



Visual Health Record

Soren Lippert

22 years in Health Care +
19 years in Health Informatics

e-mail: soli@itu.dk

&

Soren Lauesen

20 years in the IT-industry
+ 32 years as professor

e-mail: slauesen@itu.dk

www.itu.dk/people/slauesen

IT University of Copenhagen

Software Engineering

HCI, IT and business,

Media, Games . . .

VHR

Visual Health Record

PATIENT SEARCH

New Patient

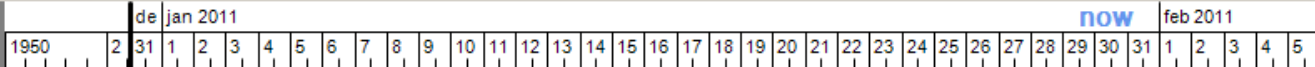
Medicine Intakes

Patient List

Patient
RecordClinical
Observation

Patient List		Patient Record	Clinical Observation
John Simpson	010270-0115		
Lis Hansen	010350-0276		
Ole Brondum	150845-0023		
Niels Biehe	300302-5217		
Yun Chen	010230-2045		
Andrew Bunting	031045-3157		
R. A. Haynes	310132-2193		
Ahmet Issom	220637-3351		
Ann Le	241272-4622		
Rom Lacey	151055-0477		
Jean Leon	170267-2588		
Ame Liki	080558-3749		
Sean Lochrie	101039-2571		
Lars Lu	041159-2945		
Jens McBride	130468-3455		
Ida McDonald	010181-5620		
Steve McKay	280873-4599		
Terje McMahan	090275-2187		
Arnold Mahajan	120981-4923		
Anne Manix	190759-3142		
Leo Marshall	291062-5381		
Frode Mati	101269-2055		
Tove Meehan	000000-0000		
Frede Memills			
G. Mill			

