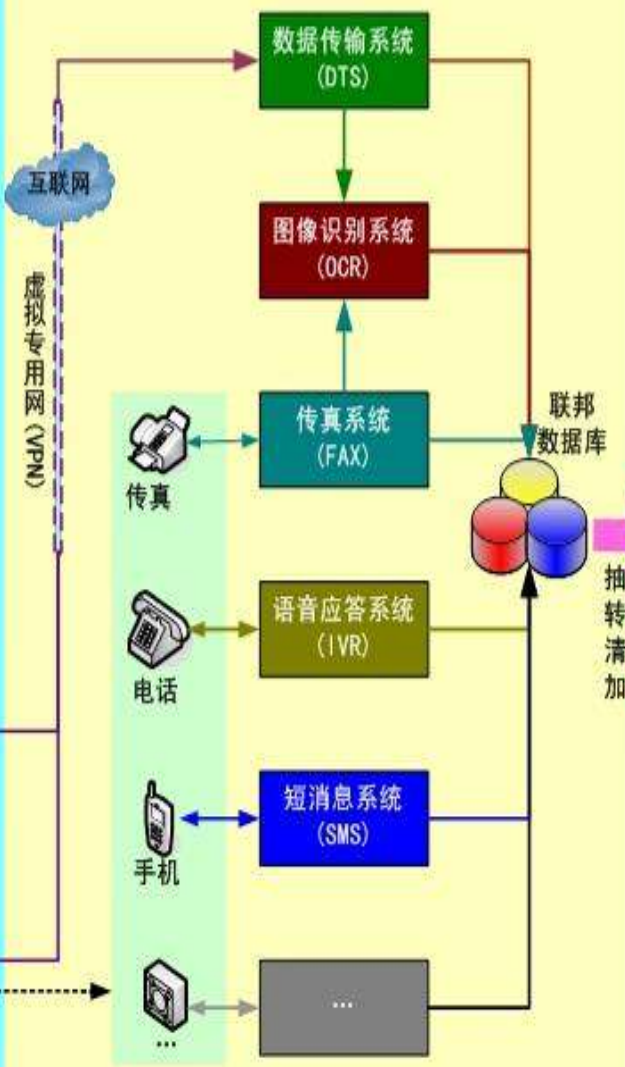
## 数据分析

### 临床数据采集

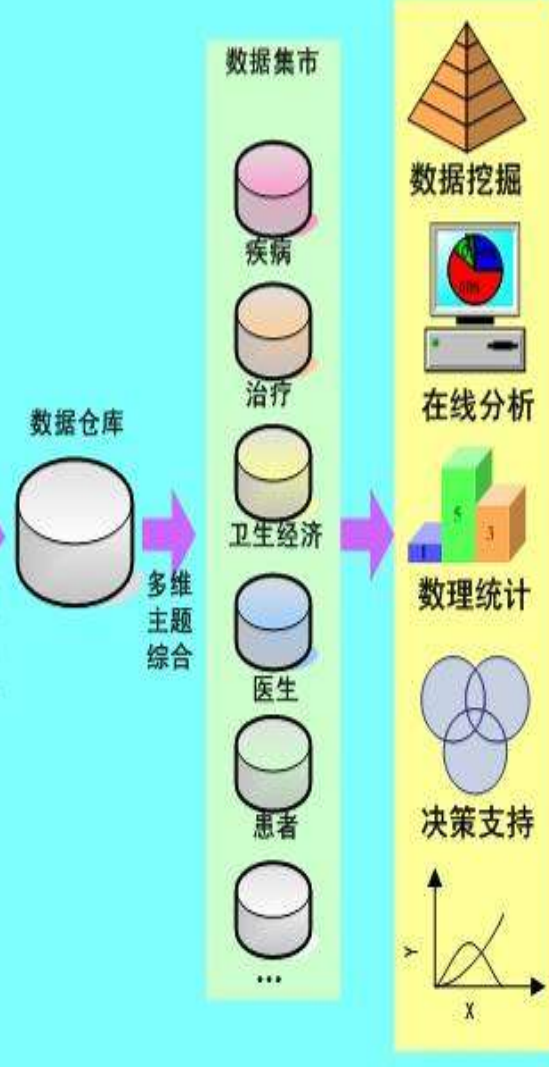
- 糖尿病组
- 冠心病组
- 中风组
- 名老中医组
- 针灸组
- ...



