

OCCUPATIONAL DISEASE of KOREA

Experience from three Phases

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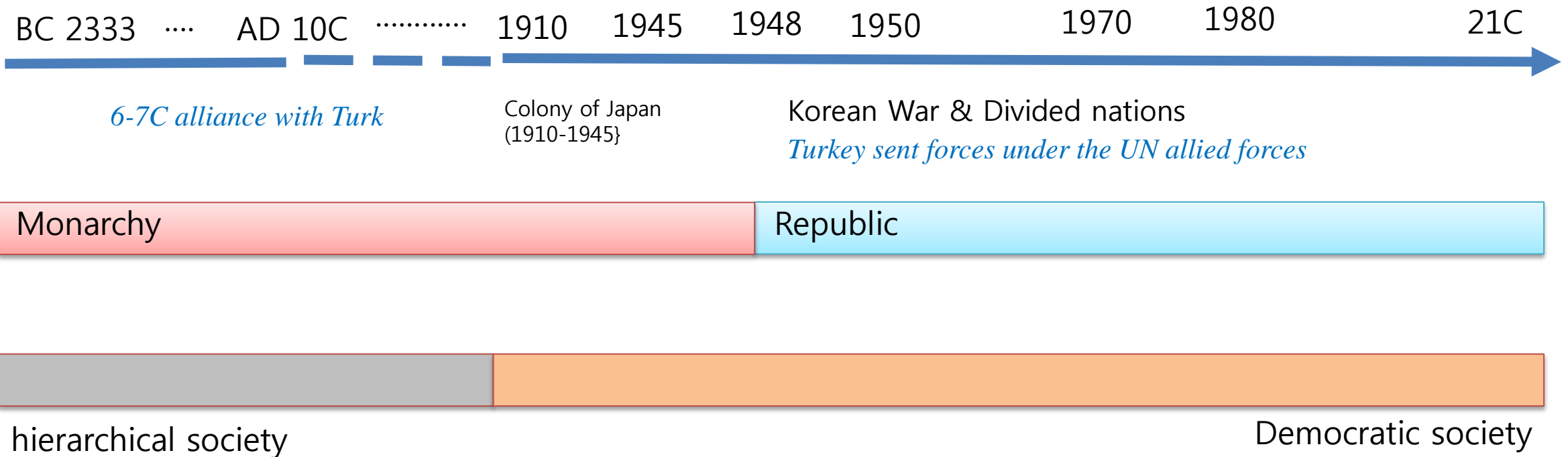
Introduction of Korea

South Korea

□ Prehistoric times

- BC 700,000

□ Historic ages



Turkey and South Korea (2015)

	Turkey*	South Korea
Population (1000), in 2016	7,951	5,125
Territory (Km ²)	783,562	99,720
Occupational Accident		
Injury (per 10 ⁵)	1,580	532.8
Disease (per 10 ⁵)	3.5	39.3
Occupational Accident Mortality (per 10 ⁵)	11.6	10.1

* Occupational safety and health profile Turkey, Ankara-2016, ILO

Compensated Work-related Disorder 2014

Turkey*

Occupational Disease	cases
Respiratory (pneumoconiosis)	115(23.3%)
Noise induced Hearing Loss	24(4.9%)
Musculoskeletal Disorder	23(4.7%)
Skin	6(1.2%)
Others	315(63.5%)
Total	494

