

Formål

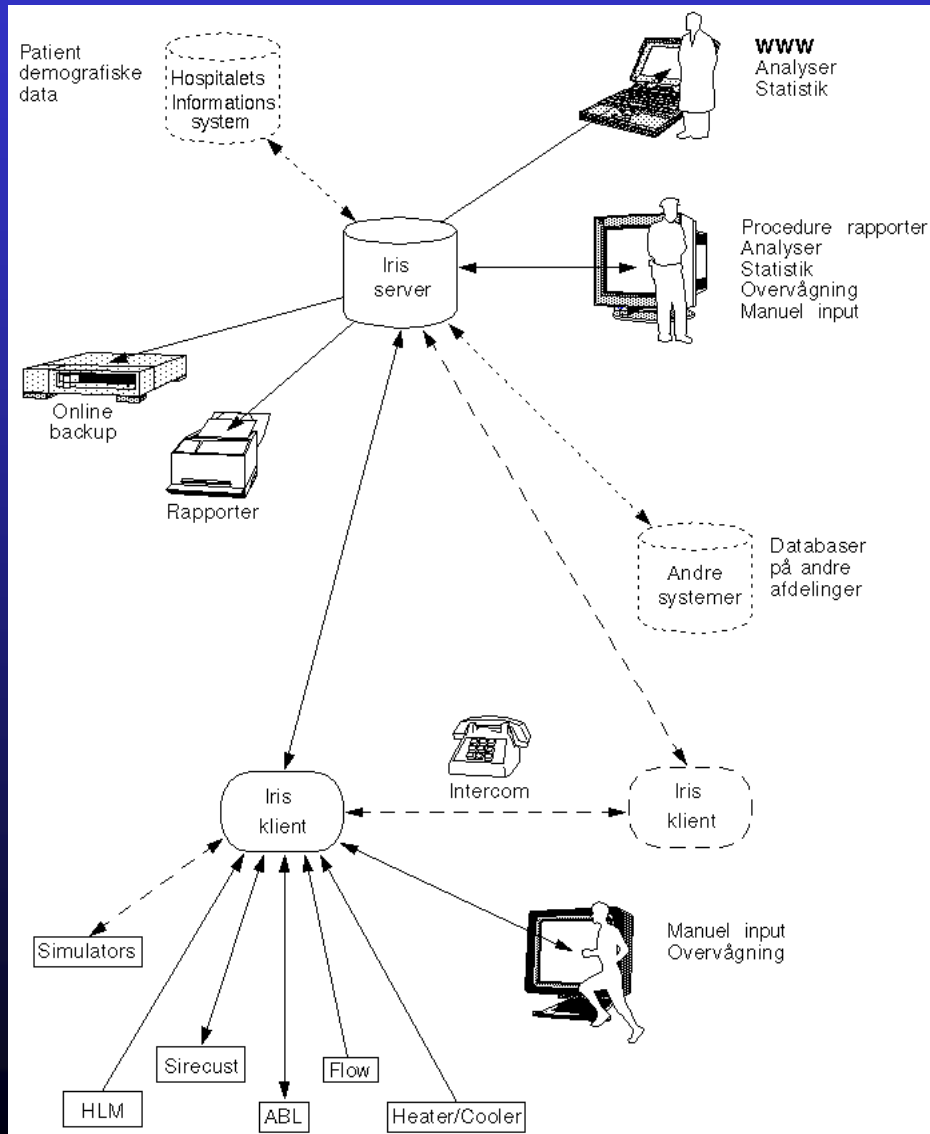
- Individuel dokumentation af et ECC- eller assist forløb
- Produktionskontrol (herunder kvalitetssikring og registrering af utensilie- og væskeforbrug)
- Forskningsværktøj