## 医疗业务平台



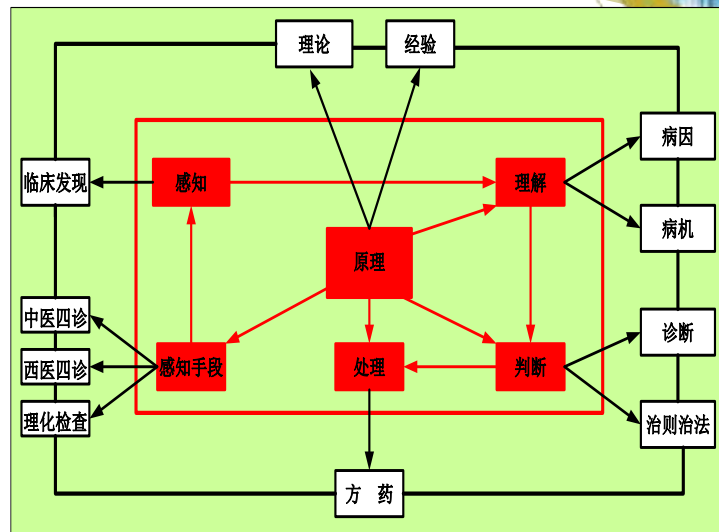
## 数据管理平台



## 临床研究平台

# Application system of standardized TCM clinical terms

《中医病症分类与代码》(GB/T15657-1995)	国家标准
《中医临床诊疗术语》疾病部分(GB/T 16751. 1—1997)	国家标准
《中医临床诊疗术语》证候部分(GB/T 16751. 2—1997)	国家标准
《中医临床诊疗术语》治法部分(GB/T 16751. 3—1997)	国家标准
《经穴部位》(GB 12346-1990)	国家标准
《耳穴名称与部位》(GB/T 13734-92)	国家标准
《出版物上数字用法的规定》GB/T 15835-1995	国家标准
《世界各国和地区名称代码》GB/T 2659-2000	国家标准
《个人基本信息分类与代码》GB/T 2261.1-2003~ GB/T 2261.7-2003	国家标准
《中医内科病证诊断疗效标准》(ZY/T 001. 1-94)	行业标准
《中医外科病证诊断疗效标准》(ZY/T 001. 2-94)	行业标准
《中医妇科病证诊断疗效标准》(ZY/T 001. 3-94)	行业标准
《中医儿科病证诊断疗效标准》(ZY/T 001. 4-94)	行业标准
《中医眼科病证诊断疗效标准》(ZY/T 001. 5-94)	行业标准
《中医耳鼻喉科病证诊断疗效标准》(ZY/T 001. 6-94)	行业标准
《中医肛肠科病证诊断疗效标准》(ZY/T 001. 7-94)	行业标准
《中医皮肤科病证诊断疗效标准》(ZY/T 001. 8-94)	行业标准
《中华人民共和国卫生部药品标准》	部颁标准



# Research result: set of standardized TCM terms and set of standardized TCM clinical case terms

The screenshot displays a software interface for managing TCM terminology. On the left, a hierarchical tree structure shows the classification of terms, with '脾胃证候' (Spleen and Stomach Symptom) selected. The main area is divided into several panels:

- InstanceEdit Panel:** Contains the following fields:
  - 概念词 (Concept Term): 脾胃证候
  - 编辑名称 (Edit Name): 河南6
  - 校验员名称 (Checker Name):
  - 词表加工时间 (Terminology Processing Time): 2006/11/14/
  - 名称字符类 (Name Character Class): Alias list including 'pi he wei zheng hou' and 'Spleen-stomach Symptom'.
  - 各种相关概念名词 (Various Related Concept Terms): List including '脏腑证候'.
  - 概念释义 (Concept Explanation): Explanation field.
  - 概念状态 (Concept Status): 已加工 (Processed)
  - 状态原因 (Status Reason):
  - 属性值对应 (Attribute Value Correspondence):
  - 概念定义 (Concept Definition): Definition field containing '脾胃相表里, 病邪侵犯于'.
  - 语义类型 (Semantic Type):
  - 来源于一体化语言系统 (Source from Integrated Language System):
- 类树跟踪 (Class Tree Tracking):** A list of terms, with '脾胃证候' highlighted.
- 类编辑 (Class Edit):** A search and filter section with '中医疾病' (TCM Diseases) entered.

# Application system of standardized TCM clinical terms

set of TCM clinical terms

a collection of  
200,000 words

VSP vBuilder

Root

- 临床术语
  - 处方
    - 按功效分类
      - A
        - 辟秽剂
        - 避孕剂
        - 表里剂
        - 补益剂
          - 补肺剂
            - 补肺剂实例
              - 安肺汤
              - 安息香膏
              - 白及散
              - 贝母括痰
              - 参蛤补肺
              - 参芪蛤蚧
              - 防喘汤
              - 加味紫菀汤
              - 结核丸
              - 金水宝

