

# Excel

## Introduction to data analysis

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**Based on lecture by Hege Line Løwer,  
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## Why Excel?

- Many different programs for data analysis
  - EpiInfo/Episheet (free)
  - SPSS
  - STATA
  - SAS
- High user threshold → sometimes difficult to learn
- Advanced features are unnecessary for most of users
- Expensive
- “Everyone” has Excel

## Why Excel?

- Most have already used it
- Can do so much
- Handles large amounts of data easily (65,536 rows x 256 columns)
- Easy to exchange data with other people and software
- Easy to get help
- It's fun! 😊

## What is a Pivottable?

- Simply a kind of advanced cross table
- Creates new and meaningful views of spreadsheet data in seconds
- Organizes data
- Automatically sums up data
- Creates graphs automatically
- Click-and-drag function

## Benefits of a Pivot table

- Changes in the pivot table don't affect the original data
  - the original data is completely untouched in the background (you can click and drag without being afraid of to “destroy” anything)
- Flexible and fast
- The results are ready to be pasted directly into other documents / presentations

## Disadvantages of Pivot table and Excel

- Not possible to use on very large data volumes (more than about 65 000 rows)
- Lacking sophisticated / advanced analysis (some are available)
- A little "stuck" in the format

# EpiNorth Example of Pivottable

**Rawdata**

ID	Undersøksels edato	Sykehusnavn	Region	Spesialitet	Antall pasienter	Antall opererte	Urinveisinfeksjon	Nedre luftveisinfeksjon	Overflatisk postoperativ sårinfeksjon	Dyp postoperativ sårinfeksjon	Septikemi
240	09.06.2004	Sykehus U	Region 1								
241	09.06.2004	Sykehus U	Region 2								
242	09.06.2004	Sykehus U	Region 3								
243	09.06.2004	Sykehus U	Region 4								
244	09.06.2004	Sykehus U	Region 1								
245	09.06.2004	Sykehus U	Region 2								
249	09.06.2004	Sykehus A	Region 3								
250	09.06.2004	Sykehus A	Region 4								
251	09.06.2004	Sykehus A	Region 1								
252	09.06.2004	Sykehus A	Region 2								
269	09.06.2004	Sykehus L	Region 3								
270	09.06.2004	Sykehus L	Region 4								
271	09.06.2004	Sykehus L	Region 1								
272	09.06.2004	Sykehus L	Region 2								
273	09.06.2004	Sykehus L	Region 3								
274	09.06.2004	Sykehus L	Region 4								
275	09.06.2004	Sykehus L	Region 1								
276	09.06.2004	Sykehus L	Region 2								
277	09.06.2004	Sykehus L	Region 3								
278	09.06.2004	Sykehus L	Region 4								
279	09.06.2004	Sykehus L	Region 1								
280	09.06.2004	Sykehus L	Region 2								
281	09.06.2004	Sykehus L	Region 3								
282	09.06.2004	Sykehus L	Region 4								
283	09.06.2004	Sykehus L	Region 1								
284	09.06.2004	Sykehus L	Region 2								
285	09.06.2004	Sykehus L	Region 3								
285	09.06.2004	Sykehus L	Region 4								
311	09.06.2004	Sykehus B	Region 1								
312	09.06.2004	Sykehus B	Region 2								