IRIS-systemet

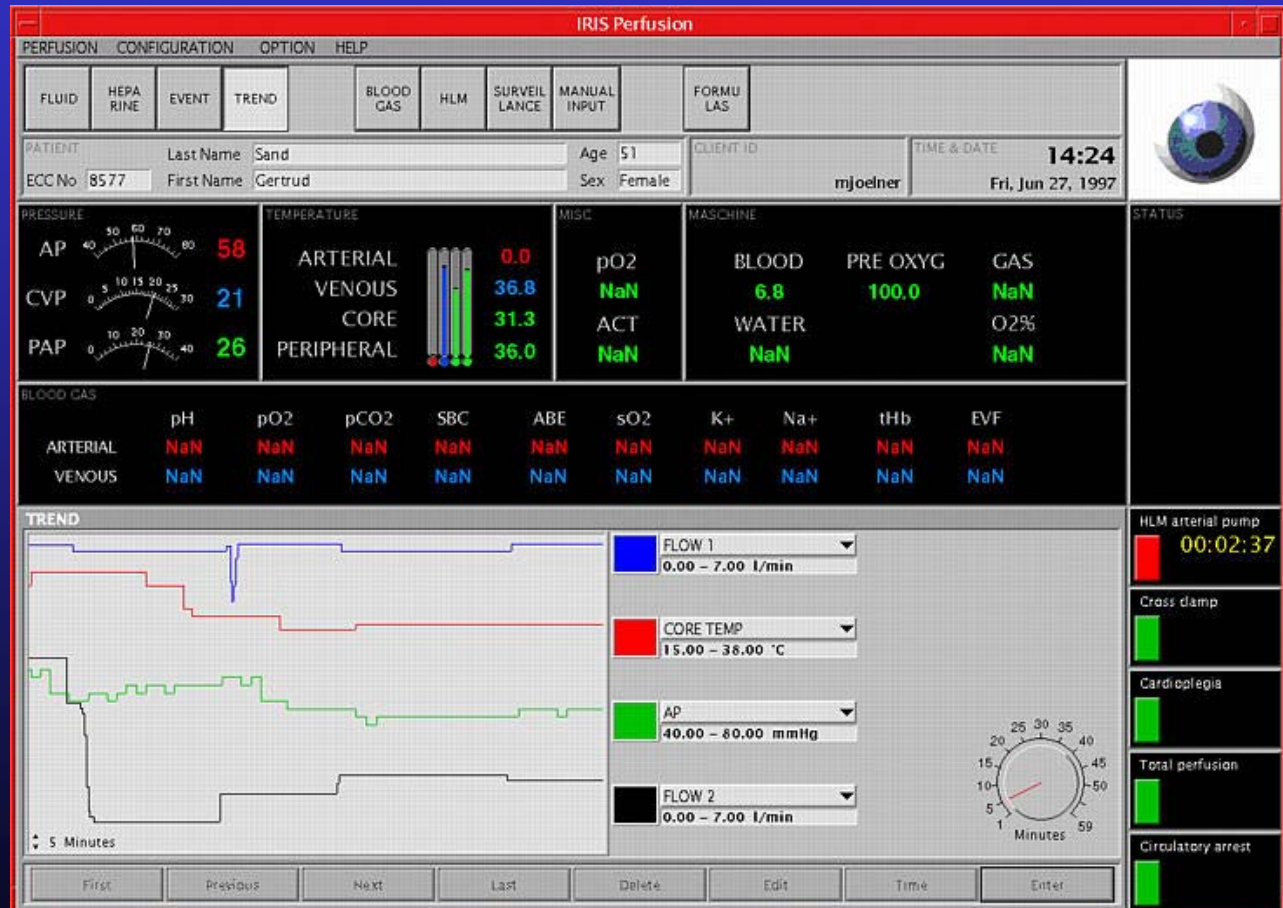
- Platformsuafhængigt
- Mange rapporteringsmuligheder
- Mulighed for adhoc udtræk
- Høj kvalitet af data i database
- Tidssvarende stabilt hardware
- Højt datasikkerheds niveau
- Let at integrere til andre databaser
- Online backup
- Veldokumenteret

<http://tiris-serv.mta.auh.dk/doc/>



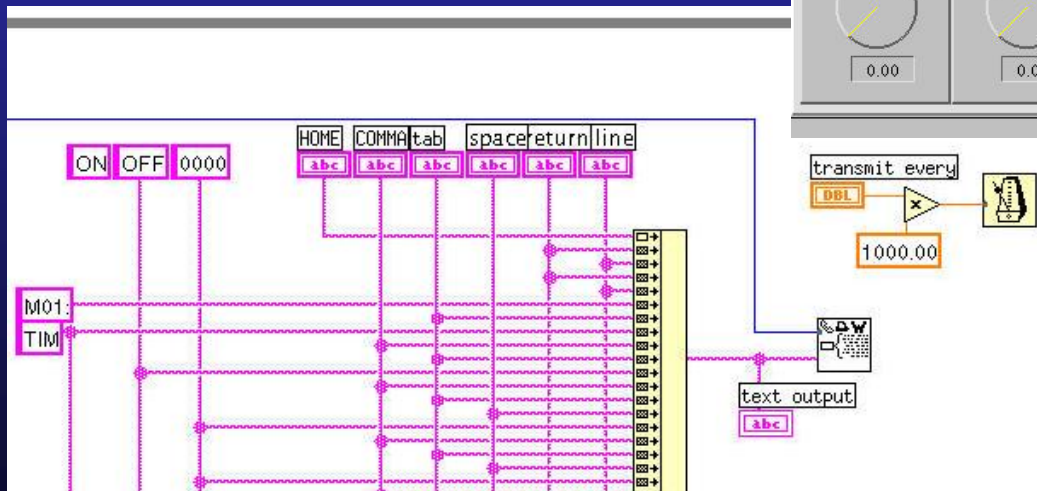
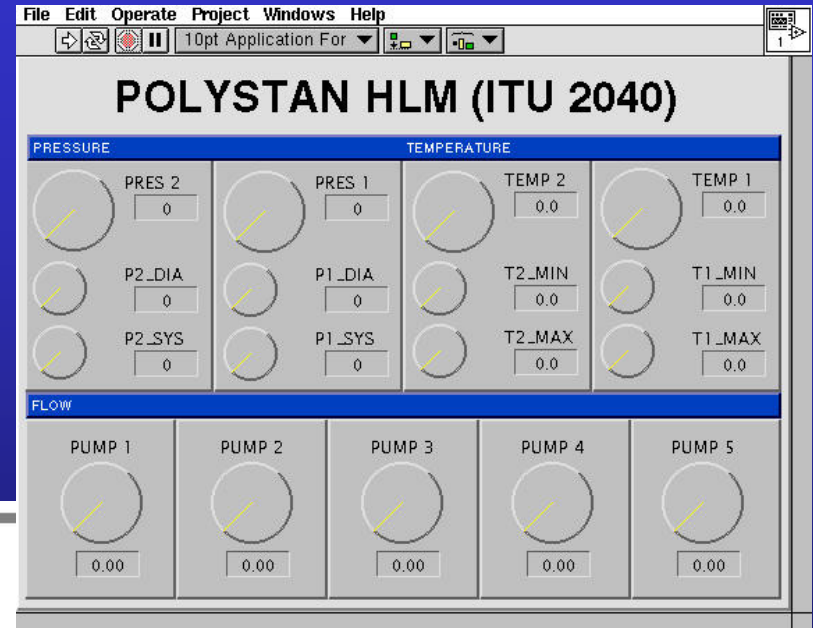
IRIS-klienten