关联描述: 白及膏治疗断跟跛。

语义关系设计来源: 中医方剂大辞典 -- 南京中医学院 -- 人民卫生出版社 -- 1999.07

相关概念名词: 发背 ↑

语义关系: 治疗

关联描述: 白及膏治疗发背。

语义关系设计来源: 中医方剂大辞典 -- 南京中医学院 -- 人民卫生出版社 -- 1999.07

相关概念名词: 蜈蚣疮 ↑

语义关系: 治疗

关联描述: 白及膏治疗蜈蚣疮。

语义关系设计来源: 中医方剂大辞典 -- 南京中医学院 -- 人民卫生出版社 -- 1999.07

相关概念名词: 生肌剂 ↑

语义关系: 上位词

关联描述: 白及膏的上位词是生肌剂。

语义关系设计来源: 中医方剂大辞典 -- 南京中医学院 -- 人民卫生出版社 -- 1999.07

相关概念名词: 消散剂 ↑

语义关系: 上位词

关联描述: 白及膏的上位词是消散剂。

语义关系设计来源: 中医方剂大辞典 -- 南京中医学院 -- 人民卫生出版社 -- 1999.07

语义关系设计来源: 中医方剂大辞典 --

相关概念名词: 衄血 ↑

语义关系: 治疗

# Application system of standardized TCM clinical terms

a collection of  
160,000 words

set of TCM clinical case terms

TCM syndrome terms

字典详细数据	
CNOMEN	ENOMEN
热结肠燥证	
热结血室证	

- 湿困中焦证
- 湿热并重证
- 湿热冲心证
- 湿热动血证

TCM point terms

字典详细数据	
CNOMEN	ENOMEN
漏黄蜡灸	
温和灸	

- 灸法
  - 化脓灸
  - 非化脓灸
  - 隔物灸

acupuncture terms

字典详细数据	
CNOMEN	ENOMEN
四白	
巨髎	

- 膝眼
- 胆囊
- 阑尾
- 内踝尖

dianosis terms of  
western medicine

CNOMEN	CONCEPTNAME
右颈部淋巴结炎	西医诊断
月经过多	西医诊断

- 西医诊断
  - 子宫颈腺囊肿
  - 子宫功能出血

symptom terms

字典详细数据	
CNOMEN	ENOMEN
鼻衄	
表情淡漠	

- 口唇深红
- 口唇焦裂
- 口唇淡白
- 口唇暗红
- 口臭
- 渴喜热饮
- 渴喜冷饮

TCM terms of disease

字典详细数据	
CNOMEN	CONCEPTNAME
中医疾病诊断	
癆病	中医疾病诊断

- 中医疾病诊断
  - 癆病
  - 心悸
  - 痤疮
  - 月经前期
  - 郁证

电子病历

操作员: 胡向禹 科室: 糖尿病住院

功能导航

- 质控检查站
- 住院护士工作站
- 字典分拣工具
- 病人基本信息
- 组合项目设置
- 通用字典维护初始
- 通用字典维护
- 科室维护
- 检查医嘱维护
- 处置医嘱维护
- 材料医嘱维护
- 药典维护

选择 医生助手

设置 事务提醒

信息类型 未

# Research result: data coding system of Chinese herbs

## 📖 Yaomatong Coding System

编码方式:



表示该中药饮片炮制方法及该中药饮片炮制用辅料

表示该类中药饮片入库先后序号

表示中药饮片按来源及用药部位分类

表示中药饮片形式

饮片炮制方法及辅料编码说明

净制、切制, 无辅料		酒炒		加辅料炒法		炙法		煨法	
编码	意义	编码	意义	编码	意义	编码	意义	编码	意义
00	净制、切制, 无辅料	10	炒黄	21	麸炒	31	酒炙	41	明煨
01	鲜药	11	炒焦	22	米炒	32	醋炙	42	煨淬
		12	炒炭	23	砂炒	33	盐炙	43	闷煨 (扣锅煨)
				24	蛤粉炒	34	姜炙		
				25	滑石粉炒	35	蜜炙		
				26	土炒	36	酪炙		
				29	其他辅料炒	39	其他辅料炙		

饮片炮制方法及辅料编码说明 (续)

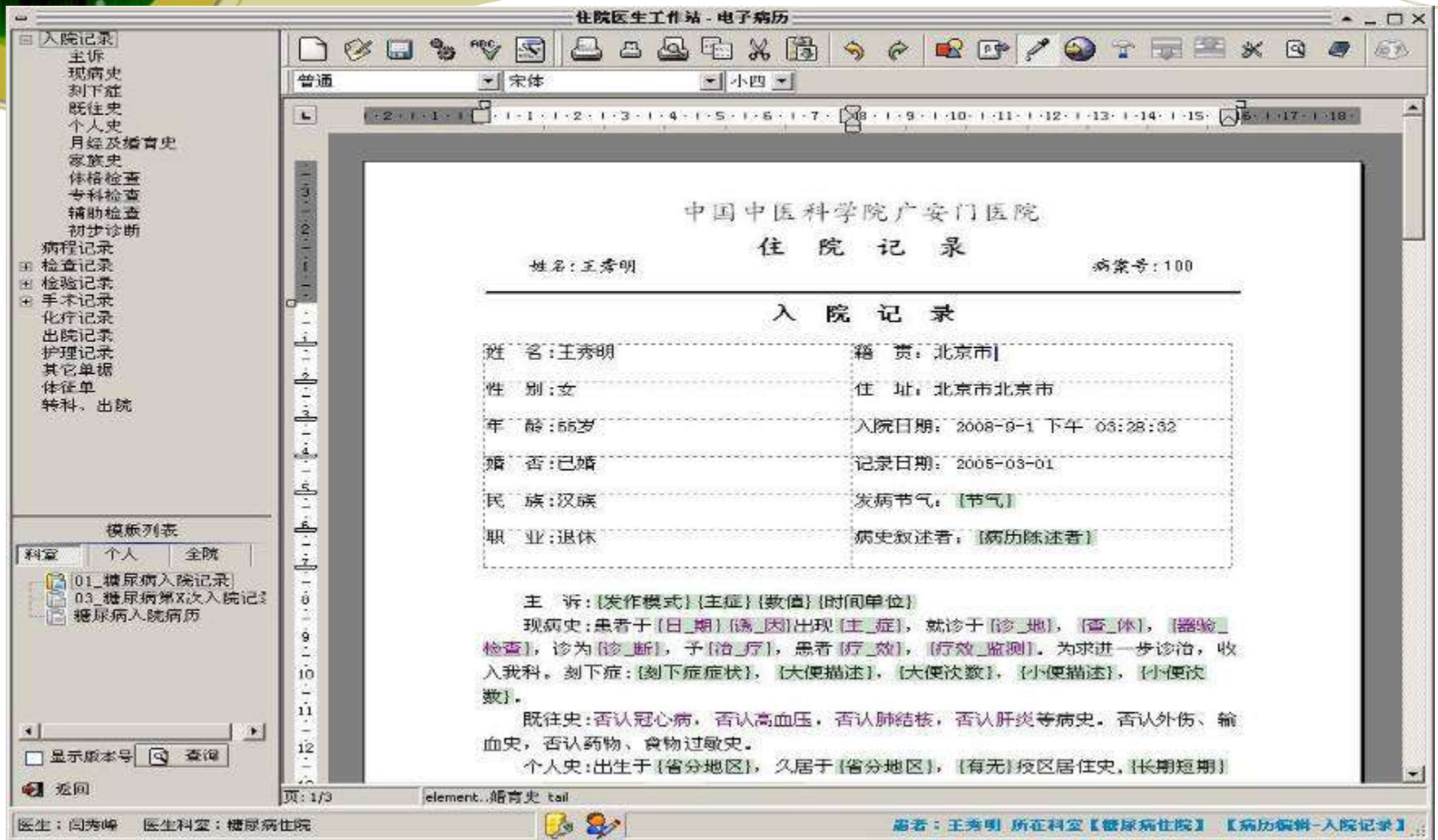
蒸法		炙法		炙法		其他炮制法		其他加工方法	
编码	意义	编码	意义	编码	意义	编码	意义	编码	意义
51	蒸法	60	无辅料辅料	71	去核炙法	81	发汗法	91	生品粉碎
52	炙法	61	以姜为主要辅料	72	炒研炙法	82	发醇法	92	炮制品研粉
53	煨法	62	以甘草为主要辅料	73	升华炙法	83	烘熔法	93	生品拌衣
		63	以贝母为主要辅料	74	煎煮炙法	84	熔制法	94	炮制品拌衣
		64	以黄芩为主要辅料			85	提净法	95	生品提净
		69	以其他为主要辅料			86	水飞法	96	炮制品提净
						87	干燥法	97	分离和去除非药用部位
						88	风化法	98	切片
						89	其他法	99	其他