South Korea

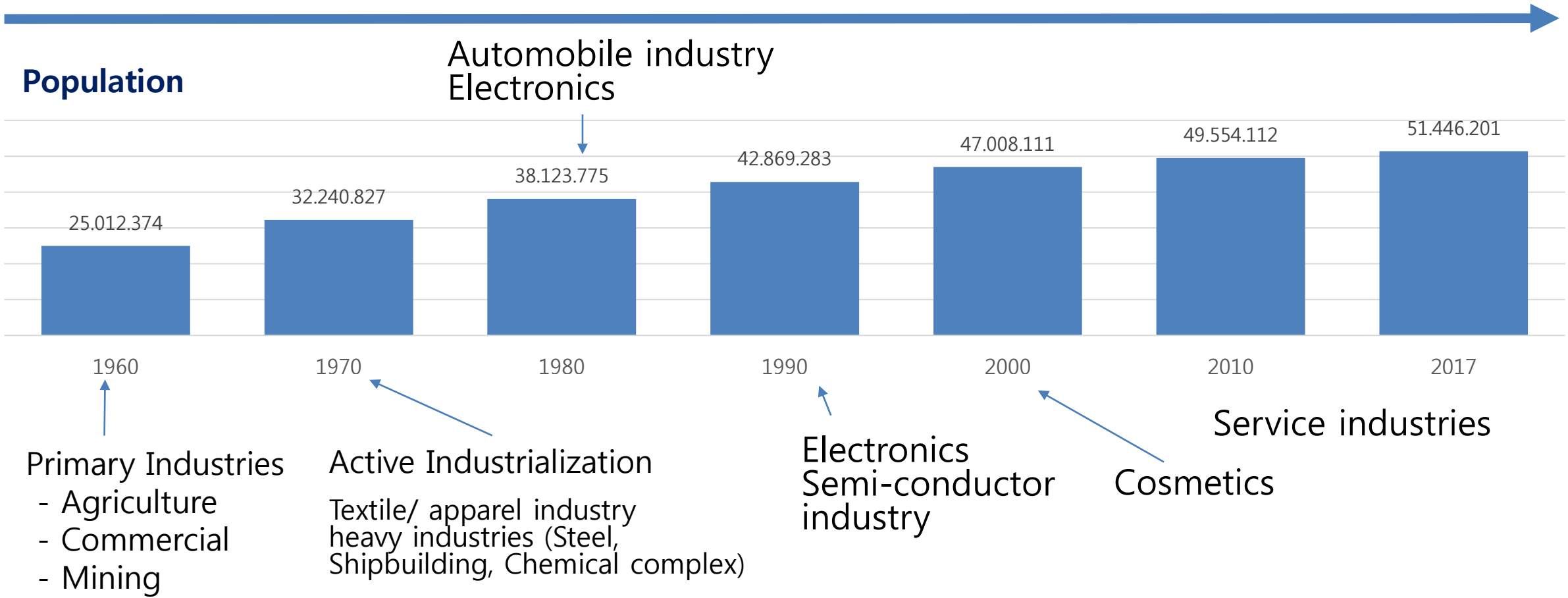
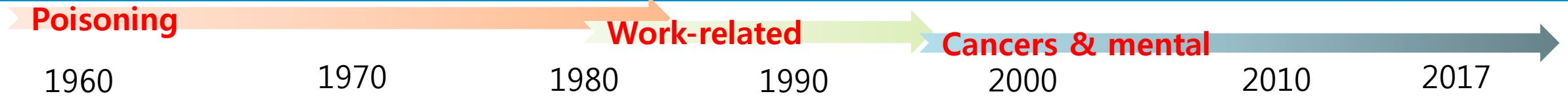
Occupational Disease	Accepted	Death
Pneumoconiosis	698(9.9%)	427
Noise induced Hearing Loss	372(5.3%)	
Metal Intoxication	13(0.2%)	1
Organic Chemical	19(0.3%)	16
CCVD	341(4.8%)	293
Musculoskeletal Disorder	2321(32.9%)	
- Back pain	2892(40.9%)	
Others	408(5.8%)	108
Total	7,064	