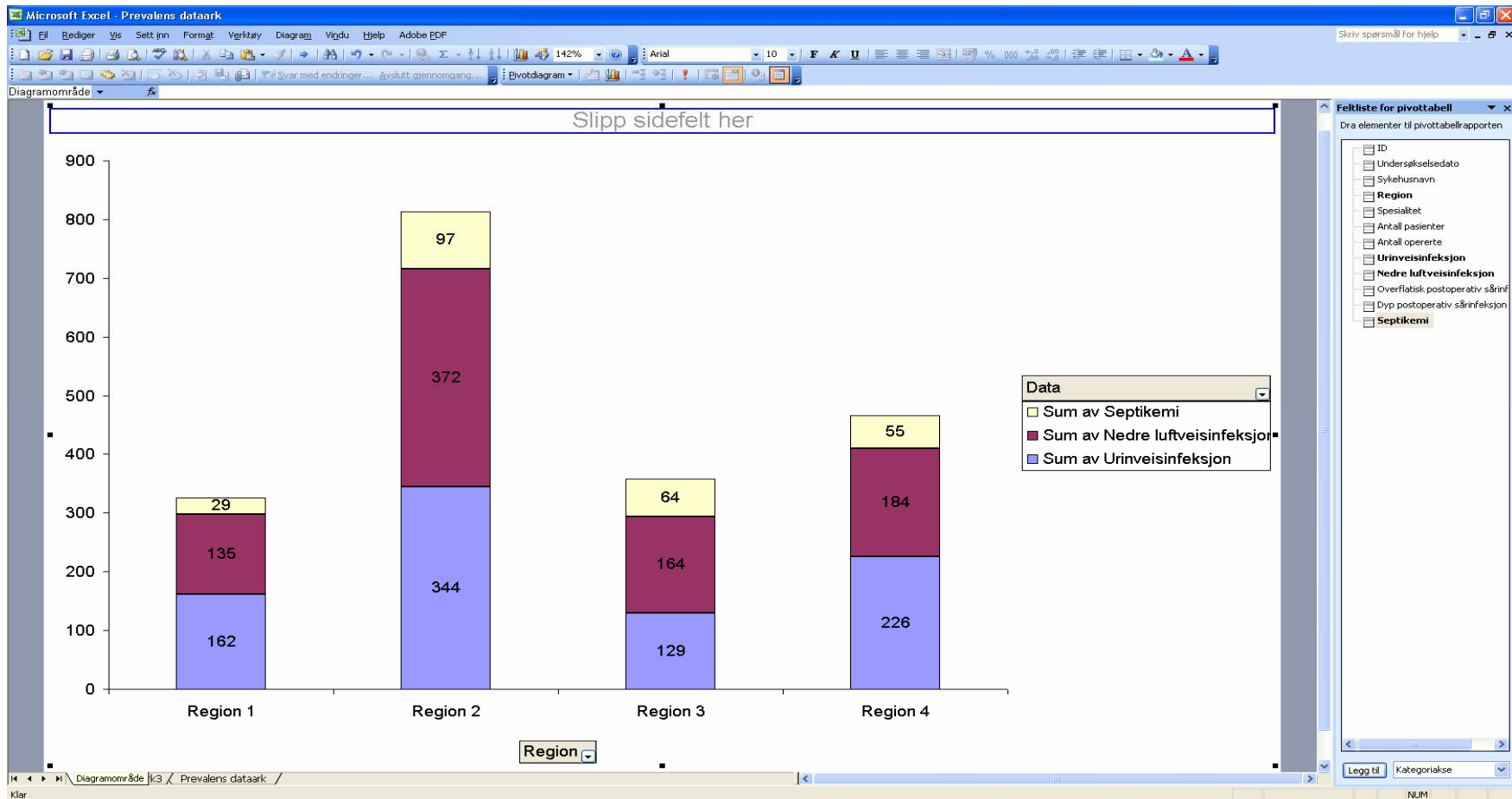
**Pivotable**

Region	Sum av Urinveisinfeksjon	Sum av Nedre luftveisinfeksjon	Sum av Septikemi
Region 1	162	135	29
Region 2	344	372	97
Region 3	129	164	64
Region 4	226	184	55
<b>Totalt</b>	<b>861</b>	<b>855</b>	<b>245</b>

**Feltliste for pivottabell**

- ID
- Undersøkselsedato
- Sykehusnavn
- Region**
- Spesialitet
- Antall pasienter
- Antall opererte
- Urinveisinfeksjon**
- Nedre luftveisinfeksjon**
- Overflatisk postoperativ sårinfeksjon
- Dyp postoperativ sårinfeksjon
- Septikemi**

# Example of Pivot graph





## When can we use a Pivot table?

- Lots of data or small amount of data
- Ordered in rows (records) and columns (variables)
  - Row → a patient or a department
  - Column → sex, age, diagnosis or number of patients etc
- Unique column headings (columns should be named differently NOT THE SAME!!!)
- Uniform data (text) → “positive” or “Pos” or “Pos.”

## Tutorial for those who need some refresh after the course:

<http://office.microsoft.com/training/training.aspx?AssetID=RC010136191044>

Choose the language

The screenshot shows the Microsoft Office website in a browser window. A red arrow points from the text 'Choose the language' to a 'Language' link in the top right corner, which is circled in red. Another red arrow points from the text 'Learning material' to a 'Prilinkas ir knygos' (Links and books) link in the bottom navigation menu, which is also circled in red. The main content area features a woman sitting at a desk with a laptop, and the text 'Šauru dirbti! Office 2010' (Work smart! Office 2010) with a green button that says 'Atsisiųskite nemokamą versiją' (Download the free version).

Learning material



What is your experience with Excel?  
Who has used Excel pivottable before?