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# Epidemiological Updates of Venous Thromboembolism in a Chinese population

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# Disclosure

*NO conflict of interest to report including*

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

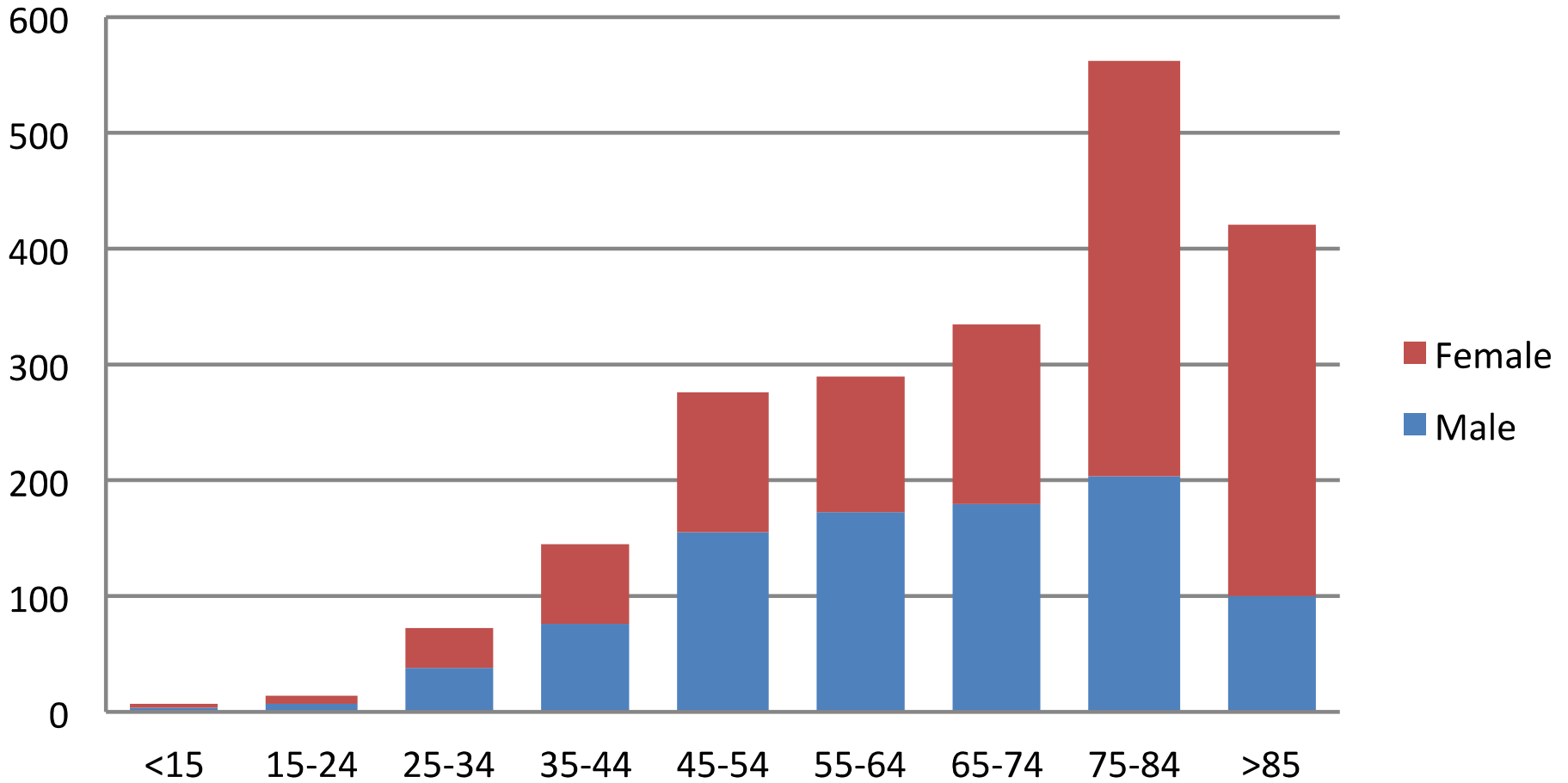
# Introduction

- Venous thromboembolism (VTE) is a major contributor to global disease burden
- Hong Kong has population of 7 million
- Aim: epidemiological updates on deep vein thrombosis (DVT) and pulmonary embolism (PE) in a Chinese population in Hong Kong