- Præsentation



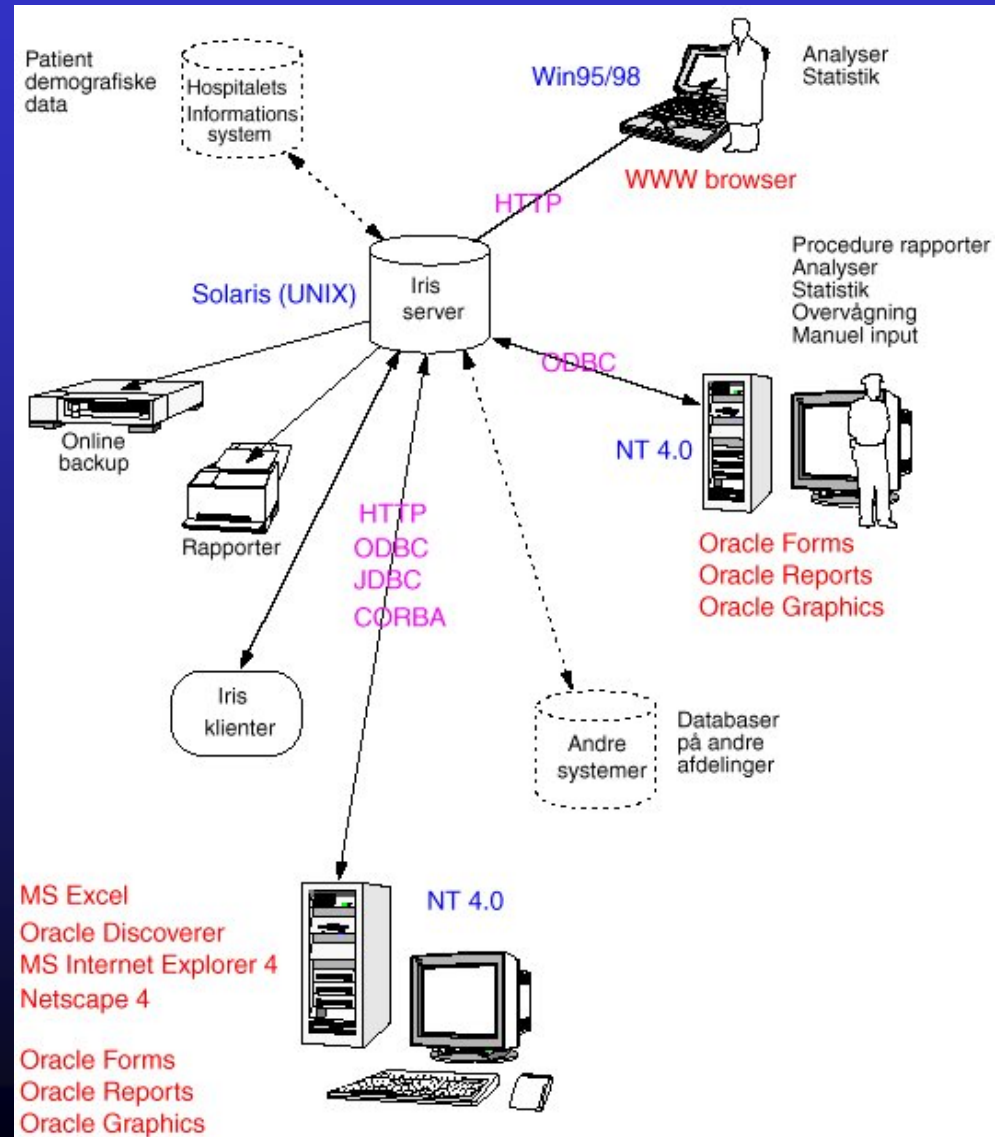
IRIS-klienten

- LabVIEW



IRIS-serveren (Oversigt)

