

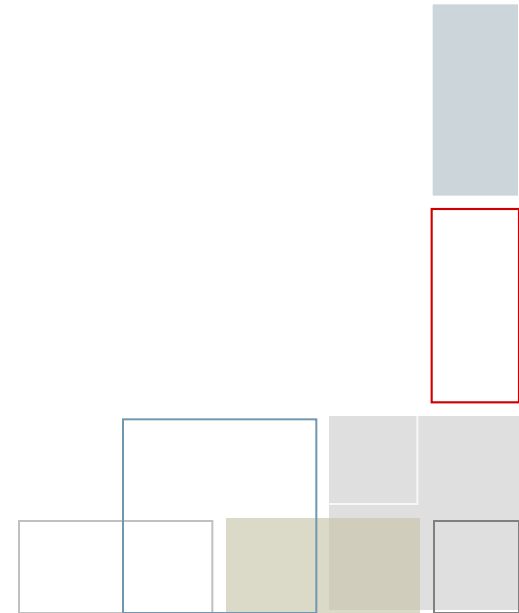
> The need of IT in medicine – practical issues of online data entry and data analysis

Dr. Daniel Schloeth

March 5, 2009

> SPSS at a glance

- Leadership
 - Market leader in Predictive Analytics
 - Focus on online & offline customer data acquisition and analysis
- Stability
 - Founded in 1968
 - 40+ year heritage in analytic technologies
- Proven track record
 - 250,000+ customer sites worldwide
 - More than 4 Mill. users
 - NASDAQ: SPSS



> Some Swiss Customers

Retail & Transport



Finance



Telecom



Other



Healthcare



A Acute
M Myocardial
I Infarction in
S Switzerland



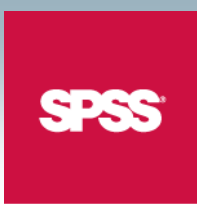
MEDECINS SANS FRONTIERES
ÄRZTE OHNE GRENZEN



Bristol-Myers Squibb

> Swiss Customers in the Healthcare Industry

- Helsana, Sanitas, CSS, Visana, Suva...
- Santésuisse, FMH, H+ Swiss Hospitals...
- BAG
- Cantonal Hospitals Genève, Lausanne, Aarau, Bern, Basel, Zürich, Luzern, Schaffhausen, Winterthur...
- Hirslanden, Schulthess Klinik, Paraplegikerzentrum Nottwil, MediX, Claraspital...
- Roche, BMS, Ciba, Novartis, DSM, Spirig, Straumann, Stryker, Kieser...
- WHO, Red Cross, Médecins Sans Frontières
- Arud, Institutes of Social und Preventive Medicine Bern, Zürich...
- AMIS Plus, Verein Outcome, AO Forschungsinstitut, Organisme Médico-Social Vaudois...



> SPSS realized for AMIS Data Entry and Online Analysis

AMIS Plus, Acute Myocardial Infarction in Switzerland - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Wechseln zu Links

Adresse <http://www.amis-plus.ch/>

University of Zurich
Institute of Social and
Preventive Medicine

AMIS Plus

Welcome

- Home
- Project
- News and Events
- Steering Committee
- Data Center
- Data Entry**
- Documents
 - AMIS Documents
 - Newsletters
 - Publications
- Online Analysis**
- Sponsors and Donators
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- Links
- Contact

AMIS Plus - National Registry of Acute Myocardial Infarction in Switzerland

A Acute
M Myocardial
I Infarction in
S Switzerland

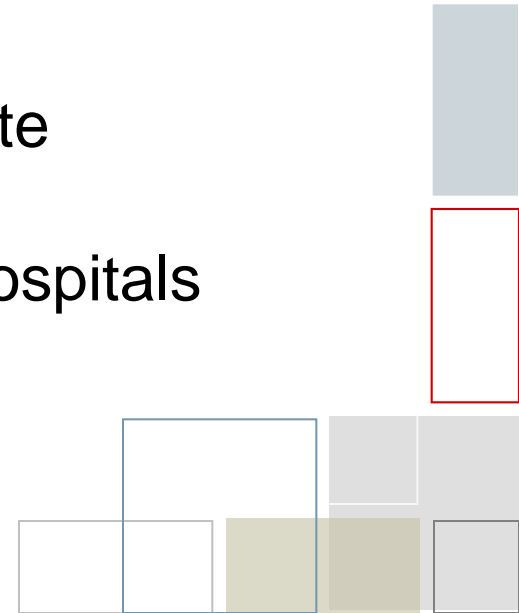
The AMIS Plus national registry collects and analyzes data on patients with acute coronary syndrome in Switzerland in the pre-admission and hospital phases. Emphasis is placed on the evaluation of risk factors, diagnostics, urgent therapy strategies, and treatment of acute coronary syndrome (acute myocardial infarction, unstable angina and minimal necrosis). The AMIS Plus data gathered are important for assessing guidelines, improving compliance with guidelines in clinical practice, investigating patient groups not extensively studied in large randomized trials, quality assurance as well as the continuous improvement of therapeutic strategies based on a large data base.