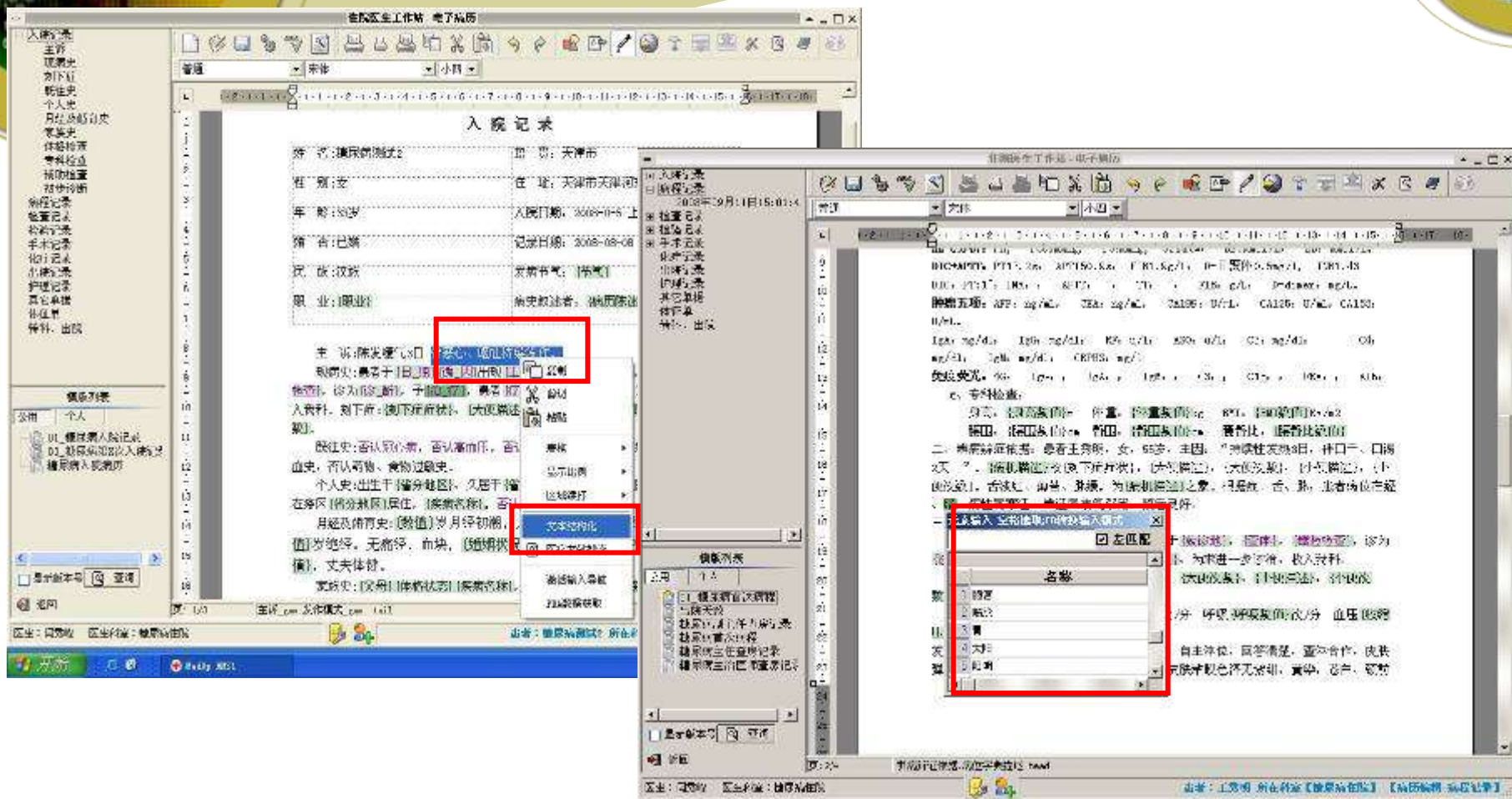
# Electronic case data collecting system