- Åben arkitektur med nutidens standarder og protokoller
- **HTTP**
(HyperText Transfer Protocol)
- **ODBC**
(Open DataBase Connectivity)
- **JDBC**
(Java DataBase Connectivity)
- **CORBA**
(Common Object Request Broker Architecture)
- **Skalerbar**



IRIS-serveren (Datasikkerhed)

- **Klassificerede brugergrupper**

Administrator

Har adgang til læsning og skrivning i hele databasen.
Kan oprette og slette brugere.

Daglig bruger

Har adgang til læsning og skrivning i databasen i forbindelse med daglig drift og vedligehold.

Gæst

Har adgang til læsning af udvalgte data i databasen.

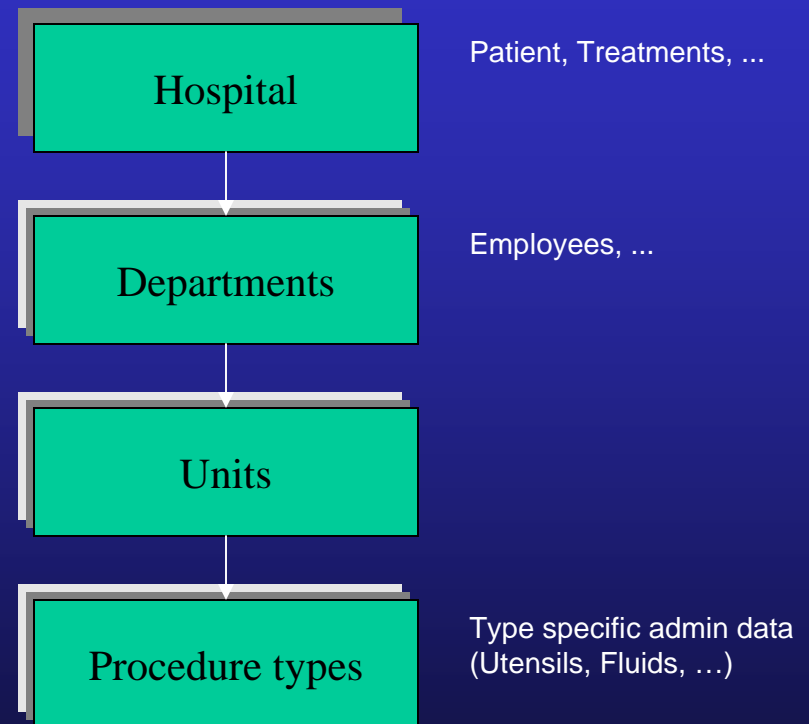
- **Auditering på brugerniveau**

Logning af brugerinformationer samt læsning og skrivning af følsomme patientdata.

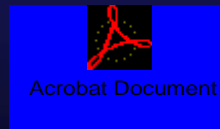


IRIS-serveren (Datamodellen 1)

- Designet efter brugernes behov og krav
- Forberedt for forskellige proceduretyper (CPB, Assist, ...)
- Grundsten i datamodel nemme at udvide med nye proceduretyper
- Nem at integrere med andre databaser
- **Se A1 plots !**