Internet

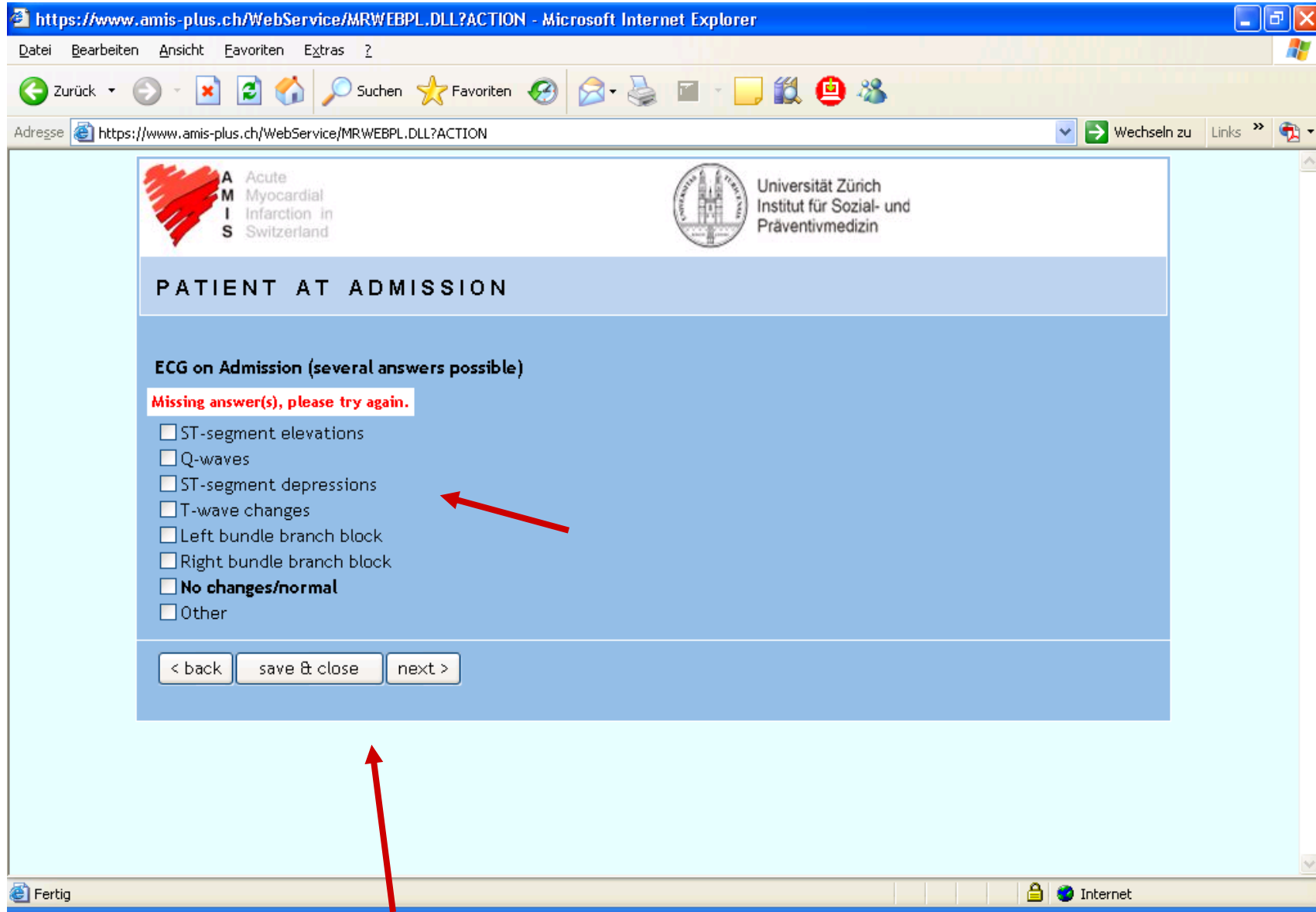
> Two ways to speed up the analysis of new cases

- Online Data Entry
 - Allows the participating hospitals to enter new cases as soon as they have the data
 - Faster analysis for the AMIS data center
 - Better data quality

- Online Analysis
 - Allows the participating hospitals immediate feedback about own cases
 - Faster comparison with data of all other hospitals



