

# Typing af MRSA

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## MRSA-typning

- *spa* *S. aureus* protein A
- *SCCmec* mecA-kassette
- *PVL* Panton-Valentine leukocidin toxin
- *MLST* multi locus sequence type

***spa*-typer** over 90 typer påvist  
**MEN variation over et tema:**

**t116: 08-16-02-16-13-13-17-34-16-34**



**t015: 08-16-02-16-34-13-17-34-16-34**



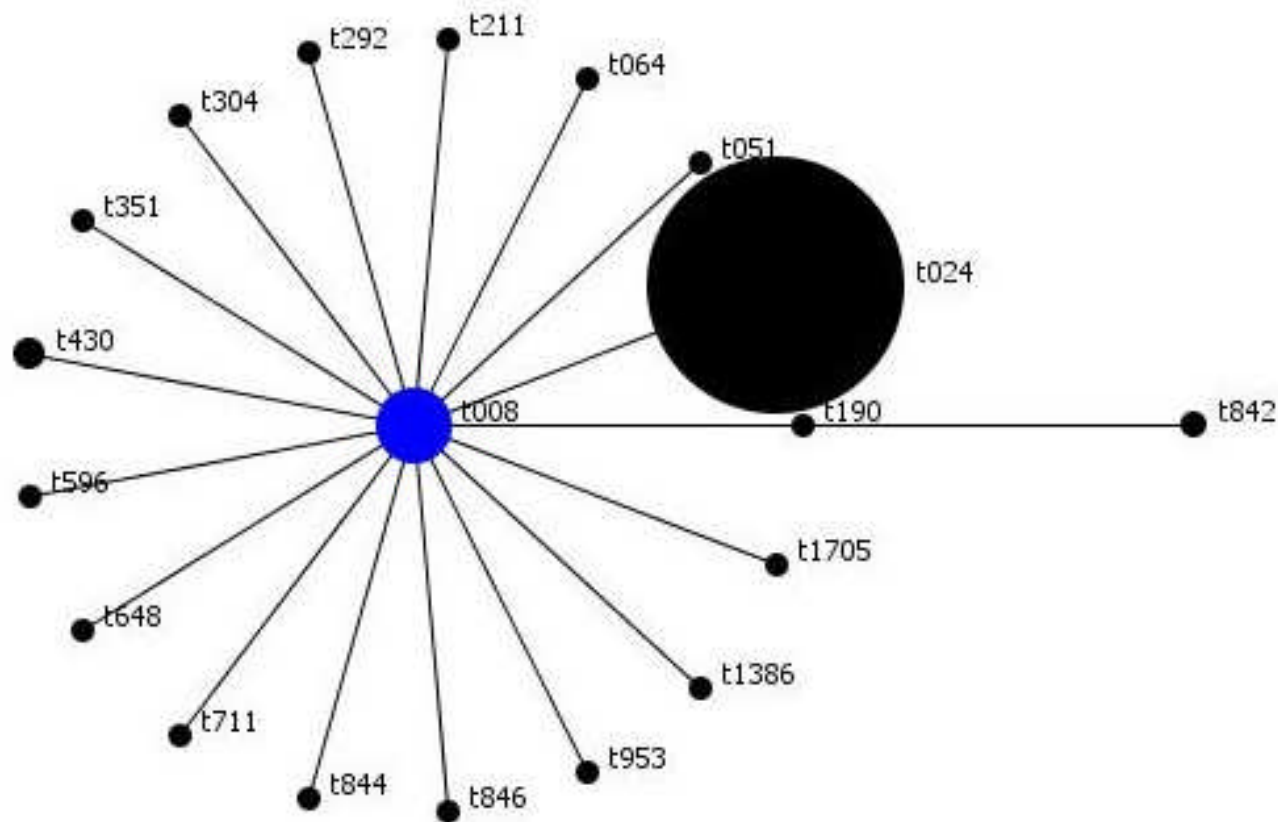