# 1、 A case writing interface and operation similar to WORD operating system



the system is designed in the WORD form, in order to make it easy for doctors to learn, and more convenient in application

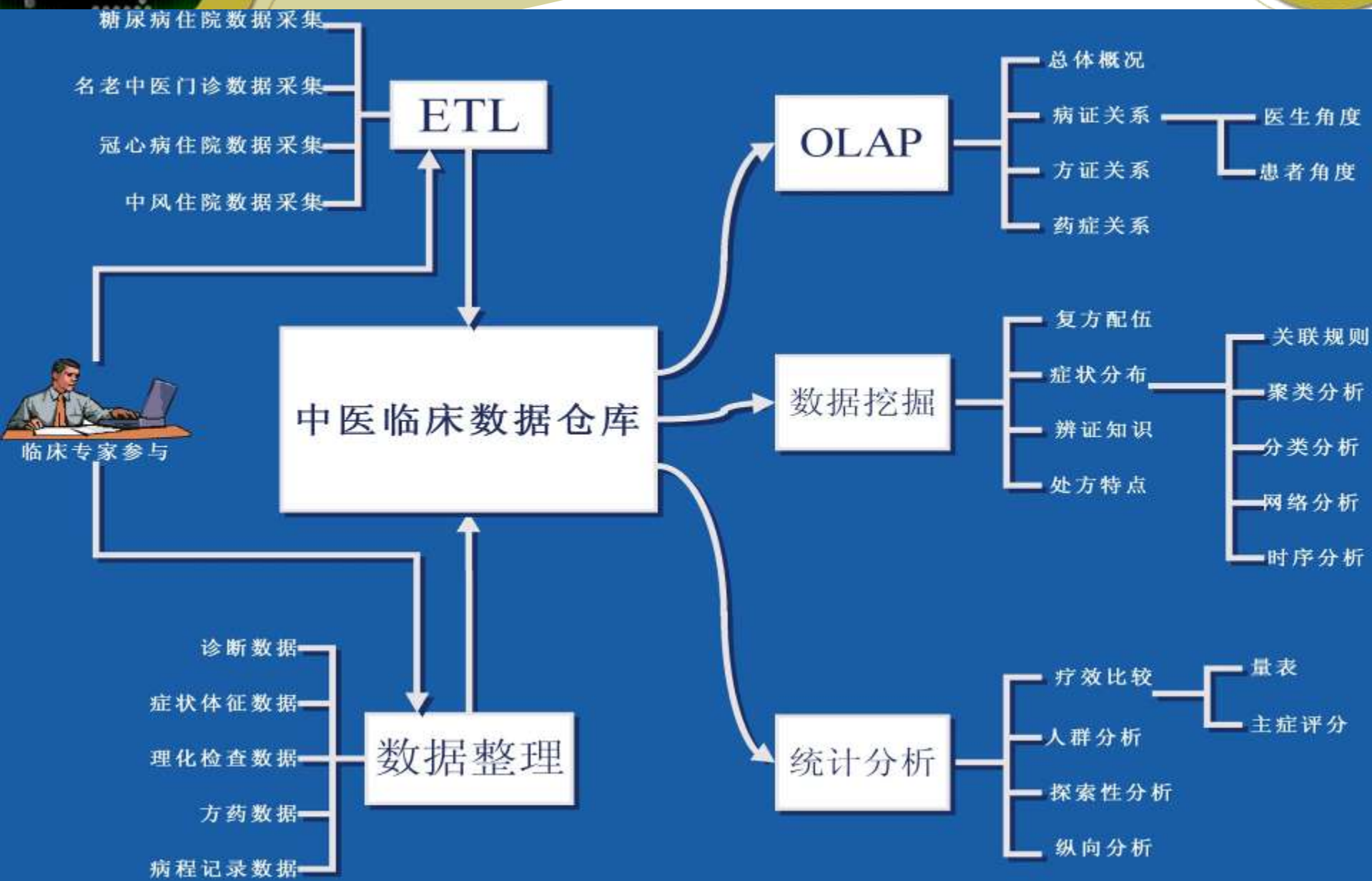
# The whole text can be automatically structured