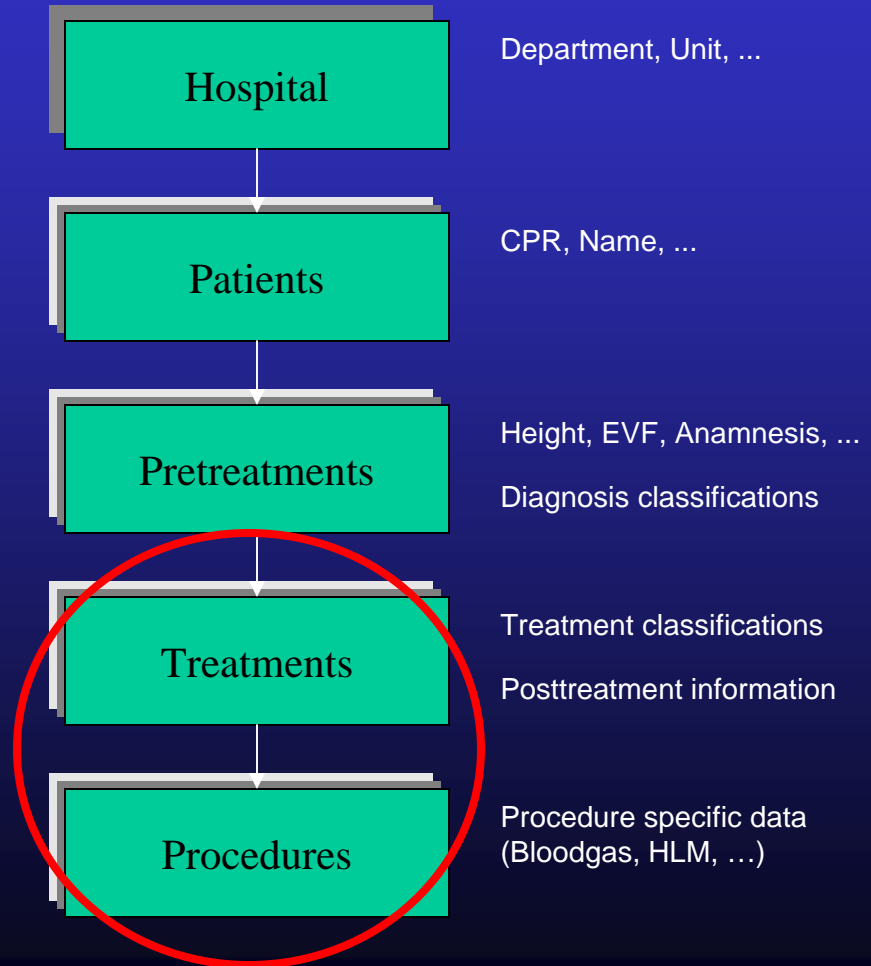


ER diagram 1



IRIS-serveren (Datamodellen 2)

- Designet efter brugernes behov og krav
- Grundsten i datamodel nemme at udvide med nye procedure data
- Nem at integrere med andre databaser
- **Se A1 plots !**



ER diagram 2



IRIS-serveren (Data - nu og senere)

- Alle administrative data, som er nødvendige for at kunne lave perfusionsrelaterede rapporter
- Alle “lavfrekvente” data fra udstyr
- Alle “højfrekvente” data fra udstyr (dataware house teknik)
- Forbindelser til andre databaser på SKS
- Stregkoder til væsker og utensilier



IRIS-serveren (Daglig brugerfunktionalitet)

Iris Server - [Main]

File Edit Config Report Window Help

Medico-teknisk afdeling
NT / 1.2.1

Current activities

Procedure:	Treatment:	CPR num
14005	14005	28025911
14004	14004	22035718
14003	14003	26093513
14002	14002	24014917
14001	14001	08012312
14000	14000	26022911

Procedure ID
Record: 1/6

Iris Server - [Procedures]

Action Edit Block Field Record Query Window Help

Medico-teknisk afdeling
NT / 1.2.3e

Cardio Pulmonary Bypass perfusion

Procedures

Procedure:	Treatment:	CPR number:	Procedure type:	Start date/time:
15169	15169	2704270103	CPB	08-12-1998 08:22:35
15171	15171	0809301168	CPB	08-12-1998 07:53:48
15170	15170	0904230839	CPB	07-12-1998 14:50:28
15168	15168	0111250057	CPB	07-12-1998 14:25:44
15163	15163	2102181274	CPB	04-12-1998 15:03:52

Procedure details

Fluid quantities

Input fluid name:	Time:	Quantity [ml]	Output fluid name:
Heparin (5000 IJ/ml)	08-12-1998 09:15:00	1	Diuresis
Heparin (5000 IJ/ml)	08-12-1998 09:32:00	4.5	Blood samples
Ringer lactate	08-12-1998 09:46:36	1800	Cardioplegie
Heparin (5000 IJ/ml)	08-12-1998 09:50:00	2	Draping
St. Thomas II in 1000 ml Ringer KJ	08-12-1998 10:13:06	1000	Leftover HLM
St. Thomas II in 1000 ml Ringer KJ	08-12-1998 10:16:54	200	Sponges
St. Thomas II in 1000 ml Ringer KJ	08-12-1998 10:45:00	400	Suction floor
Ringer lactate	08-12-1998 11:15:09	500	
Protamin sulphate (10 mg/ml)	08-12-1998 11:35:48	25	

NOTE: Sum and balance are updated after data have been saved!

Sum: 2123.5
Balance (input - output): 511.5

Exit Cancel

Input fluid name - list of values available
Record: 1/3 List of Values

Iris Server - [Treatments]

Action Edit Block Field Record Query Window Help

Medico-teknisk afdeling
NT / 1.2.3e

Cardio Pulmonary Bypass perfusion

Patients

CPR number:

- 0809301168
- 0904230839
- 2704270103
- 0111250057
- 0809321045
- 1510390020

Patient details

Last name: [redacted]
First name: [redacted]
Hospital: Skejby Sygehus
Deceased date: [redacted] (DD-MM-YYYY)

Pretreatments

Date:	Height [cm]:	Weight [kg]:	EVF [l/100]:
07-12-1998	172	74	

Anamnesis ...
Diagnosis classifications ...