Timescale
 1yr-1mo 1mo-1wk 1wk-2d

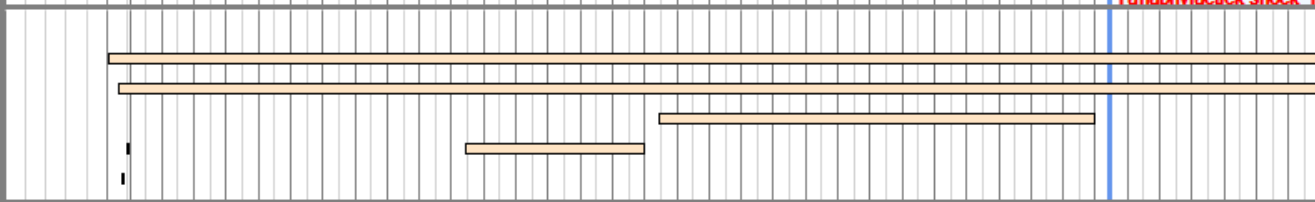


Notes All Notes
 MD
 RN

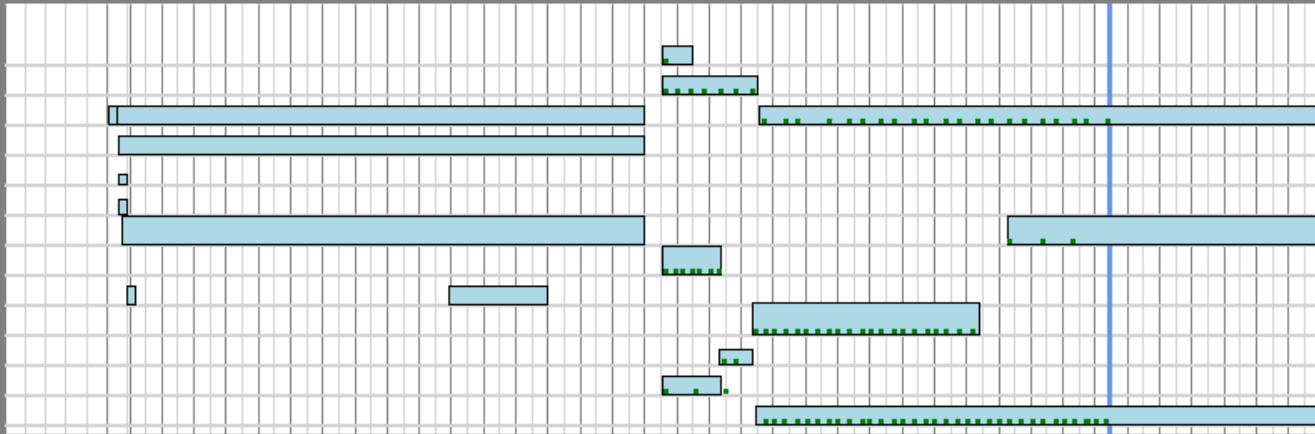


CAVE
CAVE
CAVE Phleum
 pratense:
anaphylactick shock

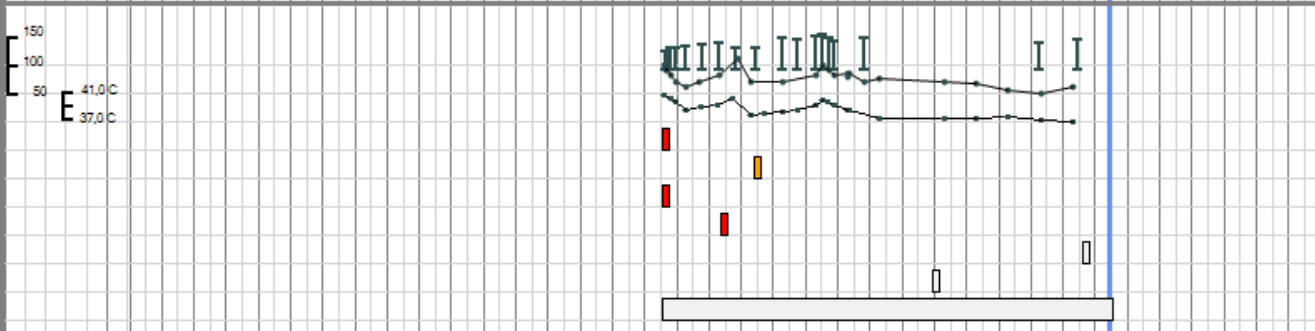
Diagnoses
 Type 2-diabetes UNS
 Blodtryksforhøjelse af ukendt årsag
 Akut pyelonefritis
 Urinvejsinfektion uden angivelse af
 Lægemiddelbivirkning UNS



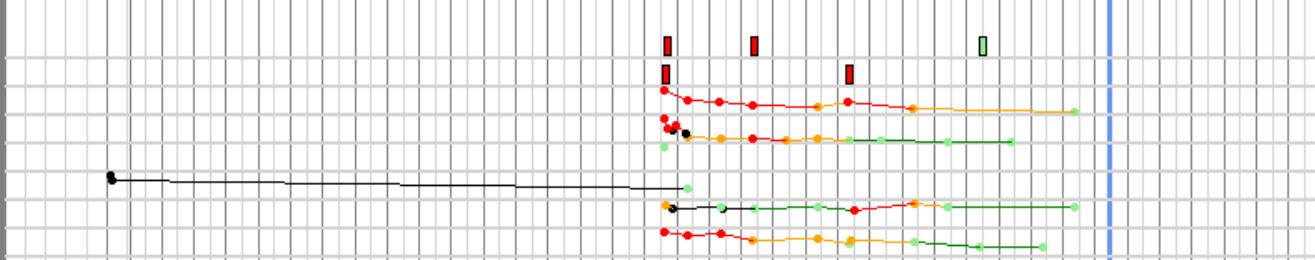
Medications
 Actrapid
 Humulin NPH
 Metformin "Aurobindo"
 Centyl med Kaliumklorid
 Centyl Mite med Kaliumklorid
 Amlodipin "1A Farma"
 Enahexal comp 20 mg/6 mg
 Ampicillin "PCD"
 Selexid
 Therios
 Cefuroxim "Fresenius Kabi"
 Gentamicin "B. Braun"
 Brufen