**t230: 08-16-02-16-34**

**t019: 08-16-02-16-02-25-17-24**

# Klonalitet af MRSA på Sjælland

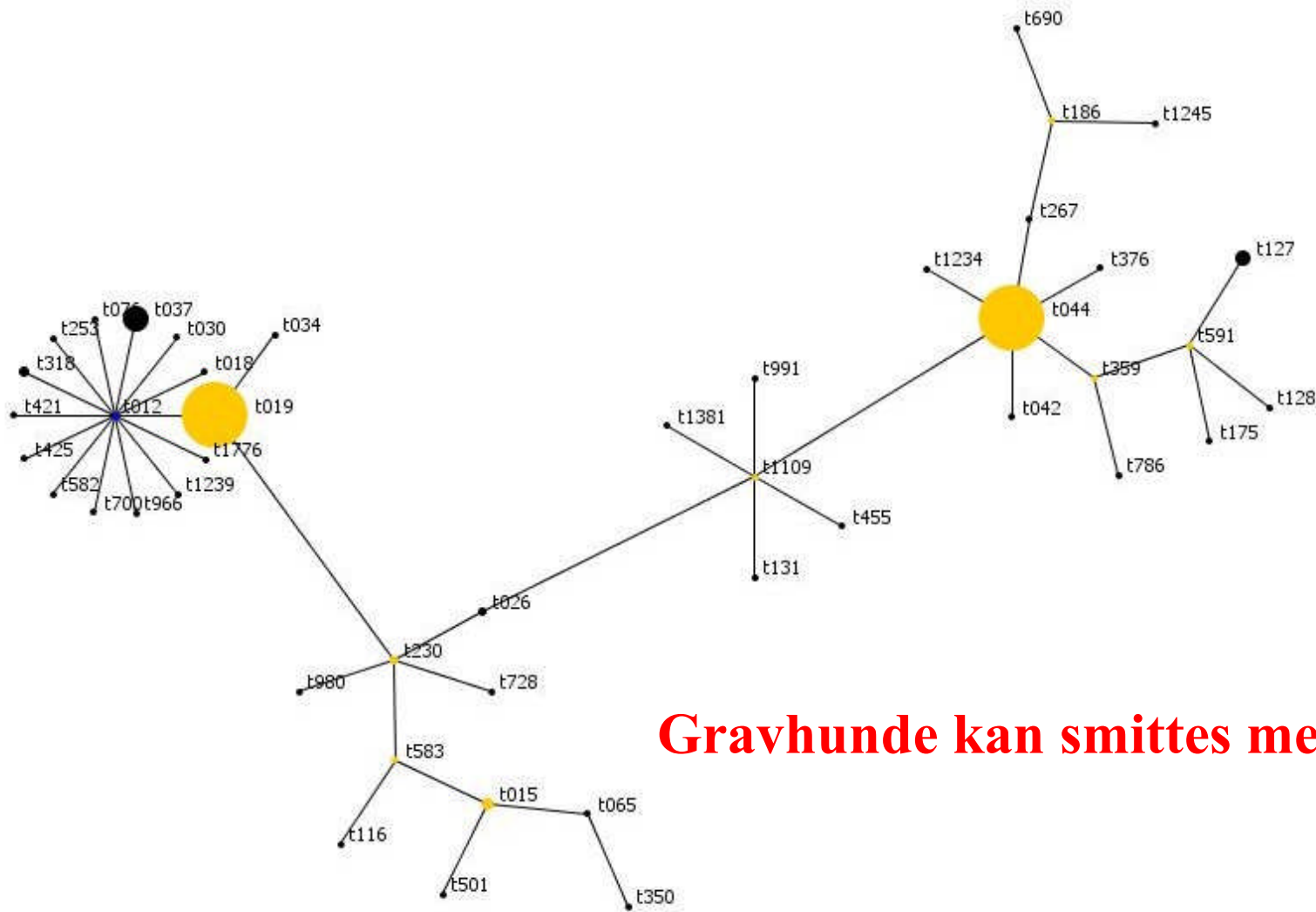
## *spa* types and *spa* clonal complexes *spa*-CC008

2001-2006 (n= 1052)

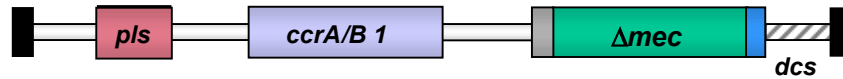


# Klonalitet af MRSA på Sjælland

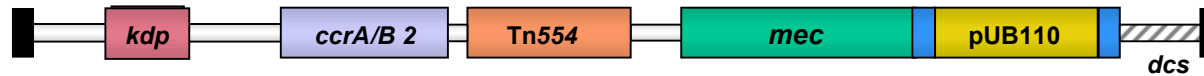
## spa types and spa clonal complexes spa-CC012