* Occupational safety and health profile Turkey, Ankara-2016, ILO

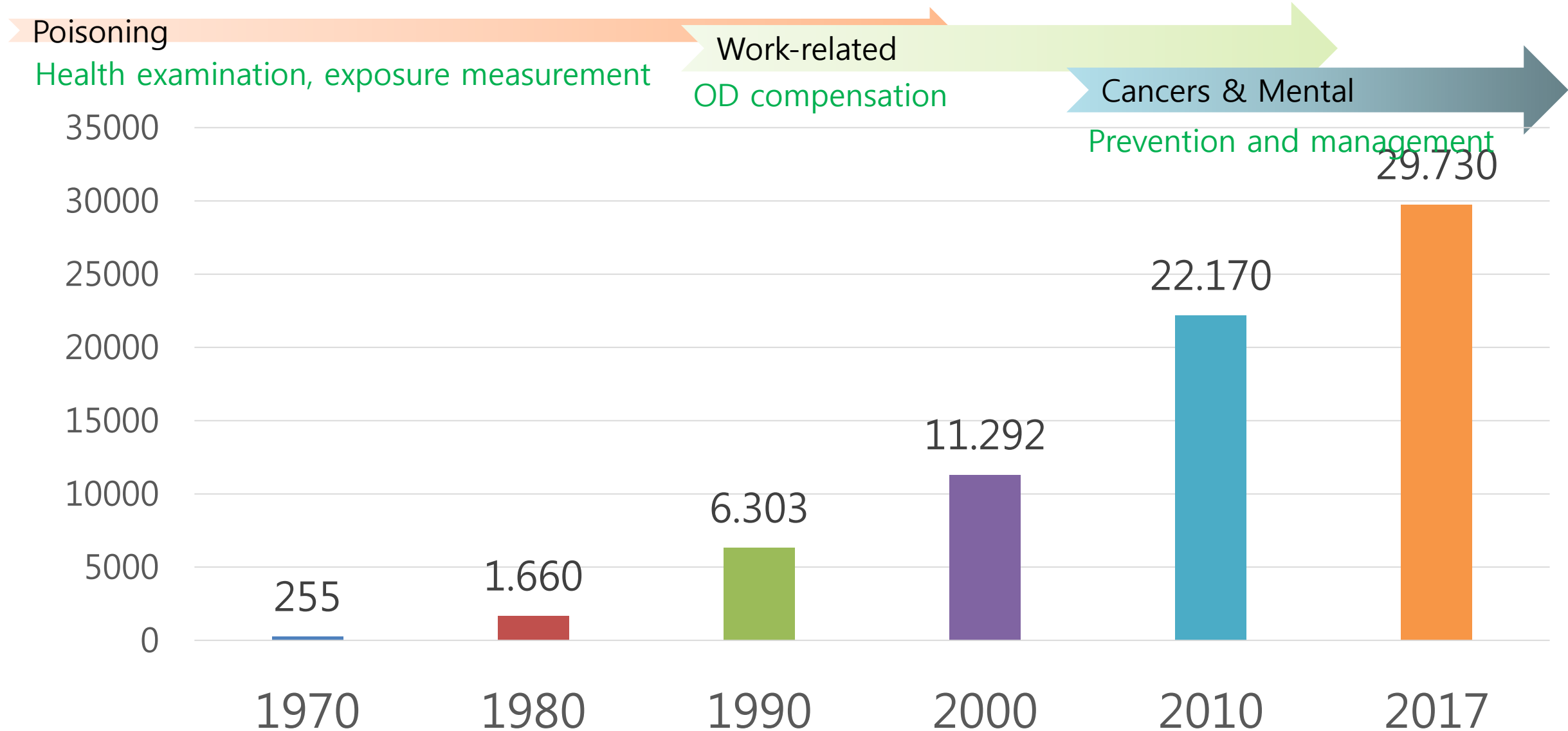


Occupational Disease

Three Phases of Occupational Diseases in Korea



Phases of OD and GDP per capita



□ Era of Poisoning (1970s~)

- GDP per Capita :250 \$

□ Major Reported Ds

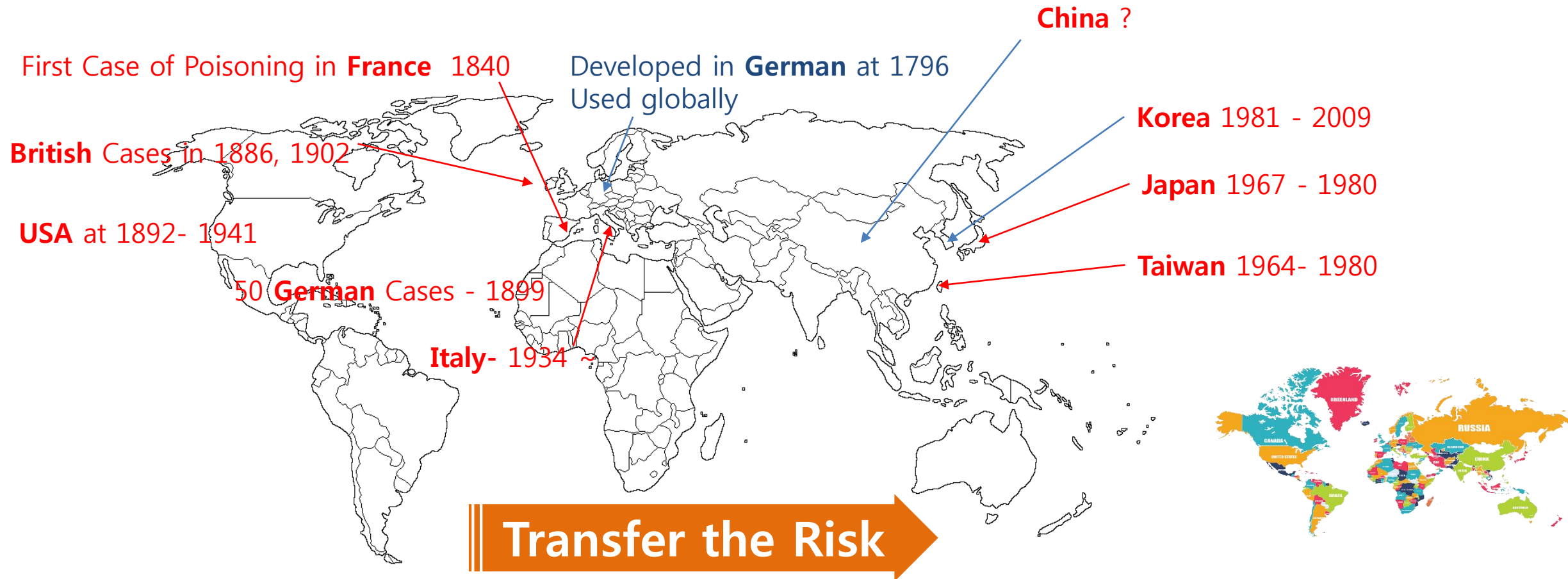
- Carbon Sulfide Poisoning
- Mercury Poisoning
- Dimethyl formamide
- N-hexane
- Trichloroethylene
- Manganese related Parkinson syndrome