> Online Data Entry – with mrInterview



The screenshot shows a Microsoft Internet Explorer browser window with the address bar displaying <https://www.amis-plus.ch/WebService/MRWEBPL.DLL?ACTION>. The page content includes the AMIS logo (A Acute, M Myocardial, I Infarction in, S Switzerland) and the logo of the University of Zurich, Institut für Sozial- und Präventivmedizin. The main heading is "PATIENT AT ADMISSION". Below this, the section "ECG on Admission (several answers possible)" contains a red warning message: "Missing answer(s), please try again." followed by a list of checkboxes: ST-segment elevations, Q-waves, ST-segment depressions, T-wave changes, Left bundle branch block, Right bundle branch block, No changes/normal, and Other. A red arrow points to the "ST-segment depressions" checkbox. At the bottom of the form are three buttons: "< back", "save & close", and "next >". A second red arrow points to the "save & close" button. The browser's status bar at the bottom shows "Fertig" and "Internet".

https://www.amis-plus.ch/WebService/MRWEBPL.DLL?ACTION - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Zurück Suchen Favoriten

Adresse <https://www.amis-plus.ch/WebService/MRWEBPL.DLL?ACTION> Wechseln zu Links

A Acute
M Myocardial
I Infarction in
S Switzerland

Universität Zürich
Institut für Sozial- und
Präventivmedizin

PATIENT AT ADMISSION

ECG on Admission (several answers possible)

Missing answer(s), please try again.

- ST-segment elevations
- Q-waves
- ST-segment depressions
- T-wave changes
- Left bundle branch block
- Right bundle branch block
- No changes/normal**
- Other

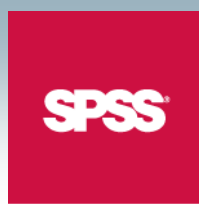
< back save & close next >

Fertig Internet

> Survey Manager

- Under “Cases” you will see a list of all your cases entered within the last 6 months.
- Complete as well as incomplete cases can be viewed and printed out as PDF documents.
- By clicking on the “Info” button (i-button) important information about the patient can be seen, such as patient ID number, gender, date of birth.
- By clicking on the “Go to...” button you can continue working on this case where you left off.
- If you click on the button “Modify” you can enter comments to a case.

> Online Data Entry – Survey Manager



Survey Manager - Windows Internet Explorer

https://www.amis-plus.ch/SurveyManager/Forward.do?target=welcome

Datei Bearbeiten Ansicht Favoriten Extras ?

SPSS (Schweiz) AG - Ac... Umbau bei Schweizer G... Survey Manager SPSS Data Collection S...

University of Zurich
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Preventive Medicine

Survey Manager

AMIS Plus

Home

- Users/Physicians
- Questionnaires
- Hospitals
- Cases
- Followups

Download

Upload

Change profile

Logout

User Manual

Welcome Daniel Schloeth

You are successfully logged in.

Your username: daniel
Your E-mail address: d.schloeth@spss.ch
Last password modification: 4. August 2007

Security messages:

- Due to security reasons you should change your password.!

Important news:

08 Sept 2008: A new update of the Survey Manager and the questionnaire has been installed. Please send any comments to amis@ifspm.uzh.ch.

Important links:

- [Start a new case](#)
- [Cases](#)
- [Change your profile](#)
- [Change your password](#)

Internet 100%

> Online Data Entry – List of open cases

Survey Manager - Windows Internet Explorer

https://www.amis-plus.ch/SurveyManager/Forward.do?target=participants

University of Zurich
Institute of Social and Preventive Medicine

Survey Manager

Cases

Only cases from last 6 months are displayed!

The cases are originally ordered by their status and creation date.
Click on 'Go to...' to start or continue the case.

1,640 cases found, displaying 1 to 10. [First/Prev] [1](#),[2](#),[3](#),[4](#),[5](#),[6](#),[7](#),[8](#) [Next/Last]

Delete	Modify	Questionnaire	User	Hospital	Status	Created on	Patient Id	Comment	Info	PDF	Go to case
		AMISPLUS	Barth Barbara	PARK	New	25.02.2009					Go to...
		AMISPLUS	Nkoulou René	GENV	New	24.02.2009					Go to...
		AMISPLUS	Nkoulou René	GENV	New	23.02.2009					Go to...
		AMISPLUS	Solothurn Bürgerspital	SOLO	New	22.02.2009					Go to...
		AMISPLUS	Se-Il Yoon	SURS	New	18.10.2008					Go to...
		AMISPLUS	Graber Mark	WETZ	Stopped	26.02.2009	314885	686058			Go to...
		AMISPLUS			Timed	25.02.2009					Go to...


> Online Data Entry – Follow-Up Interviews

WebService/MRWEBPL.DLL?ACTION - Microsoft Internet Explorer


voriten Extras ?

Suchen Favoriten Medien

ch/WebService/MRWEBPL.DLL?ACTION



A Acute
M Myocardial
I Infarction in
S Switzerland



Universität Zürich
Institut für Sozial- und
Präventivmedizin

3 Monate Follow-up: , field not available

Erneute Hospitalisation wegen kardiovaskulärer Erkrankung?