# SCCmec type I-IV



SCCmec Type I  
(34 kb)



SCCmec Type II  
(52 kb)

SCCmec Type III  
(66 kb)



SCCmec Type IV  
(20-24 kb)

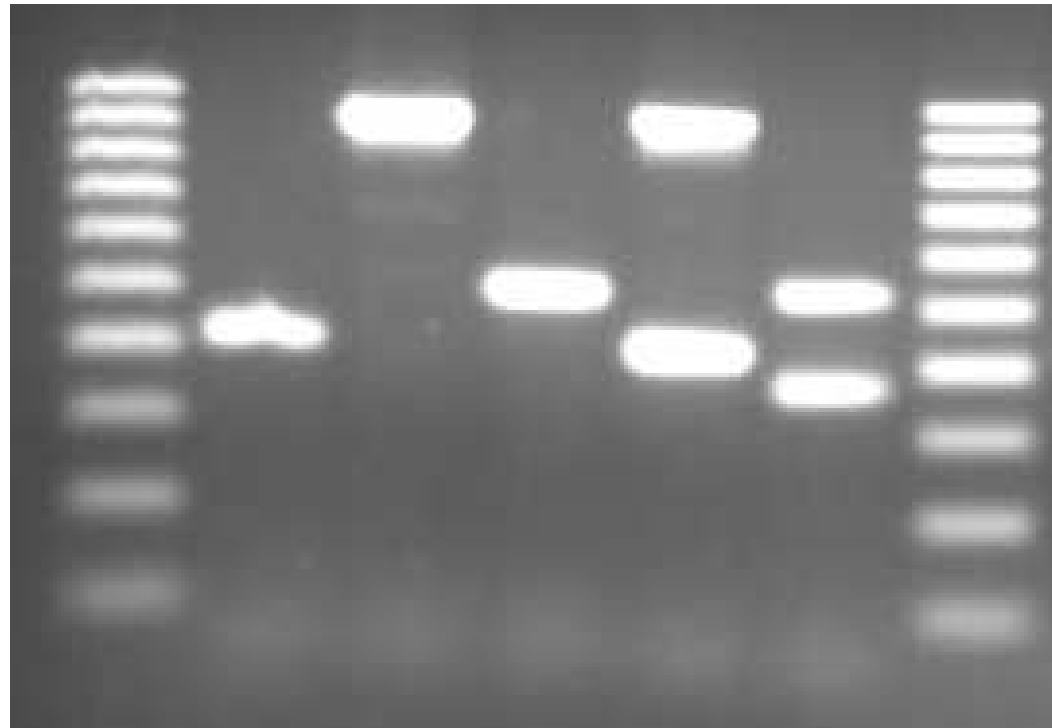
IS431

ΨIS1272

15 bp direct repeats

# SCCmec multiplex PCR

**M I II III IV V M**



# Add on value of typing systems

| <b>MLST<br/>Clonal<br/>Complex</b> | <b>Multi locus<br/>sequence type<br/>(ST)</b> | <i>spa</i> types  | <b>PVL positive</b> | <b>SCC<i>mec</i></b> |
|------------------------------------|---|---|---------------------|----------------------|
| <b>CC8</b>                         | <b>ST-8, ST-239</b>                           | <b>t024, t008,<br/>t430, t064,<br/>t351, t037<br/>+12 til</b> | <b>t008</b>         | <b>III, IV, NT</b>   |
| <b>CC1</b>                         | <b>ST-1, ST 748</b>                           | <b>t175, t127</b>   | <b>t175</b>         | <b>IV, V</b>         |
| <b>CC5</b>                         | <b>ST-5, ST-125, ST-<br/>225</b>              | <b>t002, t067, t003</b>                                       | <b>t002, t003</b>   | <b>I, II, IV</b>     |
| <b>CC22</b>                        | <b>ST-22, ST 737</b>                          | <b>t005, t022, t354,<br/>t541, t542</b>                       |                     | <b>IV, NT</b>        |
| <b>CC45</b>                        | <b>ST-45</b>                                  | <b>t015, t026, t065,<br/>t116, t350</b>                       |                     | <b>IV + V</b>        |