# Methods

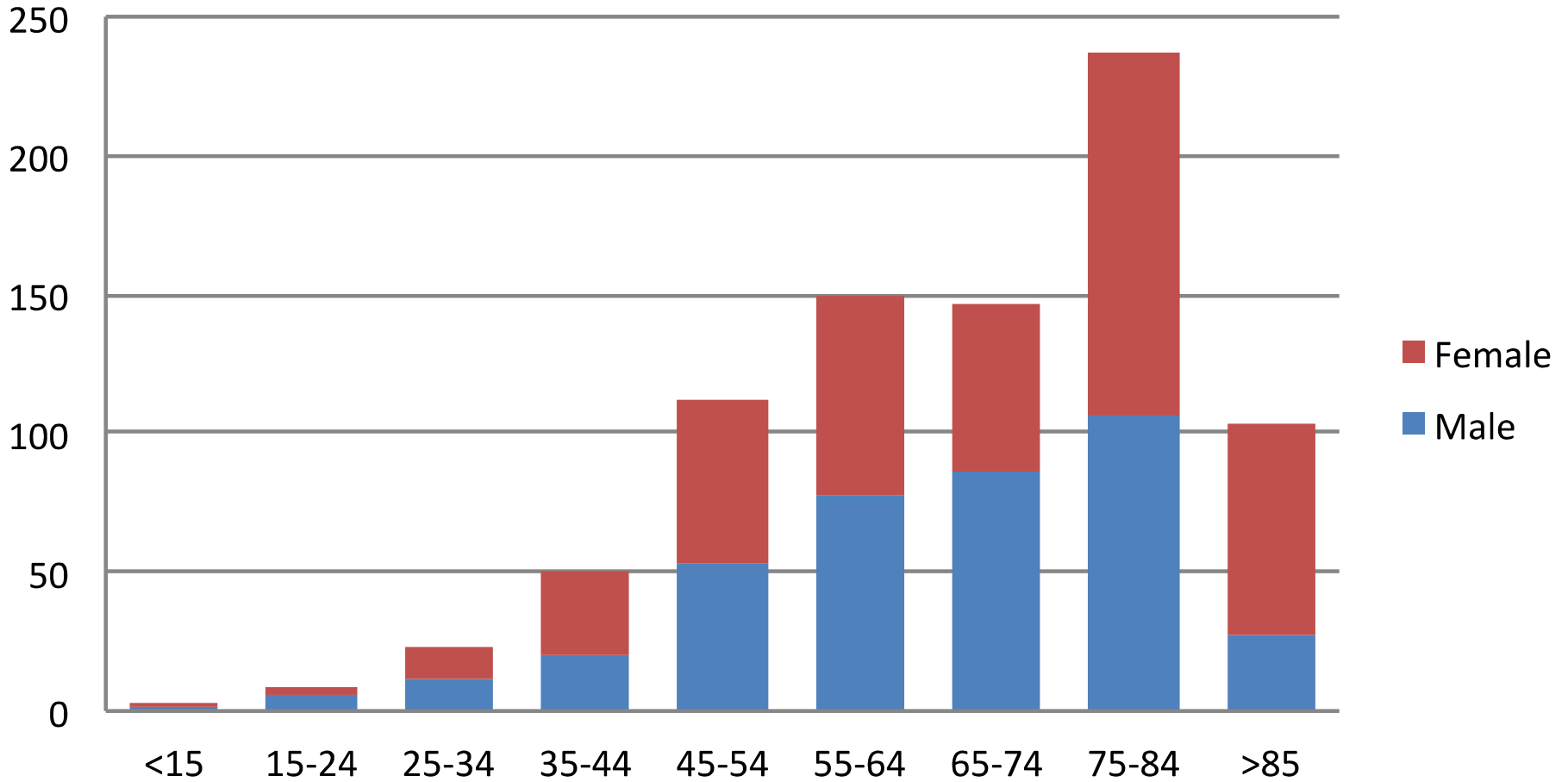
- Study period: 2010 and 2011
- All patients with newly diagnosed DVT and PE
- Retrieved through the Clinical Data Analysis and Report System (CDARS)
- Outcomes:
  - Annual overall and age specific incidences
  - Annual overall and age specific mortalities
  - Annual postoperative incidences
- All calculation were averaged over the years 2010 and 2011