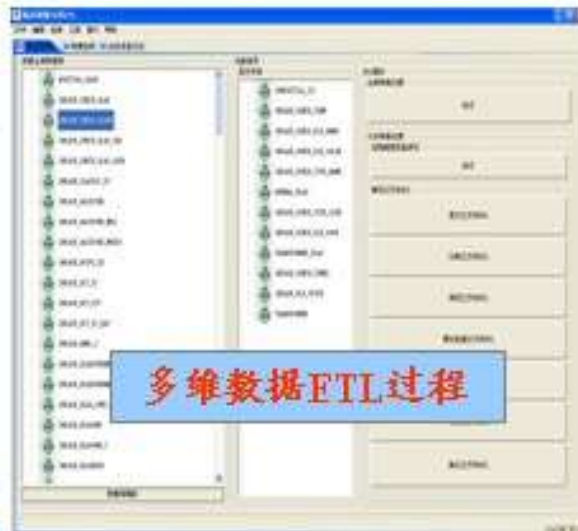
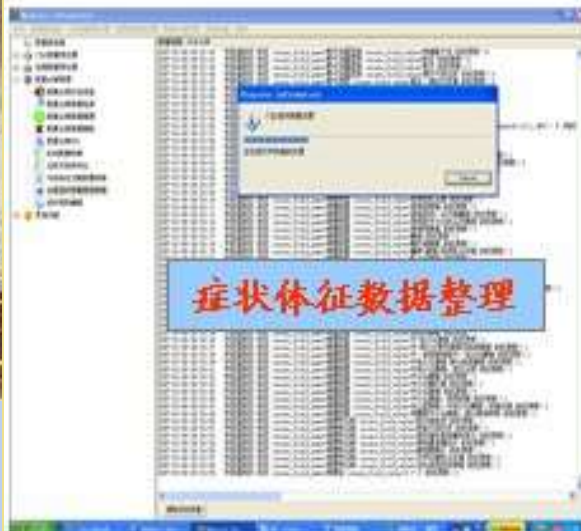
1 : the left picture shows the structuring of a sentence by choosing the sentence in a text and clicking "automatic structuring"

2 : the right picture shows that the whole text is automatically structured while inputting it with the structuring tool in the red square

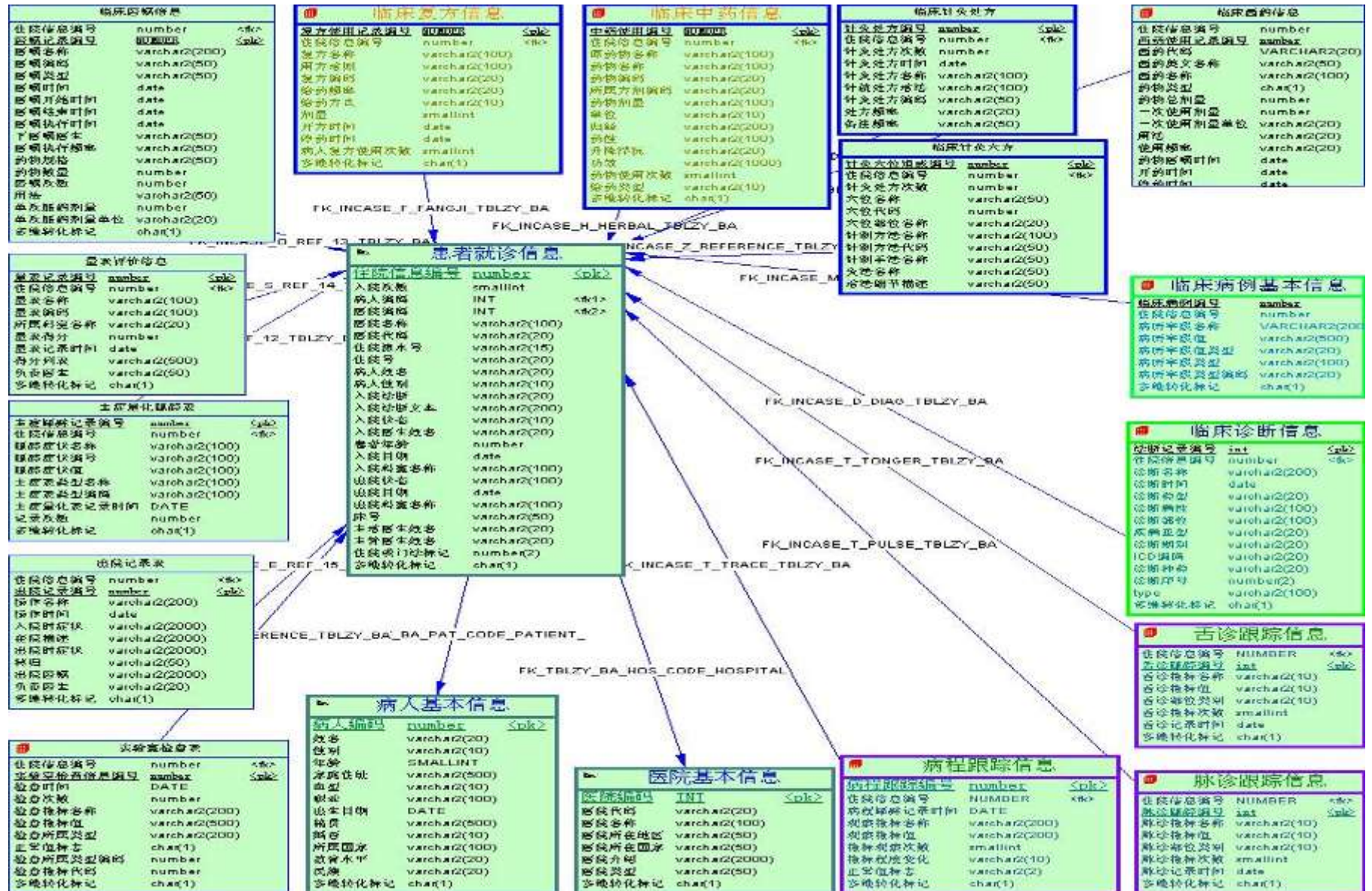
# Constructing a TCM clinical data warehouse and analysis platform