□ Reports by Academia and NGO's

Carbon Disulfide Intoxication

Relapsing poisoning around world

Transfer of Occupational Health Problems From a Developed to a Developing Country



Carbon Disulfide Intoxication

- ❑ A viscose Rayon Industry (1967-1993)
 - Imported from Japan
 - No ventilation system, No PPE
 - More than 1,000 occupational disease cases
 - Compensation : 26 million \$ / year



Carbon Disulfide Intoxication

□ Fatality

- More than 50 cases
- Transfer to China after 1993

□ Major Clinical Symptom

- Multiple cerebral impart, peripheral neuritis
- Micro aneurysm, retinal change
- Psychosis, reproductive dysfunction

□ Induce the occupational health regulation strengthening



Mercury Poisoning

- **Acute poisoning case of a thermometer industry at 1988**
 - Following outbreaks from thermometer manufacturing industry at 1989
- **Another outbreak from fluorescent tube manufacturing at 1990**



Mercury Poisoning (1988)

- ❑ Started to work at thermometer manufacturing industry at 14 years old (87.12)
- ❑ Paint, cleaning, mercury injection
- ❑ Myalgia, headache for a month
- ❑ Two months later, convulsion (88.02)
- ❑ Visit a Hospital, confirm the mercury poisoning
- ❑ Death (88.07) (mercury and solvent poisoning)



A Turning Point of Occupational Health Protection

□ Enforcing the Occupational health regulation

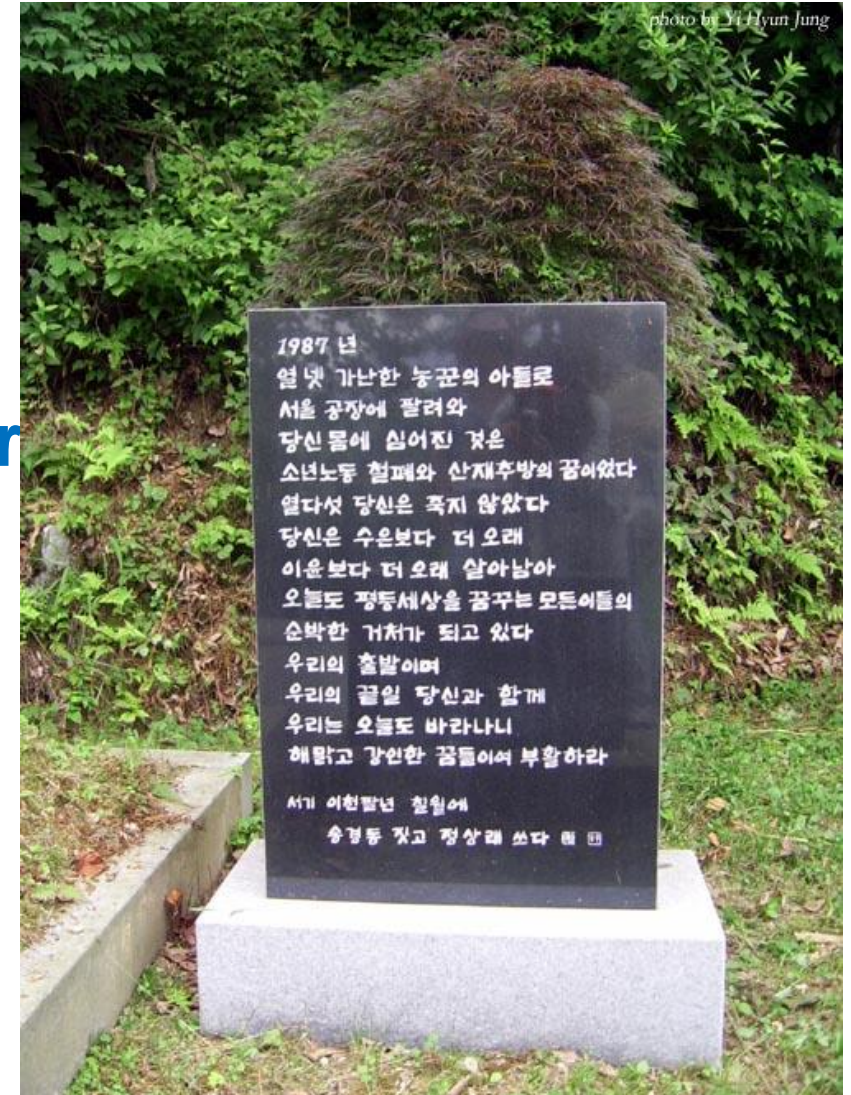
- Workers' health monitoring
- Strengthening the Workplace Measurement