Ja
 Nein
 Geplant

< back save & close next >



> Online Analysis - only Browser needed

AMIS Plus Analysis - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten

Adresse <http://www.amis-plus.ch/WebApp.htm> Wechseln zu Links

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Preventive Medicine

AMIS Plus

Analysis

- [Home](#)
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- [Data Entry](#)
- [Documents](#)
 - [AMIS Documents](#)
 - [Newsletters](#)
 - [Publications](#)
- [Online Analysis](#)
- [Sponsors and Donators](#)
- [Participants](#)
- [Links](#)
- [Contact](#)

► [AMIS Plus Online Analysis](#)

User Guide for Online Analyses (English) ([PDF](#))

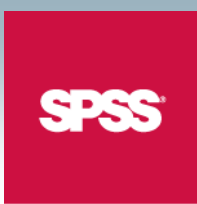
Merkblatt zur Online Analyse (deutsch) ([PDF](#))

Notice pour l'analyse des données online (français) ([PDF](#))

For [Demo AMIS Plus Online Analysis](#): User ID: amis/ Password: demo.

Internet

> Data Analysis




Home - Windows Internet Explorer
http://www.amis-plus.ch/sv/home

SPSS (Schweiz) AG - Ac... Home Survey Manager SPSS Data Collection S...

University of Zurich
Institute of Social and Preventive Medicine

Online Analysis



HOME HELP LOG OUT [Customize](#)

Search

[More Search Options](#)

Categories

- [Demo Applications](#)
- [Demo Online Analysis](#)

[[View all Documents](#)]

Data Management Tools

- [Filter Cases](#)

Welcome

Hello, amis.

Welcome to the **Demo site of AMIS Plus Online Analysis**

In the [Online Analysis](#) Area, you choose the statistics you are interested in.

The results are computed in real time as soon as you click on the button "Compute" and displayed in your browser (this may take some seconds).

You see always the cases of your (fictitious) hospital called DEMO in comparison to all other cases.

Please be aware: In Demo mode you work with a faked dataset!

SPSS This application has been realized by [SPSS WebApp Framework](#)

Preferences

[Your Documents](#) - manage all the documents you published.

[Your Profile](#) - change your password and edit your Contact Information.

Quick Links

- [01. Number of patients for diagnosis_gender_transfer](#)

[[edit Quick Links](#)]

Job Status

Status of your background requests.

Application	Status
03_Age distribution of patients	Done delete

[delete finished jobs](#)

[[more information](#)]

Fertig Internet 100%

> List of possible analyses

Catalog : Demo Online Analysis - Windows Internet Explorer

http://www.amis-plus.ch/sv/catalog?category=objectid:/3904

HOME HELP LOG OUT

Search [More Search Options](#)

Categories

- [Demo Applications](#)
- [Demo Online Analysis](#)

[[View all Documents](#)]

[Home](#) > [Demo Applications](#) > [Demo Online Analysis](#)

View - compact | [detailed](#)

Sort by - title: [Up](#) | [Down](#) author: [Up](#) | [Down](#) date: [Up](#) | [Down](#)

title	author	date modified
00. Number of patients	[details] SPSS (Schweiz) AG	13.02.2008 20:48:32
01. Number of patients for diagnosis, gender, transfer	[details] SPSS (Schweiz) AG	13.02.2008 20:52:23
02. Age statistics grouped by gender and diagnosis	[details] SPSS (Schweiz) AG	13.02.2008 20:52:37
03. Age distribution of patients	[details] SPSS (Schweiz) AG	13.02.2008 20:52:49
04. Killip classification	[details] SPSS (Schweiz) AG	13.02.2008 20:53:02
05. Risk factors	[details] SPSS (Schweiz) AG	13.02.2008 20:53:19
06. ECG on admission	[details] SPSS (Schweiz) AG	13.02.2008 20:54:21
07. Immediate therapy	[details] SPSS (Schweiz) AG	07.07.2008 14:08:36
08. Door-to-needle time for thrombolysis	[details] SPSS (Schweiz) AG	13.02.2008 20:55:46
09. Door-to-needle time for PCI	[details] SPSS (Schweiz) AG	13.02.2008 20:58:19
10. Complications	[details] SPSS (Schweiz) AG	13.02.2008 20:58:19
11. Performed procedures	[details] SPSS (Schweiz) AG	13.02.2008 20:58:20
12. Mortality	[details] SPSS (Schweiz) AG	13.02.2008 20:58:20
13. Delay (symptom onset to admission time)	[details] SPSS (Schweiz) AG	13.02.2008 20:58:21
14. ICU duration in days	[details] SPSS (Schweiz) AG	13.02.2008 20:58:22
15. Hospitalisation duration in days	[details] SPSS (Schweiz) AG	13.02.2008 20:58:22
16. Medication at discharge	[details] SPSS (Schweiz) AG	13.02.2008 20:58:23
17. Major adverse cardiac event (MACE) (Yes/No)	[details] SPSS (Schweiz) AG	13.02.2008 21:15:17
18. Followup Analysis	[details] SPSS (Schweiz) AG	07.07.2008 13:58:05