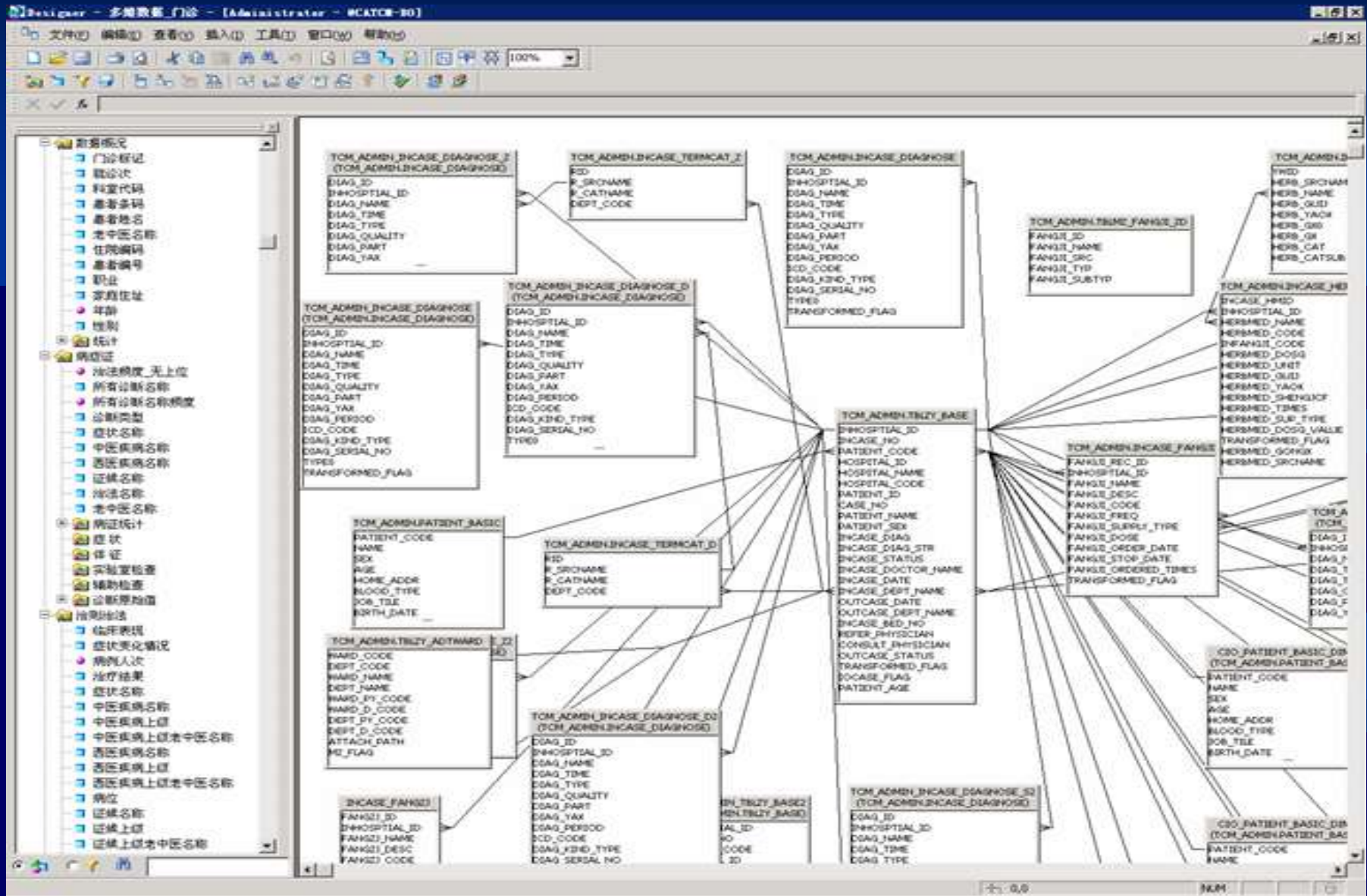
# (ETL) constructing the TCM clinical data pre-processing system (extract, transform, loading)



# Physical data model of TCM



# Multidimensional data query and analysis platform of TCM



# Multidimensional data query and analysis platform of TCM





# TCM clinical data mining system

Medisco-35

操作(N) 查看视图(V) 帮助(H)

网络图

数据筛选

网络图分析

ID	FILTER_OBJ	NET_TIT	NET_TABRNUM	NET_TABNAME	PATIENT_NUM	DIAGNOSE
39	症状	中医疾病-面瘫症状	9260	INCASE_GR...	0	0
40	药物	中医证候-胃热用药	3262	INCASE_GR...	0	0
41	症状	中医证候-胃热症状	5638	INCASE_GR...	0	0
42	中医证候...	路老_胸痹_证候	274	INCASE_GR...	0	0
43	药物	薛老_药物_症状网络	12124	INCASE_GR...	0	0
44	症状	薛老_病例_症状网络关...	76493	INCASE_GR...	0	0
45	药物	高血压_气虚血瘀用药	7194	INCASE_SJZ...	0	0