Treatments

Treatment:

- 15170

Treatment classifications ...
Post treatment course ...

Procedures

Procedure:	Procedure type:	Start date/time:
15170	CPB	07-12-1998 14:50:28

Edit procedures ...

Exit Cancel

Patients CPR number
Record: 2/7



IRIS-serveren (Daglig rapportering)



PERFUSION REPORT

Aarhus University Hospital
SKEJBY SYGEHUS
Perfusion
Department of Thoracic
and Cardiovascular Surgery

Report date: 21-05-2002 11:33
Procedure: 18361 17-05-2002

Page 3 of 4



Adobe Acrobat
Document

Other data:

Name	Type	Min time	Max time	Num	Min	Max	Mean	Unit
BF	Arterial	17-05 13:32:31	17-05 15:23:52	58	0.00			
POP		17-05 13:32:31	17-05 15:23:52	249	20.00	31		
VT		17-05 13:32:31	17-05 15:23:52	93	28.50			
WT		17-05 13:32:31	17-05 15:23:52	83	35.20			
AT	Arterial	17-05 13:31:18	17-05 15:19:42	142	22.90			
ABE	Arterial	17-05 13:35:05	17-05 15:19:00	100	-23.00			
R+	Arterial	17-05 13:31:00	17-05 15:18:24	97	3.00			
sO2	Venous	17-05 13:30:54	17-05 15:23:17	582	0.62			
HCT	Venous	17-05 13:31:24	17-05 15:23:17	311	19.00			
pO2(37°C)	Arterial	17-05 13:30:54	17-05 15:23:05	739	9.50			
pH(37°C)	Arterial	17-05 13:34:53	17-05 15:22:53	53	6.58			
pCO2(37°C)	Arterial	17-05 13:35:05	17-05 15:20:42	224	1.60			
O2%		17-05 13:32:31	17-05 15:23:52	77	21.00			
Gas flow		17-05 13:34:36	17-05 15:15:50	45	0.90			
MAP		17-05 13:30:43	17-05 15:31:02	402	49.00	11		
CVP		17-05 13:30:43	17-05 15:30:43	231	3.00			
CT		17-05 13:30:43	17-05 15:29:50	36	35.70			
PT		17-05 13:30:43	17-05 15:26:31	27	34.00			

HLM:

8978 Hjertelunge maskine Jostra

Oxygenators:

1 Adult QUADROX HMO 1000

Cannulas and catheters:

1 Aortic cannula 7.0 8802
1 Two-stage venous catheter, 9cm tip 91251C

Core temperature position: Nasopharyngeal

Fluid balance: ([ml])

Input:

Heparin 9.0
Infusion / Crystalloids 2700.0
Protamin 25.0
2734.0

Output:

Blood samples 10.
Leftover HLM 1000.
1010.

Gain (input-output): 1724

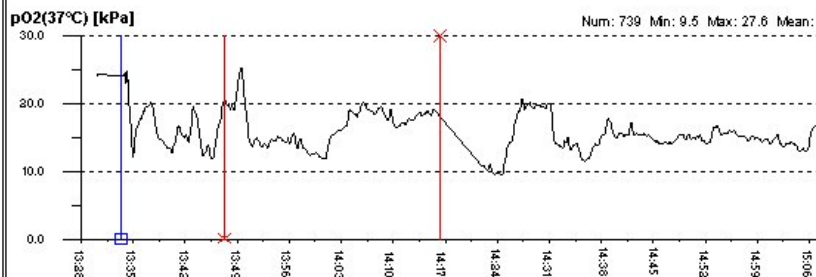
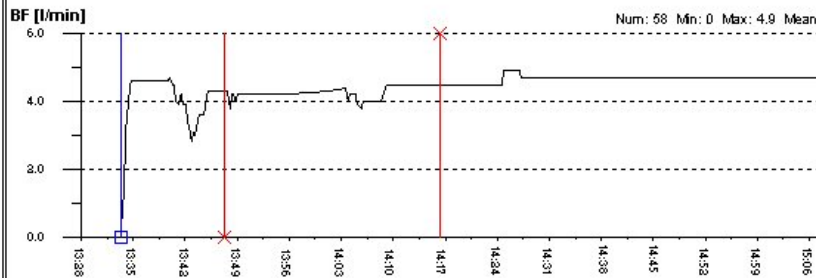
Staff:

Anaesthesiologists: BHN (1),
Perfusionists: ER (1),
Surgeons: MJ (1),

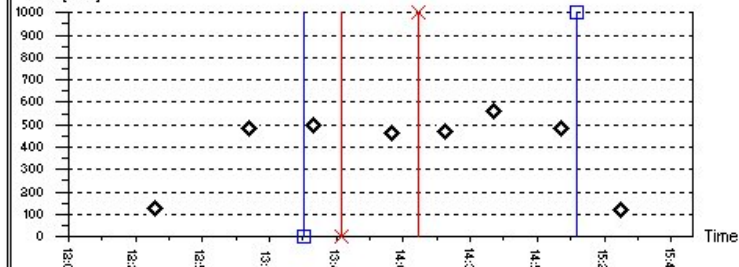
Coagulation course:

Heparin / Protamin:

17-05 12:00	1.0[ml]	5000[IU]	Heparin (5000 IU/ml)
17-05 13:05	5.0[ml]	25000[IU]	Heparin (5000 IU/ml)
17-05 13:24	1.0[ml]	5000[IU]	Heparin (5000 IU/ml)
17-05 14:16	1.0[ml]	5000[IU]	Heparin (5000 IU/ml)
17-05 14:37	1.0[ml]	5000[IU]	Heparin (5000 IU/ml)
17-05 15:22	25.0[ml]	250[mg]	Protamin sulphate (10 mg/ml)



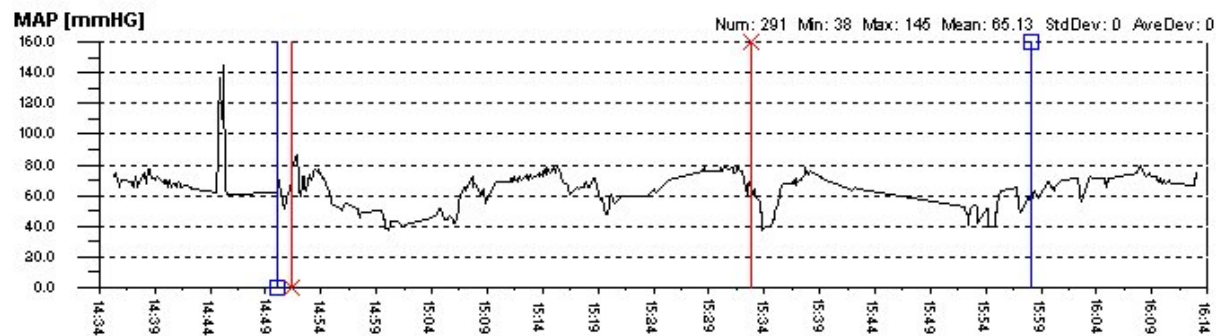
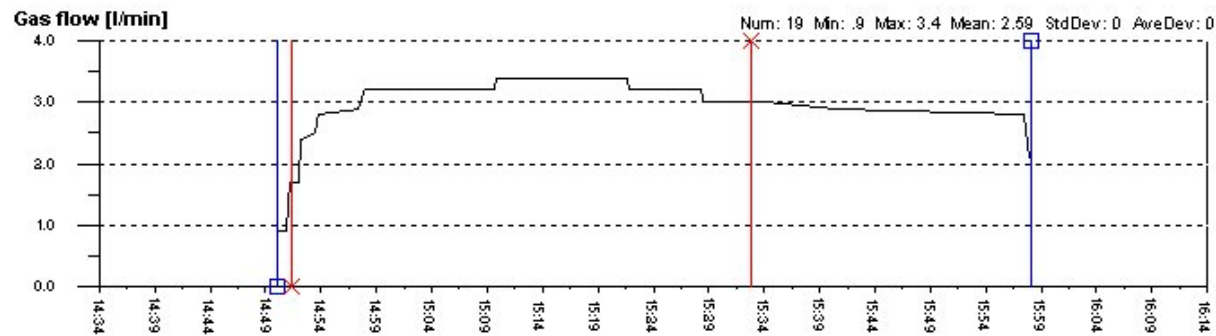
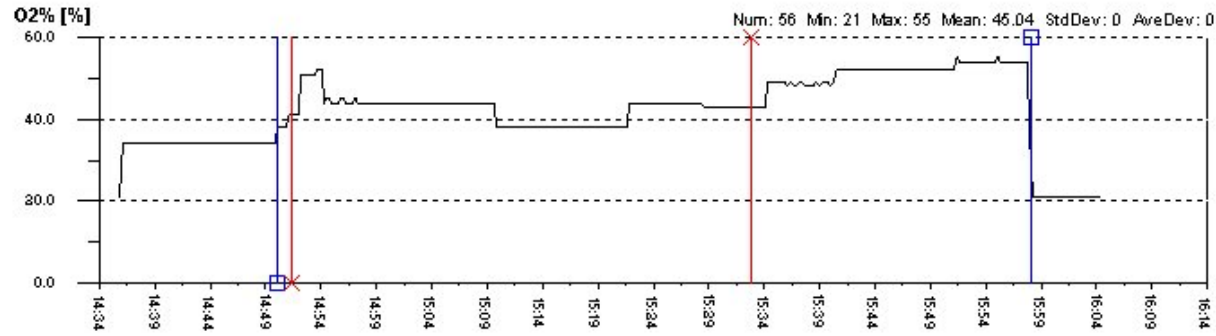
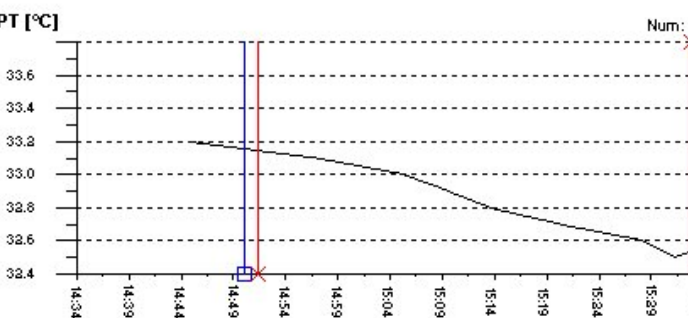
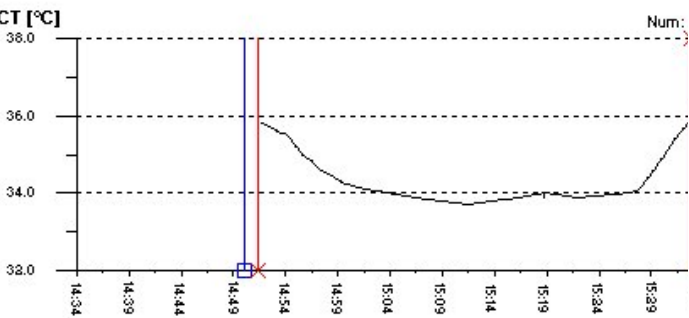
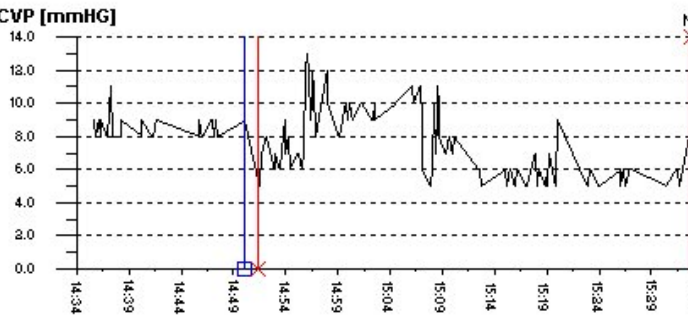
ACT [sec]