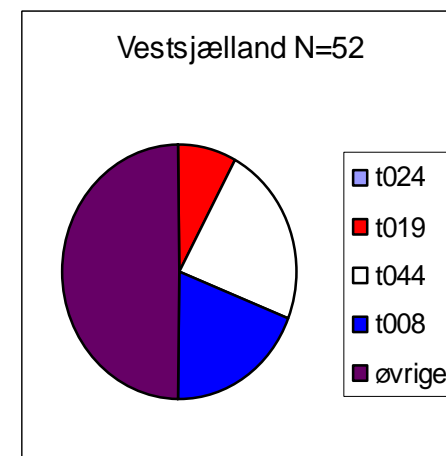
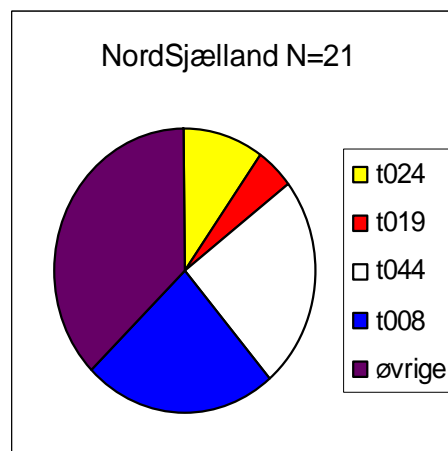
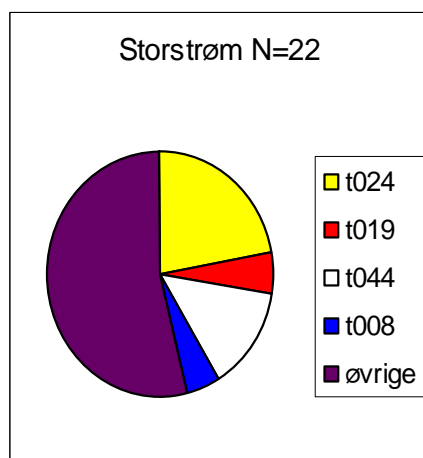
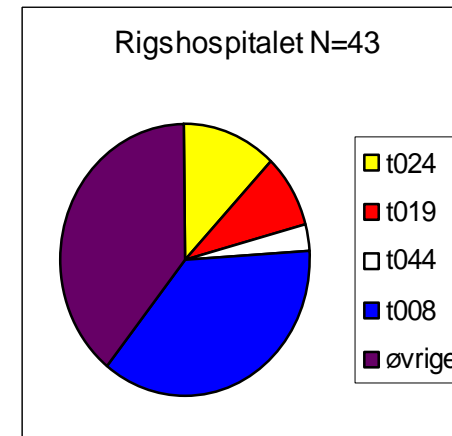
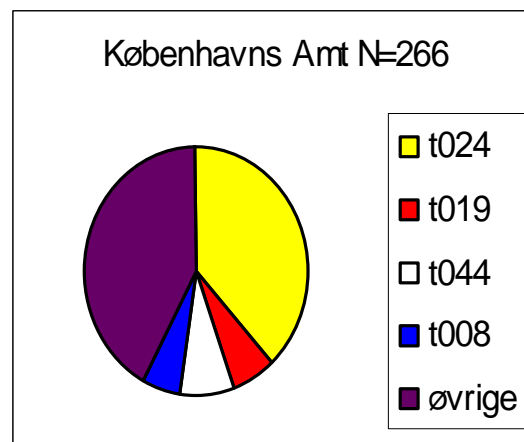
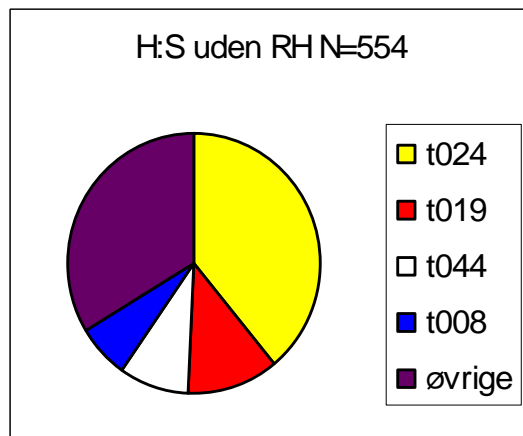