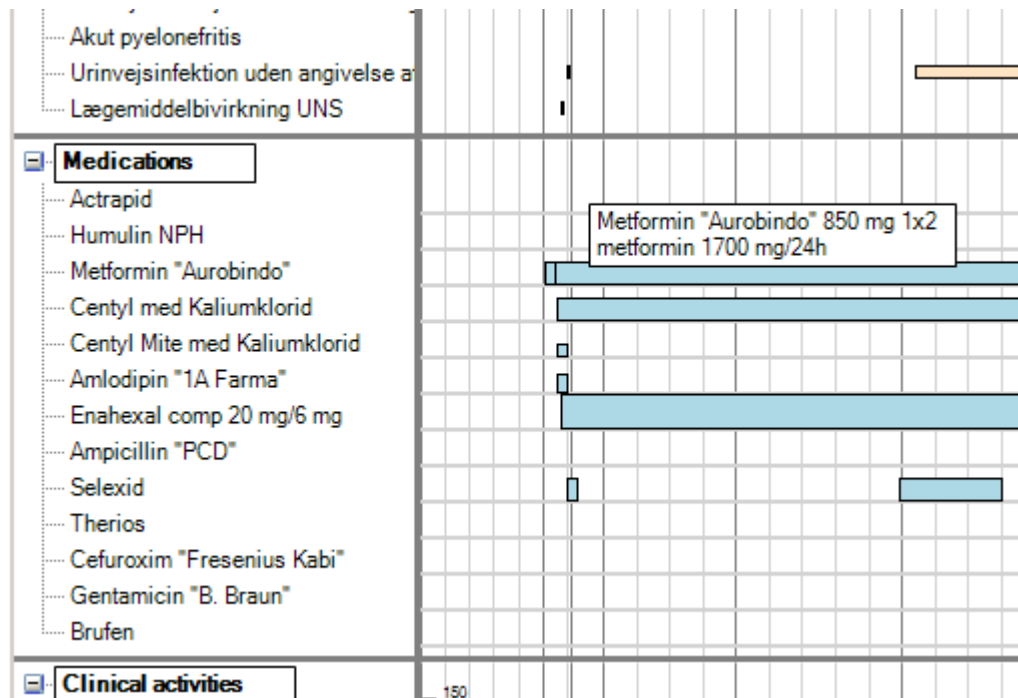


Clinical activities
 Blodtryksmåling
 Måling af puls
 Temperaturmåling med rektalføler
 Anamneseoptagelse
 Stetoskopi af lunger
 Klinisk undersøgelse
 Røntgenundersøgelse af thorax
 Fleksibel bronkoskopi med biopsi a
 Administration ved forsendelse, ark
 Indlæggelse