Internet 100%


> Choose filters, then compute

05. Risk factors - Microsoft Internet Explorer


Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten

Adresse http://www.amis-plus.ch/sv/viewer/oid_4042/?category=objectid%3A%2F3904&catalog=true&action=view&object-id=oid%3A4042 Wechseln zu Links

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Institute of Social and
Preventive Medicine

Online Analysis

 AMIS Plus

HOME LOG OUT

[<< Back to Category](#) | [Add to Quick Links](#)

05. Risk factors
Created by SPSS (Schweiz) AG on 2005.06.24 10:31:04 PM

Frequencies [help](#)

Hospital type:
All hospitals

Year:
All years

Age category:
All age categories

[Case Filter:](#)
All Cases

Compute

Fertig Internet

> Table comparing your hospital

05. Risk factors - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Wechseln zu Links

Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&action=view&object-id=objectid%3A%2F4042&customfavoriteurl=true&aid=97&category=objectid%3>

Hospital type:
All hospitals

Year:
All years

Age category:
All age categories

Case Filter:
All Cases

Compute

Type of hospital: All hospitals
Year: All years
Age category: All age categories
Case filter: All Cases

Summary (Graphs)

Risk factors

Layer: Gender Total

		Hospital ID			Total
		DEMO	Other hospitals		
Risk factors	History of diabetes mellitus	N	216	867	1083
		%	21.1%	21.0%	21.0%
	History of dyslipidemia	N	603	2347	2950
		%	58.8%	56.8%	57.2%
	History of arterial hypertension	N	585	2367	2952
		%	57.0%	57.3%	57.3%
	Smoking	N	656	2687	3343
		%	63.9%	65.1%	64.8%
Total		N	1026	4129	5155
		%	100.0%	100.0%	100.0%

Internet

> Move Gender to Columns

05. Risk factors - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Wechseln zu Links

Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&action=view&object-id=objectid%3A%2F4042&customfavoriteurl=true&aid=97&category=objectid%3>

Hospital type: All hospitals

Year: All years

Age category: All age categories

Case Filter: All Cases

Compute

Type of hospital: All hospitals
Year: All years
Age category: All age categories
Case filter: All Cases

Summary (Graphs)

Risk factors

Layer: Gender Total

Risk factor		Hospital ID		
		DEMO	Other hospitals	Total
Diabetes mellitus	N	216	867	1083
	%	21.1%	21.0%	21.0%
History of dyslipidemia	N	603	2347	2950
	%	58.8%	56.8%	57.2%
History of arterial hypertension	N	585	2367	2952
	%	57.0%	57.3%	57.3%
Smoking	N	656	2687	3343
	%	63.9%	65.1%	64.8%
Total	N	1026	4129	5155
	%	100.0%	100.0%	100.0%

Internet

> New table with Gender

05. Risk factors - Microsoft Internet Explorer

File Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Wechseln zu Links

Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&aid=97&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid%3A22842&category=objecti>

Year: All years

Age category: All age categories

Case filter: All Cases

Summary [\(Graphs\)](#)

Risk factors

		Hospital ID									
		DEMO			Other hospitals			Total			
		Gender			Gender			Gender			
		Total	Male	Female	Total	Male	Female	Total	Male	Female	
Risk factors	History of diabetes mellitus	N	216	136	80	867	576	291	1083	712	371
		%	21.1%	18.6%	27.2%	21.0%	19.2%	25.8%	21.0%	19.1%	26.1%
	History of dyslipidemia	N	603	439	164	2347	1713	634	2950	2152	798
		%	58.8%	60.0%	55.8%	56.8%	57.0%	56.3%	57.2%	57.6%	56.2%
	History of arterial hypertension	N	585	380	205	2367	1554	813	2952	1934	1018
		%	57.0%	51.9%	69.7%	57.3%	51.7%	72.2%	57.3%	51.8%	71.7%
	Smoking	N	656	538	118	2687	2279	408	3343	2817	526
		%	63.9%	73.5%	40.1%	65.1%	75.9%	36.2%	64.8%	75.4%	37.0%
Total		N	1026	732	294	4129	3003	1126	5155	3735	1420
		%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fertig Internet

> Download data of table

05. Risk factors - Microsoft Internet Explorer

Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&aid=97&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid%3A22842&category=objecti>

Year: All years
Age category: All age categories
Case filter: All Cases

Year: All years
Age category: All age categories
Case Filter: All Cases
Compute

Summary ([Graphs](#))