## *spa*-typernes udbredelse

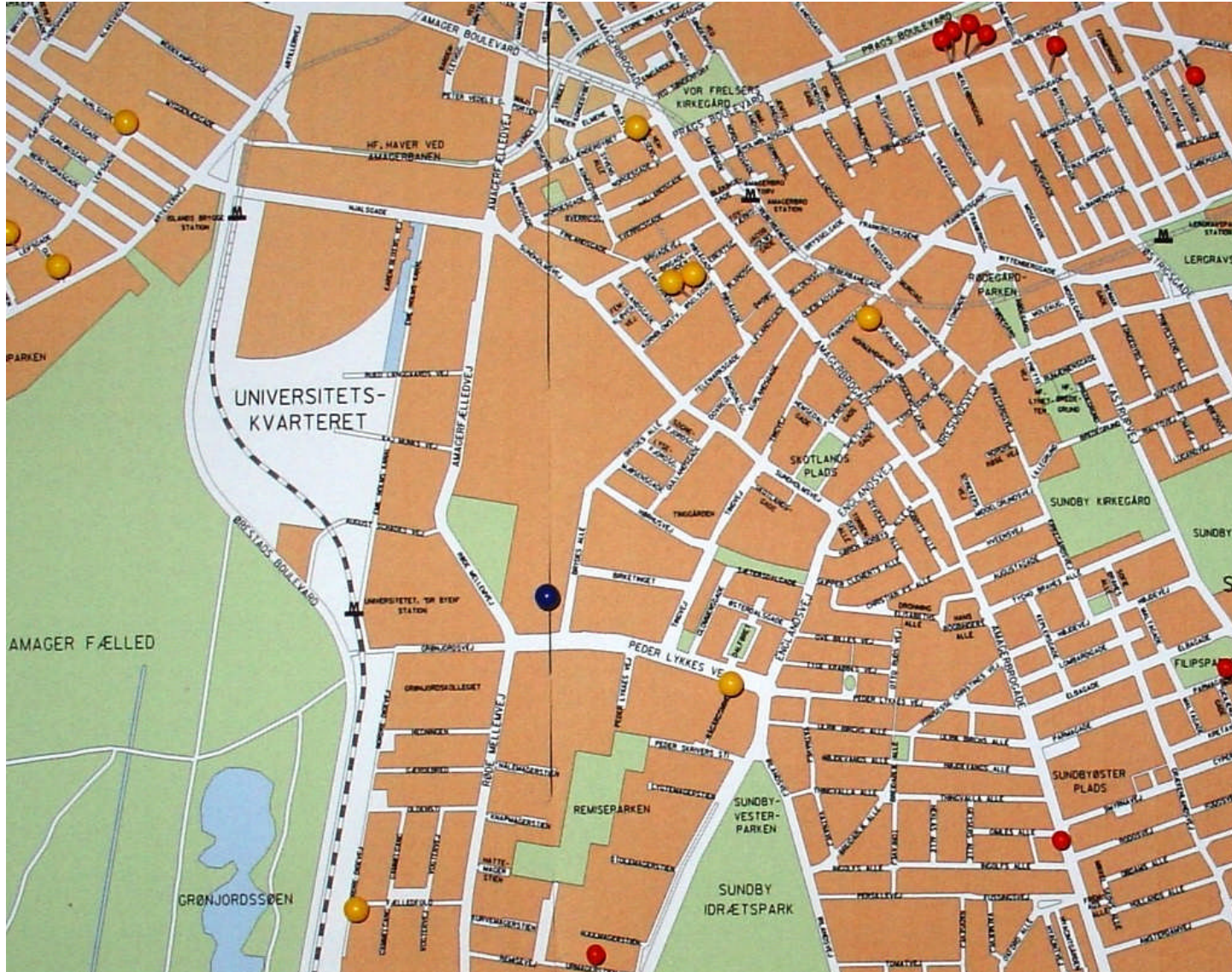
| <i>spa</i> -type | København                |
|------------------|--------------------------|
| t024             | Plejehjem, ældre, Amager |
| t019             | Filipinere, Amager       |
| t044             | Etnisk, børn+unge, N+NV  |
| t008             | Nørrebro                 |
|                  |                          |

- forskellige typer har forskellig udbredelse

# 2006 Sjælland



2004



2006



# Tak for opmærksomheden



# Klonalitet af MRSA på Sjælland

*spa* types and *spa* clonal complexes *spa*-CC002  
2001-2006 (n= 1052)