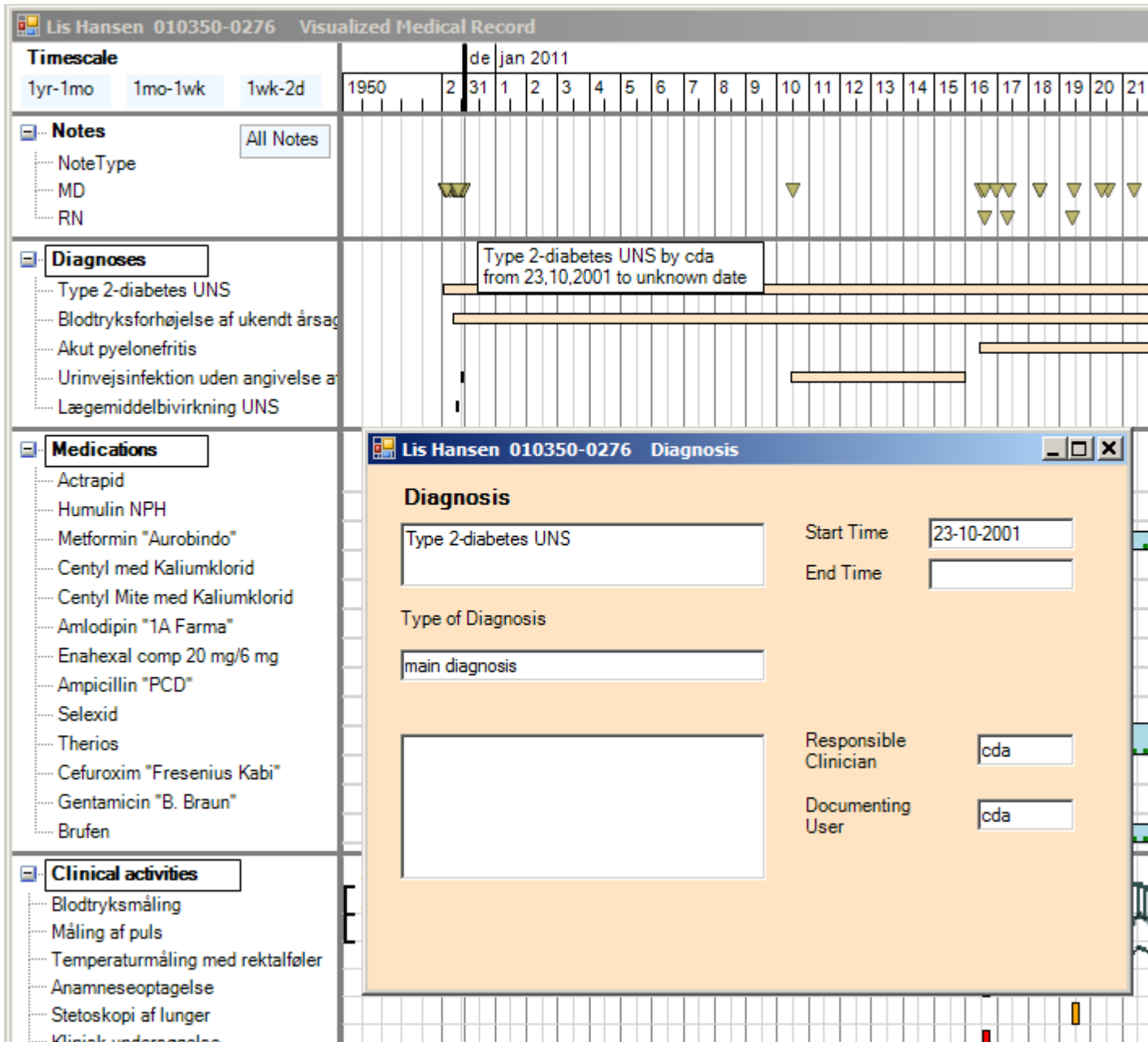


Lab tests
 Bacterium; U
 Bacterium; B
 C-reaktivt protein [CRP]; P
 Glukose; P
 Hæmoglobin; B
 Hæmoglobin A1c; Hb
 Kreatinin; P
 Leukocytter; B





Lis Hansen 010350-0276 Notes	
16 jan 2011 23:30	olpe / lisk
Feeling better, TP 40,0 C	
17 jan 2011 09:30	pehu / lisk
TP decreasing, urine slighly clouded	
18 jan 2011 09:00	olpe / lisk
Urine culture: Staph. aureus. Change Ampii to Cefuroxim	
18 jan 2011 09:30	pehu / lisk
Chest x-ray shows opacity left inf. lobe. Dullness left lower lung field. If progress continues oral AB in 5 days, new chest image in 10 days.	
19 jan 2011 11:15	olpe / lisk
NSAID for hip arthrosis. Increase metformin	
20 jan 2011 08:30	olpe / lisk
Tp slightly up, check at midday. Systolic pressure high, will need antihypertensive before discharge.	
20 jan 2011 13:15	pehu / pehu
Lung stethoscopy & chest x-ray: left pneumonia; re-UVI also possible. Conf. with microbiologist: repeat cefuroxime. Late temp-check.	
21 jan 2011 09:10	pehu / lisk
Temp. coming down; BP Unacceptably high. Start ACE-inhibitor again.	
22 jan 2011 08:45	olpe / lisk
Temp. and BP better	
25 jan 2011 09:20	olpe / olpe
Daily temp shows subfebrilia, continue AB.	