□ Occupational Safety and Health Research Institute (1988)

- Occupational Disease Research

□ Occupational Disease Compensation

- Expand the criteria for the acceptance of compensation



Occupational disease in Korea

□ Era of Work-related disorder (1990s~)

- GDP per Capita :6,000 \$

□ Major ODs

- Overtime Work related Cardio cerebral vascular disorder
- Musculoskeletal disorder
 - telephone operators
 - Car manufacturing industries, Ship building

□ Unions of Large Industries

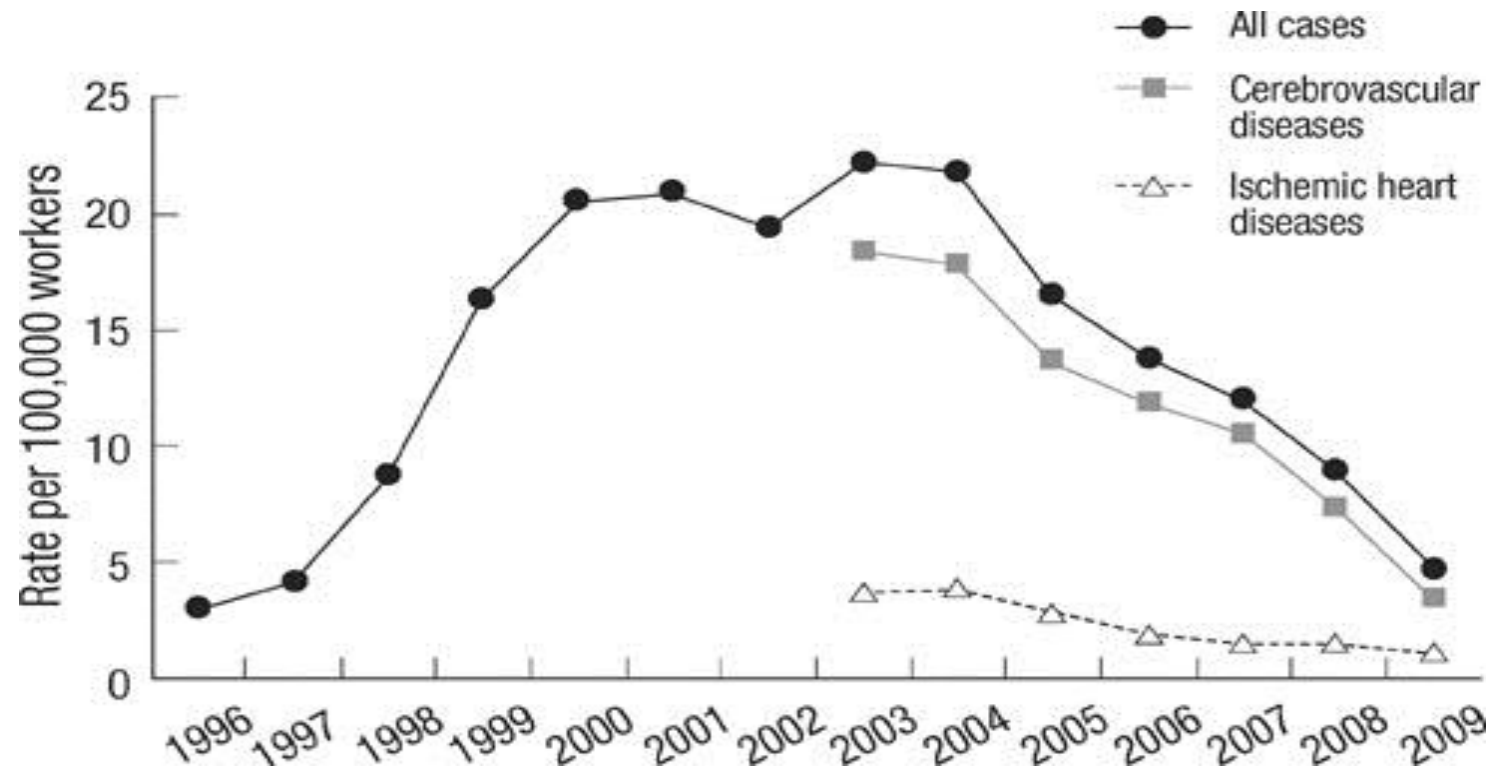
- Campaign for ODs Compensation

Cerebro-cardio vascular diseases, Work-relatedness

- ❑ **Concept: Some events of CVA could be aggravated by work stress or hard work such as long working hours.**
- ❑ **Few cases of cerebral hemorrhage from night shift workers with hypertension (1980s)**
 - 1982, acceptance criteria for intracranial hemorrhage was developed
- ❑ **Taxi driver claimed a compensation for cerebral infraction, accepted in supreme court (1990s)**
 - following numerous cases brought up to the court
 - Despite of the insufficient scientific evidence, COMWEL developed acceptance criteria for Cerebro-vascular disease

The Reasons of Compensation for cardio-cerebro vascular diseases

- ❑ The criterion of cardio-cerebro vascular disease was included in the diagnostic criteria of occupational diseases listed since 1994
- ❑ Since acceptance criteria was revised since 2003, the cases were decreased.