Risk factors

Download data as CSV file

		Hospital ID									
		DEMO			Other hospitals			Total			
		Gender			Gender			Gender			
		Total	Male	Female	Total	Male	Female	Total	Male	Female	
Risk factors	History of diabetes mellitus	N	216	136	80	867	576	291	1083	712	371
		%	21.1%	18.6%	27.2%	21.0%	19.2%	25.8%	21.0%	19.1%	26.1%
History of dyslipidemia	N	603	439	164	2347	1713	634	2950	2152	798	
	%	58.8%	60.0%	55.8%	56.8%	57.0%	56.3%	57.2%	57.6%	56.2%	
History of arterial hypertension	N	585	380	205	2367	1554	813	2952	1934	1018	
	%	57.0%	51.9%	69.7%	57.3%	51.7%	72.2%	57.3%	51.8%	71.7%	
Smoking	N	656	538	118	2687	2279	408	3343	2817	526	
	%	63.9%	73.5%	40.1%	65.1%	75.9%	36.2%	64.8%	75.4%	37.0%	
Total	N	1026	732	294	4129	3003	1126	5155	3735	1420	
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

<http://www.amis-plus.ch/sv/viewer/data.csv?action=view&mime=text/csv&savedata=yes&viewsn=-1233073984&cmdoid=oid:22842&reni> Internet

> Flip table

05. Risk factors - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Wechseln zu Links

Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&aid=97&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid%3A22842&category=objecti>

Year: All years
Age category: All age categories
Case filter: All Cases

Year: All years
Age category: All age categories
Case Filter: All Cases
Compute

Summary [\(Graphs\)](#)

Risk factors

		Hospital ID									
		DEMO			Other hospitals			Total			
		Gender			Gender			Gender			
		Total	Male	Female	Total	Male	Female	Total	Male	Female	
Risk factors	History of diabetes mellitus	N	216	136	80	867	576	291	1083	712	371
		%	21.1%	18.6%	27.2%	21.0%	19.2%	25.8%	21.0%	19.1%	26.1%
History of dyslipidemia	N	603	439	164	2347	1713	634	2950	2152	798	
	%	58.8%	60.0%	55.8%	56.8%	57.0%	56.3%	57.2%	57.6%	56.2%	
History of arterial hypertension	N	585	380	205	2367	1554	813	2952	1934	1018	
	%	57.0%	51.9%	69.7%	57.3%	51.7%	72.2%	57.3%	51.8%	71.7%	
Smoking	N	656	538	118	2687	2279	408	3343	2817	526	
	%	63.9%	73.5%	40.1%	65.1%	75.9%	36.2%	64.8%	75.4%	37.0%	
Total	N	1026	732	294	4129	3003	1126	5155	3735	1420	
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Flip table

javascript:spstableCommand('22842', '/sv/viewer?catalog=true&aid=97&childcall=true&customfavoriteurl=true&action=view&cmdoid=0

Internet

> Switched Columns and Rows

05. Risk factors - Microsoft Internet Explorer

Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&aid=101&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid:22890&category=objectid:;>

Hospital type: All hospitals

Year: All years

Age category: All age categories

Case Filter: All Cases

Compute

Summary [\(Graphs\)](#)

Risk factors

				Risk factors									
				History of diabetes mellitus		History of dyslipidemia		History of arterial hypertension		Smoking		Total	
				N	%	N	%	N	%	N	%	N	%
Hospital ID	DEMO	Gender	Total	216	21.1%	603	58.8%	585	57.0%	656	63.9%	1026	100.0%
			Male	136	18.6%	439	60.0%	380	51.9%	538	73.5%	732	100.0%
			Female	80	27.2%	164	55.8%	205	69.7%	118	40.1%	294	100.0%
	Other hospitals	Gender	Total	867	21.0%	2347	56.8%	2367	57.3%	2687	65.1%	4129	100.0%
			Male	576	19.2%	1713	57.0%	1554	51.7%	2279	75.9%	3003	100.0%
			Female	291	25.8%	634	56.3%	813	72.2%	408	36.2%	1126	100.0%
	Total	Gender	Total	1083	21.0%	2950	57.2%	2952	57.3%	3343	64.8%	5155	100.0%
			Male	712	19.1%	2152	57.6%	1934	51.8%	2817	75.4%	3735	100.0%
			Female	371	26.1%	798	56.2%	1018	71.7%	526	37.0%	1420	100.0%

Fertig Internet

> Graph for all hospitals

05. Risk factors - Microsoft Internet Explorer

Adresse [http://www.amis-plus.ch/sv/viewer?catalog=true&aid=101&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid:22890&category=objectid:/:](http://www.amis-plus.ch/sv/viewer?catalog=true&aid=101&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid:22890&category=objectid:/) Wechseln zu Links

	Total	Gender	Total	1083	21.0%	2950	57.2%	2952	57.3%	3343	64.8%	5155	100.0%
		Male	712	19.1%	2152	57.6%	1934	51.8%	2817	75.4%	3735	100.0%	
		Female	371	26.1%	798	56.2%	1018	71.7%	526	37.0%	1420	100.0%	

All hospitals ([Only your hospital: DEMO](#))