# Number of patients with DVT



Male to Female ratio – 1:1.27

# Number of patients with PE



Male to Female ratio – 1:1.15

# Annual overall and age specific incidence

| Per 100,000 population |          |                   |       |       |       |       |       |       |       |       |
|------------------------|----------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                        |          | Age group (years) |       |       |       |       |       |       |       |       |
|                        | All ages | 0-14              | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | ≥85   |
| DVT                    | 30.0     | 0.4               | 1.7   | 6.6   | 12.7  | 21.5  | 31.5  | 72.2  | 159.7 | 335.5 |
| PE alone               | 8.7      | 0.2               | 0.7   | 1.5   | 2.9   | 6.2   | 12.4  | 22.6  | 53.0  | 60.2  |
| PE with DVT            | 3.0      | 0.1               | 0.3   | 0.6   | 1.6   | 2.4   | 3.9   | 8.9   | 14.5  | 21.9  |

# Annual overall and age specific 30-days mortality

Per 100,000 population  
(Percentage of incidence)

|                    |               | Age group (years) |              |            |               |               |               |               |                |                |
|--------------------|---------------|-------------------|--------------|------------|---------------|---------------|---------------|---------------|----------------|----------------|
|                    | All ages      | 0-14              | 15-24        | 25-34      | 35-44         | 45-54         | 55-64         | 65-74         | 75-84          | ≥85            |
| <b>DVT</b>         | 2.7<br>(9.0)  | 0<br>(0)          | 0<br>(0)     | 0<br>(0)   | 0.4<br>(2.8)  | 1.6<br>(7.2)  | 2.8<br>(8.8)  | 6.2<br>(8.6)  | 16.8<br>(10.5) | 41.9<br>(9.0)  |
| <b>PE alone</b>    | 1.5<br>(17.4) | 0<br>(0)          | 0.1<br>(7.7) | 0<br>(3.0) | 0.4<br>(15.4) | 1.0<br>(16.9) | 1.7<br>(14.0) | 4.2<br>(18.6) | 11.0<br>(20.7) | 11.2<br>(18.5) |
| <b>PE with DVT</b> | 0.4<br>(13.3) | 0<br>(0)          | 0<br>(0)     | 0<br>(0)   | 0.2<br>(13.9) | 0.3<br>(14.3) | 0.7<br>(18.1) | 0.5<br>(6.0)  | 2.0<br>(13.7)  | 4.4<br>(20.0)  |



# Annual incidence of postoperative DVT and PE

|                           | No. of operations | No. of postoperative DVT | No. of postoperative PE | No. of postoperative PE with DVT |
|---------------------------|-------------------|--------------------------|-------------------------|----------------------------------|
| Cardiothoracic surgery    | 2957              | 3.0(0.10)                | 4.0(0.14)               | 0.5(0.02)                        |
| Dental                    | 1391              | 0.5(0.04)                | 1(0.07)                 | 0.5(0.04)                        |
| General surgery           | 34295             | 53(0.15)                 | 31.5(0.09)              | 14(0.04)                         |
| Neurosurgery              | 2940              | 19(0.64)                 | 14.5(0.49)              | 3.5(0.12)                        |
| Obstetrics and gynecology | 12882             | 17(0.13)                 | 5(0.03)                 | 4(0.03)                          |
| Ophthalmology             | 16858             | 8(0.05)                  | 1.5(0.01)               | 1(0.01)                          |
| Orthopedics               | 24436             | 91.5(0.37)               | 21.5(0.09)              | 15.5(0.06)                       |
| Urology                   | 7264              | 11.5(0.16)               | 6.5(0.09)               | 2(0.03)                          |
| Overall                   | 103023            | 203.5(0.20)              | 85.5(0.08)              | 40.5(0.04)                       |