网络图展示

网络图分析

节点设置

节点形状: Ellipse

节点大小

节点度: 1

过滤节点

显示节点名称

节点颜色: 类别

补虚药

诊断类型: [下拉菜单]

诊断包含: [输入框]

症状包含: [输入框]

药物包含: [输入框]

医院名称: [输入框]

科室代码: [输入框]

患者年龄: [输入框]

患者性别: [输入框]

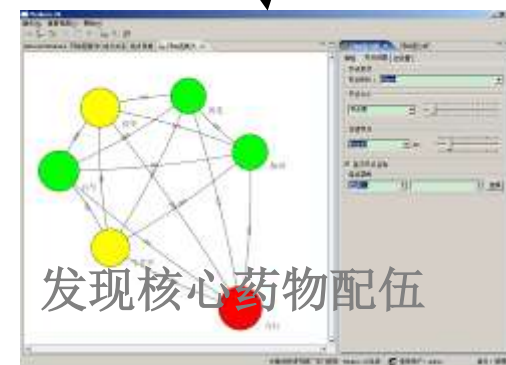
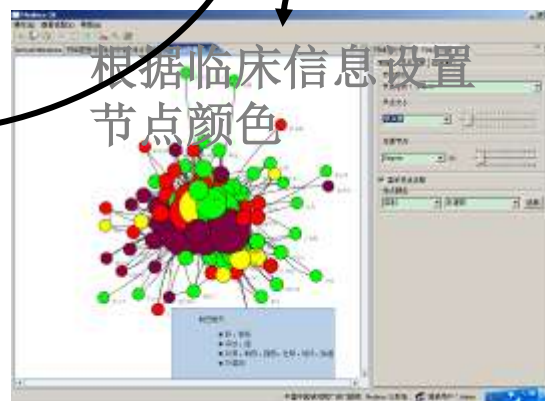
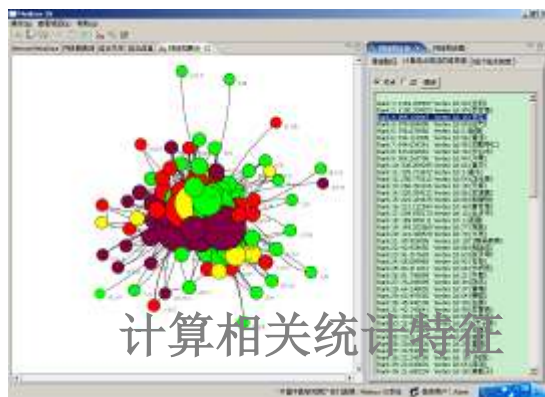
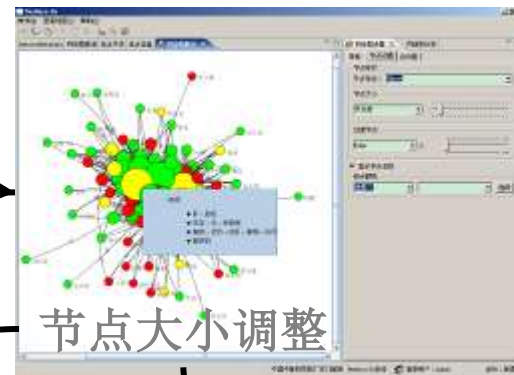
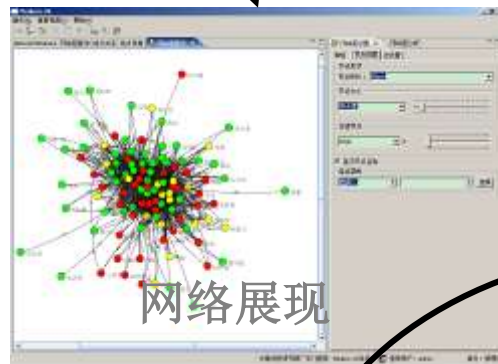
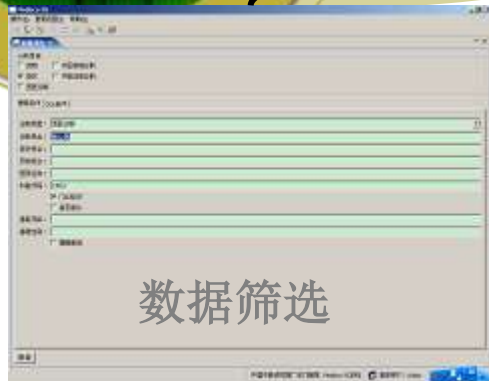
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# The on line analysis flow and part of its functions



# Conclusion



- ❖ **The TCM's development rule itself shows the prospect of prosperity and reflects defects in itself at the same time. So on one hand, we should have faith and be confident in it; on the other hand, we should be aware of its problems and construct appropriate methods to bring its advantages into full play.**



THANK YOU FOR YOUR ATTENTION!  
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喜鹊·羊·喜鹊·苍鹭

和气四瑞

The Four Dutiful Friends