Risk Factor	Male (%)	Female (%)
History of arterial hypertension	~48	~65
History of dyslipidemia	~58	~55
History of diabetes mellitus	~18	~22
Smoking	~72	~38

[top](#)

Only your hospital: DEMO ([All hospitals](#))

Risk

Fertig Internet


> Graph only for your hospital

05. Risk factors - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Wechseln zu Links

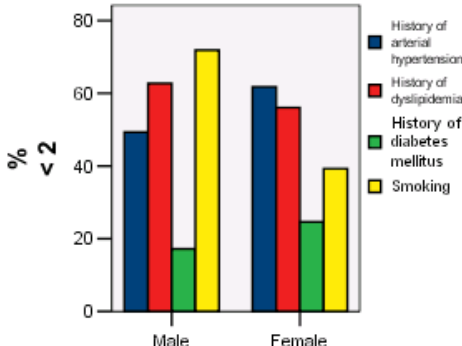
Adresse <http://www.amis-plus.ch/sv/viewer?catalog=true&aid=101&childcall=true&customfavoriteurl=true&action=view&cmdoid=oid:22890&category=objectid:;>



Gender

[top](#)

Only your hospital: DEMO ([All hospitals](#))



Risk factors

% < 2

Gender

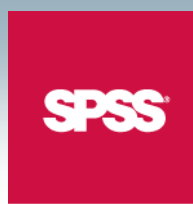
- History of arterial hypertension
- History of dyslipidemia
- History of diabetes mellitus
- Smoking

[top](#)

HOME LOG OUT

Fertig Internet

> IHAM - www.Hypertensioncohort.ch



- Online Registry for GP
- Measuring high blood pressure

IHAMB
Institut für Hausarztmedizin
Universität Basel

Hc.cH
Hypertensioncohort.ch

UNI
BASEL

Hypertonie

Hypertonie neu entdeckt?

Ja
 Nein

FALLS HYPERTONIE NICHT NEU ENTDECKT:
Hypertonie bekannt seit
(Jahr, z.B. 2005)

Art der Hypertonie:

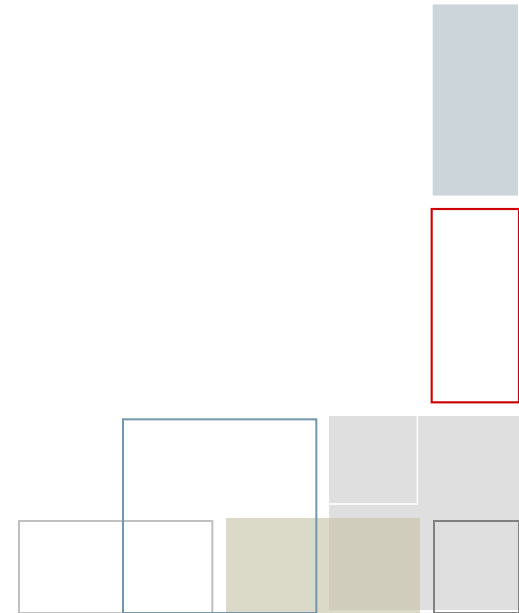
Essentiell Phäochromozytom
 Renovaskulär Hyperaldosteronismus
 Renoparenchymatös anderes

Blutdruck-Messwerte
(*=Eingabe obligatorisch)

	Syst.	Diast.	Herzfrequenz	Messgerät	Datum	Nicht erfasst
Praxis*	<input type="text"/>	<input type="text"/>	<input type="text"/>	-- Bitte auswählen --		
Heim	<input type="text"/>	<input type="text"/>	<input type="text"/>	-- Bitte auswählen --		<input type="checkbox"/>
Langzeit: 24-Std.	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="checkbox"/>
Langzeit: Tag	<input type="text"/>	<input type="text"/>	<input type="text"/>			<input type="checkbox"/>
Langzeit: Nacht	<input type="text"/>	<input type="text"/>	<input type="text"/>			<input type="checkbox"/>

> Data Mining for Health

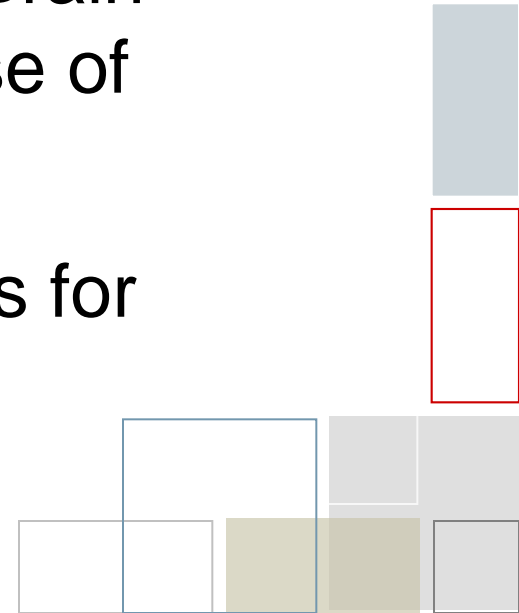
- Combines comprehensive data analysis techniques
 - Including advanced modelling algorithms
- With domain knowledge
 - E.g. Biological, Medical
- To produce new insight and predictive capability
 - E.g. classification, discovery of categories