Medications

- Actrapid
- Humulin NPH
- Metformin "Aurobindo"
- Centyl med Kaliumklorid
- Centyl Mite med Kaliumklorid
- Amlodipin "1A Farma"
- Enahexal comp 20 mg/6 mg
- Ampicillin "PCD"
- Selexid
- Therios
- Cefuroxim "Fresenius Kabi"
- Gentamicin "B. Braun"
- Brufen

Clinical activities

- Blodtryksmåling
- Måling af puls
- Temperaturmåling med rektalføler
- Anamneseoptagelse
- Stetoskopi af lunger
- Klinisk undersøgelse
- Røntgenundersøgelse af thorax
- Fleksibel bronkoskopi med biopsi a
- Administration ved forsendelse, ark
- Indlæggelse

Lab tests

- Bacterium; U
- Bacterium; B
- C-reaktivt protein [CRP]; P

Lis Hansen 010350-0276 Medication Order

CAVE Acetosalicylic acid: Gastritis
CAVE Ketorolactrometamol: coagulopathy suppurativa
CAVE Phleum pratense: anaphylactick shock

Medication Order 30-01-2011 11:15

x / 24h

Start Time

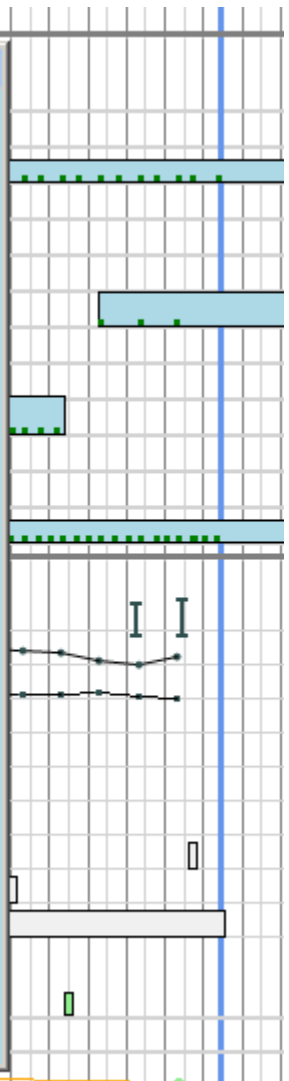
Duration days

End Time

Order Time

Responsible Clinician

Documenting User



Brufen

Clinical activities

Blodtryksmåling

Måling af puls

Temperaturmåling med rektalføler

Anamneseoptagelse

Stetoskopi af lunger