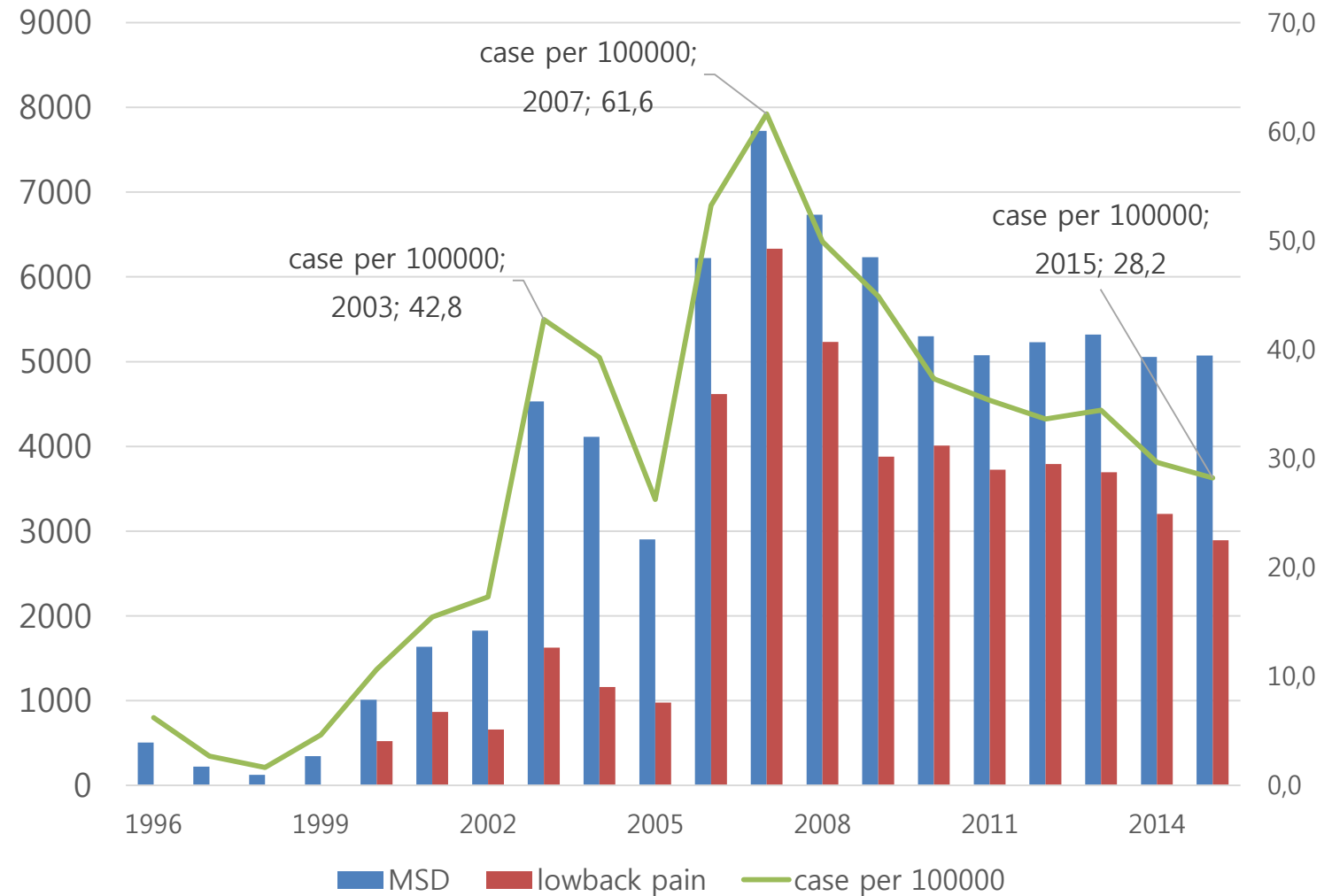
Musculoskeletal Disease

□ **Compensable Occupational MSD**

- MSD related repeated movement
- Since 2002, increased low back pain to the compensation
- Unions of Large industries (exp., automobile manufacturer and ship building) organized MSD compensation campaign, and submit group litigation

Musculoskeletal Disease

□ Back pain is
More than
50% of
Accepted MSD



Solutions of CVD, MSD

□ **Management Program for Work related CVD**

- Job Stress Evaluation, Health Promotion