MAP [mmHG]

Num: 402 Min: 49 Max: 168 Mean: 168

IRIS-serveren (Daglig rapportering)



Andre udtræksmuligheder fra databasen

- WWW browser
 - MS Internet Explorer
 - Netscape Communicator
- MS Excel
- Oracle Discoverer

The screenshot displays the Oracle Discoverer interface. The main window shows a table with columns for years (1961-1996) and two categories: 'Cross clamp' and 'HLM arterial pump'. The values for 'Cross clamp' range from 9.5 to 53.2, and for 'HLM arterial pump' from 76.7 to 50.8. A bar chart titled 'Timers.dis - Timers Cross' is overlaid on the table, showing the values for 'Cross clamp' as blue bars and 'HLM arterial pump' as green bars. The Y-axis of the chart ranges from 0.00 to 127.82. The chart shows a general upward trend for both categories over the period shown.

Year	Cross clamp	HLM arterial pump
1961	9.5	76.7
1962	22.5	90.8
1963	29.4	85.9
1964	46.3	
1966	73.0	
1973		
1974	30.0	
1975	39.0	
1976	66.0	
1977	66.6	
1978	77.0	
1979	82.1	
1980	85.9	
1981	93.9	
1982	85.3	
1983	83.6	
1984	78.1	
1985	64.3	
1986	65.0	
1987	62.7	
1988	62.7	
1989	61.7	
1990	57.5	
1991	52.6	
1992	53.5	
1993	55.3	
1994	51.0	
1995	50.8	
1996	53.2	



Select Items | Crosstab Layout | Conditions | Calculations

To add items to your worksheet, select them from the Available list and move them to the Selected list.

Available

- Inis CPB Procedures @ Skejby Hospital
 - Timer periods
 - Start time
 - Stop time
 - Time length [minutes]
 - Timer types
 - Timer name
 - Procedures
 - Procedure ID
 - Treatment ID
 - Start time
 - Start time [month]
 - Start time [year]
 - Stop time
 - Comments
 - Adult procedure
 - Pretreatments
 - Treatments
 - Posttreatment courses
 - Hospitals

Selected

- Timer periods
 - Time length [minutes]
 - AVG
- Timer types
 - Timer name
- Procedures
 - Start time [year]

Options... | OK | Cancel | Help