Klinisk undersøgelse

Røntgenundersøgelse af thorax

Fleksibel bronkoskopi med biopsi a

Administration ved forsendelse, ark

Indlæggelse

Lab tests

Bacterium; U

Bacterium; B

C-reaktivt protein [CRP]; P

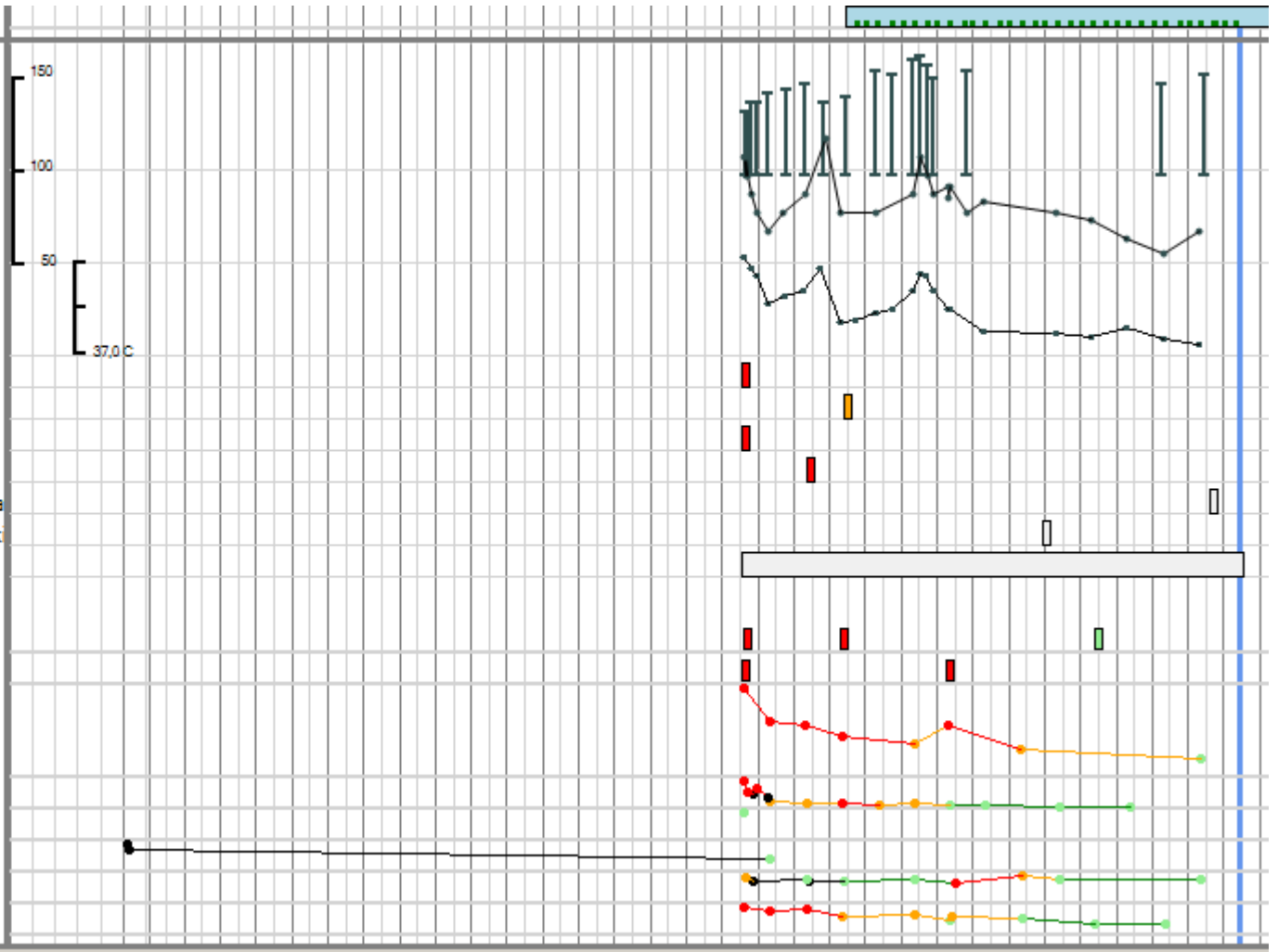
Glukose; P

Hæmoglobin; B

Hæmoglobin A1c; Hb

Kreatinin; P

Leukocytter; B



Activity

Clinical Activity Laboratory Test Custom Activity

Order Time Urgency
Start Time Duration
End Time
Status changed
Indication
Parent Activity
Logistics

Clinical Evaluation of Result signed

- Abnormal
- Uncertain
- Normal

Result Result2 Result3:
Reference limits

Result Text

Add Note

Clinical Activities

Alphabetic Search, % is Wildcard

Administrative forhold	A 7, 1272
Behandlings- og plejeklassifikation	B 8, 4290
Skadeårsager etc	E 7, 3195
Operationer	K 7, 9861
Anæstesi	N 6, 92
Undersøgelser	U 7, 502
Undersøgelser 2	W 8, 423
Andre procedurer & resultater	Z 8, 1074

Responsible Clinician
Participating 1
Participating 2
Documenting User
Refresh Close Save



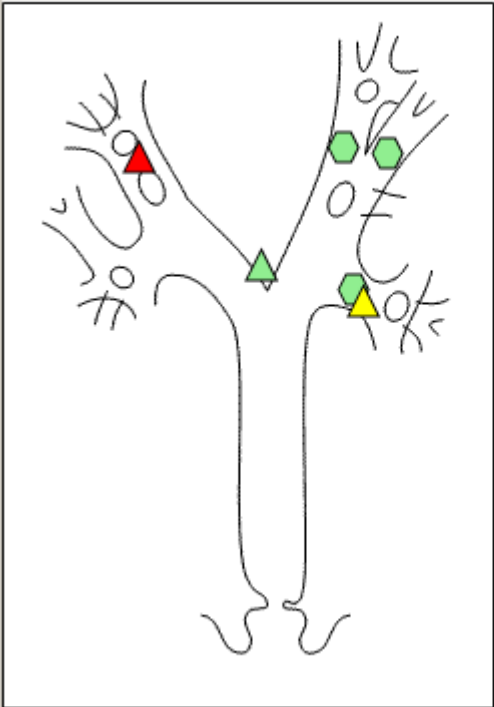
Lis Hansen 010350-0276 18.01.2011 10:32

Image description:

Røntgenundersøgelse af thorax 18-01-2011 10:17:00
Plain chest x-ray shows infiltration/atelectasis of left lower lobe, Possible pelural exsudate.

signed

- Abnormal
- Uncertain
- Normal



Sample date:

Sample number

Remark

- △ Biopsy or puncture
- ⬡ Brush or lavage
- No result
- Benign
- Indeterminate
- Malignant
- Negative Culture
- Positive Culture

Sa

File View

Refresh All Requery All Auto Refresh: Interaction: Design with ctrl+

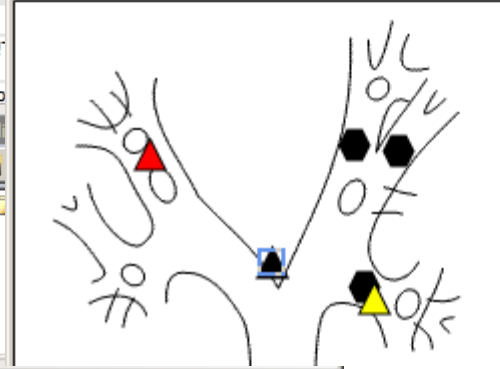
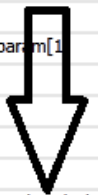
Simulated Time: 30-01-2011 11:15:00 Day increment: 0

Limited Rows: 200 Simulated Update: Auto Help: Double Buffer Paint:

sample[1]

Bronchia sample

Property	Formula	Value
Common		
Name	sample	
Type	Glyph	
Rows	PtActivity Where parentPtActiID = param[1]	6 rows: SELECT
Top	init me.result3+icon1!top-7	125
Height	14	14
Left	init me.result2+icon1.left-7	122
Width	14	14
BackColor	Choose(result1+1, Color.LightGray, Color.Black, Color.Yellow, Color.Red, Color.Aqua, Color.BlueViolet)	Color [Black]
BorderColor	Color.Black	Color [Black]
BorderWeight	2 ' Choose(ant_post, 4, 2, 1)	2
ZOrder	Init 5	5
Movable	true	True
Special		
Shape	a_codeSKSacti = "ZZ4170" ? 6 : 3 ' Choose(kind, 3, 6, 2)	3
Designer		
DesignProp	result2	
Event		
Click	marker.Selected = index; RefreshForm(Me); SetFocus(me)	
Moved	me.result2=Left+Width/2-icon1!left; me.result3=Top+Height/2-icon1!top; RefreshForm(Me)	
KeyDown	if (key=keys.delete) { DeleteRow(Me); marker!Selected=-1; RefreshForm(Me)}	



Sample date:

Sample number:

Remark:

Biopsy or puncture

Brush or lavage

Error List

Appl

Datamap

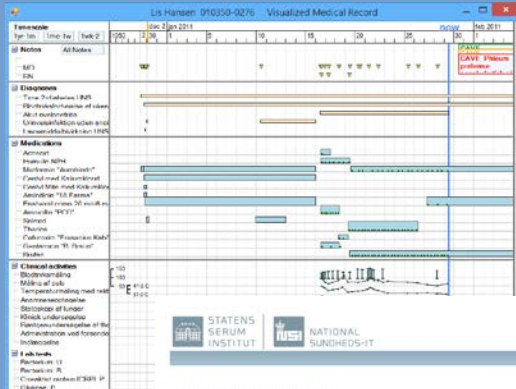
CritMedInfo

Toolbox

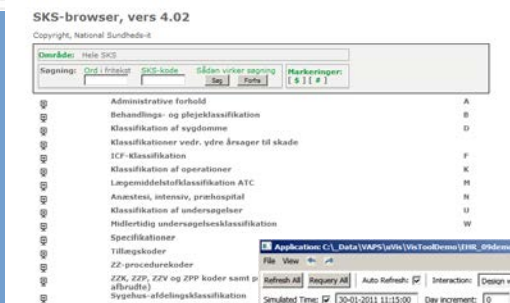
- Box
- Canvas
- cButton
- cLabel
- Glyph

Three benefits of VHR:

All data on one screen image and on one common time line



Any official classification can structure data



Screen images are changed locally