□ **Since 2003, Risk Assessment for Work related MSD Prevention**

- OSH act and regulation
 - Employer operate workplace having risky processes should conduct risk assessment of ergonomic environment every 3 years
- Frequency, duration, body part, Job detail

Occupational disease in Korea

□ Era of Occupational Cancer (2000s~)

- GDP per Capita :22,170 \$, \The leading cause of death in general population is cancer

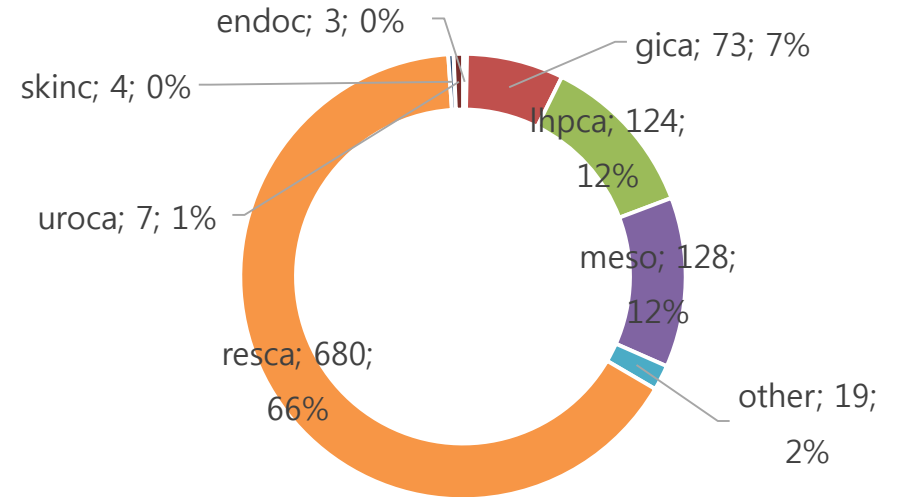
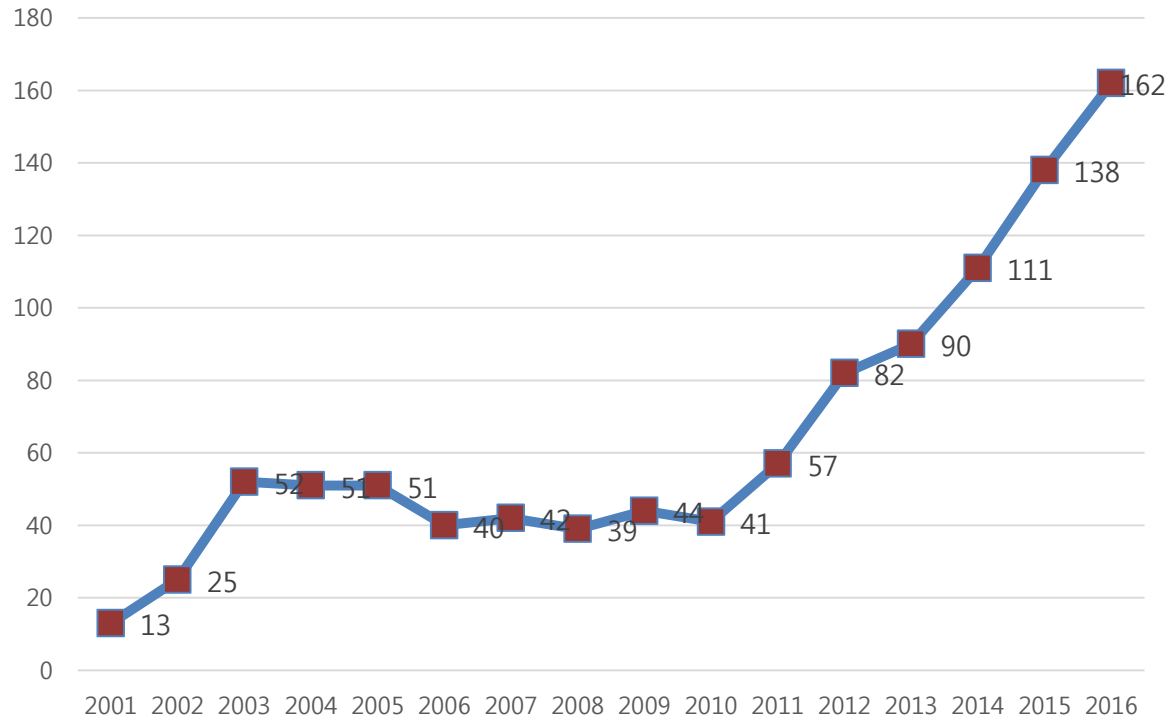
□ Major ODs