> Brain Tumor Research

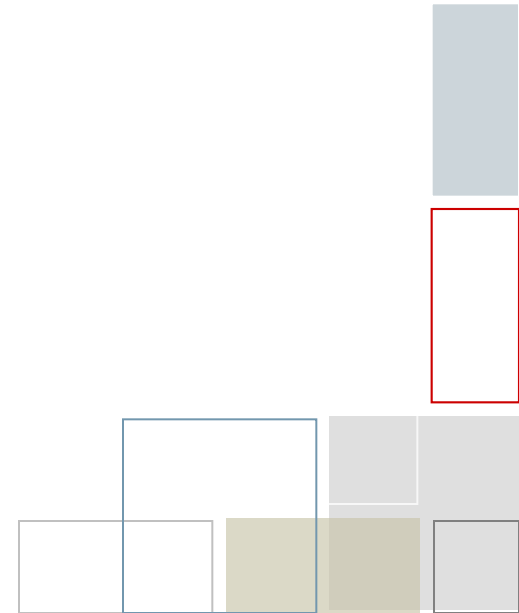
Dr. Bremer, Director brain tumor research,
Children's Hospital Chicago:

- Each year, nearly 3,000 children in the U.S. are diagnosed with brain tumors
- Almost half will die within five years. Brain tumors have become the leading cause of death for children with cancer
- Beyond surgery, successful treatments for pediatric brain tumors are rare



> Tumor Classification

- Three main types of statistical problems in tumor classification:
 - 1. Identification of new tumor classes
 - unsupervised learning, cluster analysis, class discovery
 - 2. Classification into known classes
 - supervised learning, discriminant analysis, class prediction
 - 3. Identification of “marker” genes that characterize different tumor classes

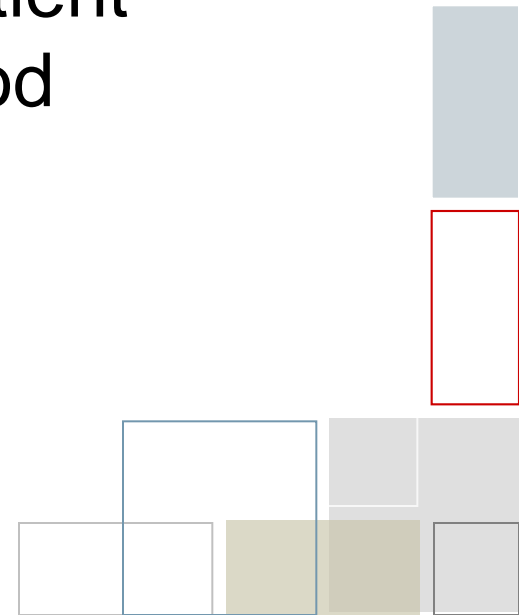


> Tumor Model Summary

- Built predictive models for the classification of pediatric brain tumors
 - Based on Neural Nets
 - Based on Decision Trees
- Greater than 90% accuracy on unseen test data.
- A rapid classification of the tumor – and its stage / grade - allows an earlier therapy increasing the patients chances for survival

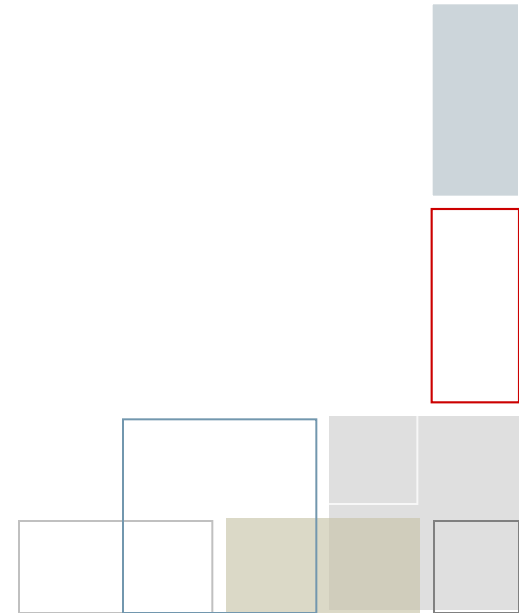
> Data Mining for Public Health

- Detect fraudulent healthcare billing claims
- Enhance disease surveillance and public health security
- Make more informed decisions for patient care: Sequence of procedures for good patient outcome
- Monitor patient satisfaction



> Data Mining possibilities for Health insurers

- Disease Management
- Marketing optimization for finding new customers and up selling
- Churn analysis
- Prevent of fraudulent bills



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