# Compared to 10 years ago

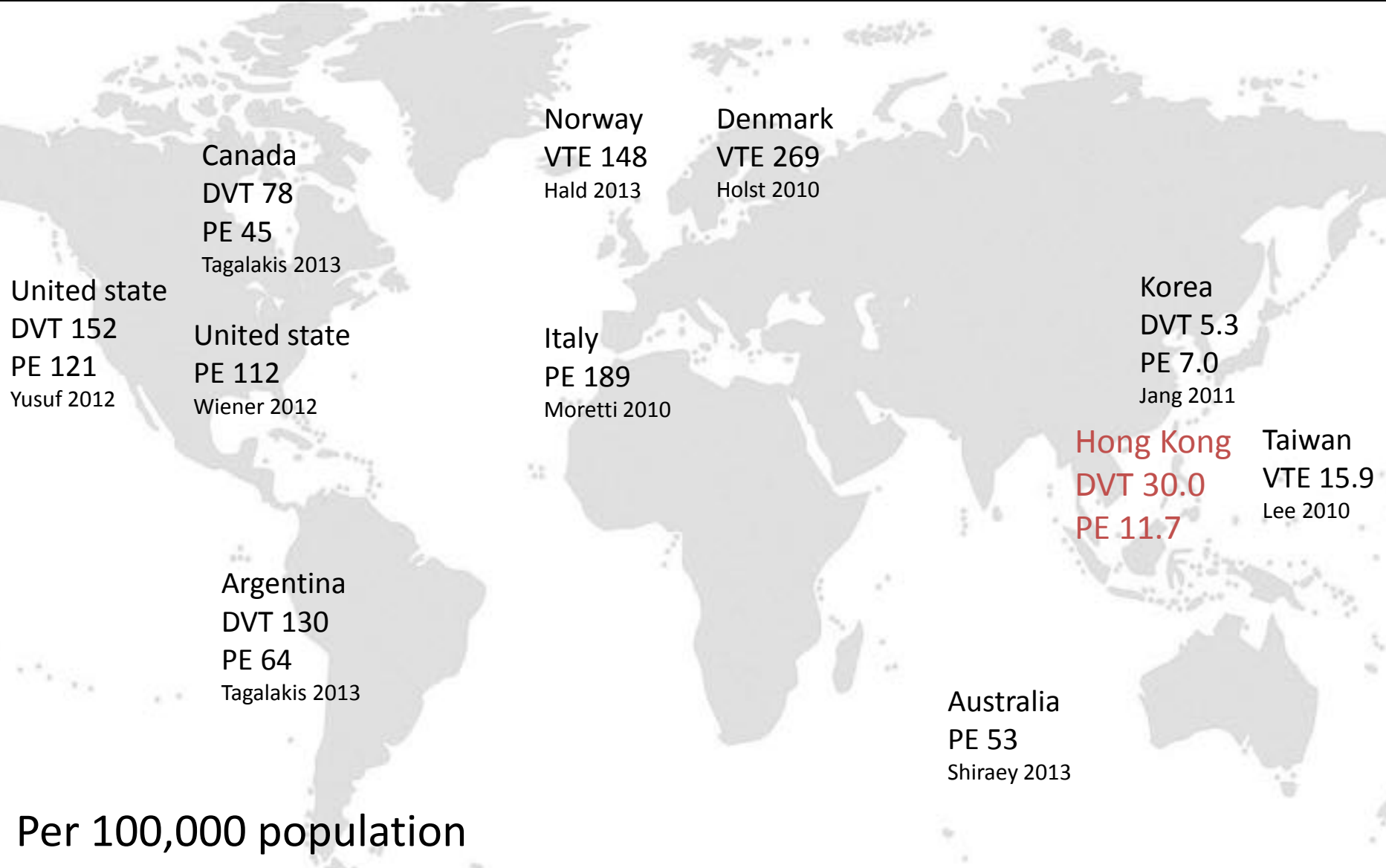
| Per 100,000 population | 2000/2001* | 2010/2011 |
|------------------------|------------|-----------|
| DVT                    | 17.1       | 30.0      |
| PE                     | 3.9        | 11.7      |

Possible causes:

1. ?? Genetics
2. Westernized diet
3. Better recognition

\*Cheuk 2004

# Incidence around the worlds



Per 100,000 population

# Conclusion

- Incidence of venous thromboembolism was still low compared to Caucasians
- Increasing trend over time
- Postoperative thromboembolic event was not common and hence routine pharmacological prophylaxis may not be worthwhile