- Asbestos related cancers (mesotheliomas, lung cancer)
 - Textile industry (imported from Japan)
- Leukemia, Lymphoma
 - Semiconductor industry
- Mental Health Problem
 - Emotional Labor, Job related stress
 - Anxiety, Phobia, PTSD, Suicide

□ Increased Concern about OCCUP HEALTH issue

Occupational Cancer

cancer



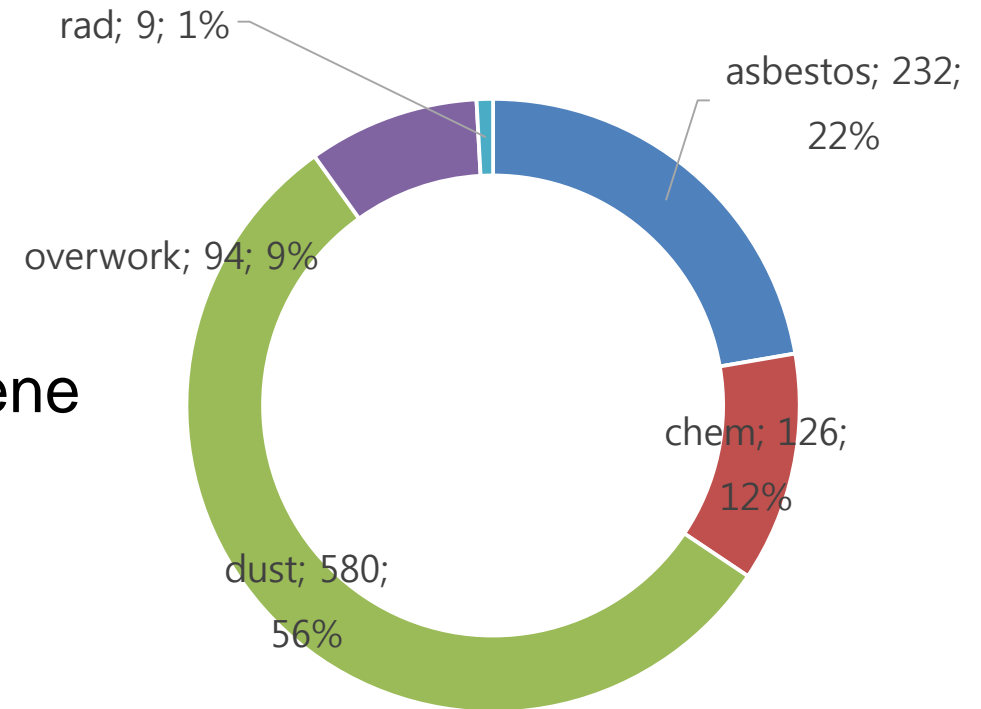
Occupational Cancer –causes

□ 56% of Occupational cancer caused by Dust

- Crystalline Silica, welding fume
- Asbestos (22%)

□ Chemical(12%)

- Benzene, formaldehyde, 1,3-butadiene



Summary of the Three Phases of ODs in Korea

☐ **Poisoning**

- Learning from the experiences of developed Countries
- Workplace Measurement, Workers' Medical Screening

☐ **Work related Disease**

- Benchmarking of Japanese and/or Scandinavian countries
- Compensation, Health Promotion, Workplace management Policies

☐ **Cancers, Mental Health**

- Explore the newly founded or Unknown risk factors
- Working time, work-life balance

International Collaboration

□ History of OSH repeat itself

- at different countries, different phase and different ways

□ Exchange of OSH Information

- Unknown or known chemicals, risky industries, reemerging poisonings, newly emerged occupational diseases etc.