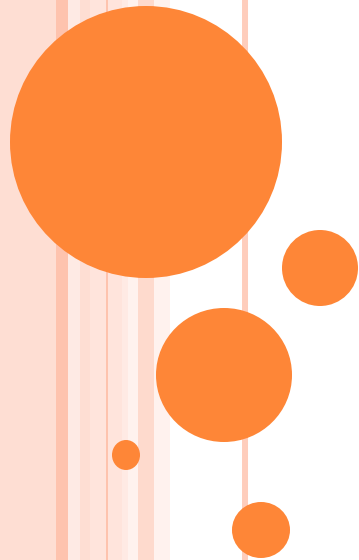


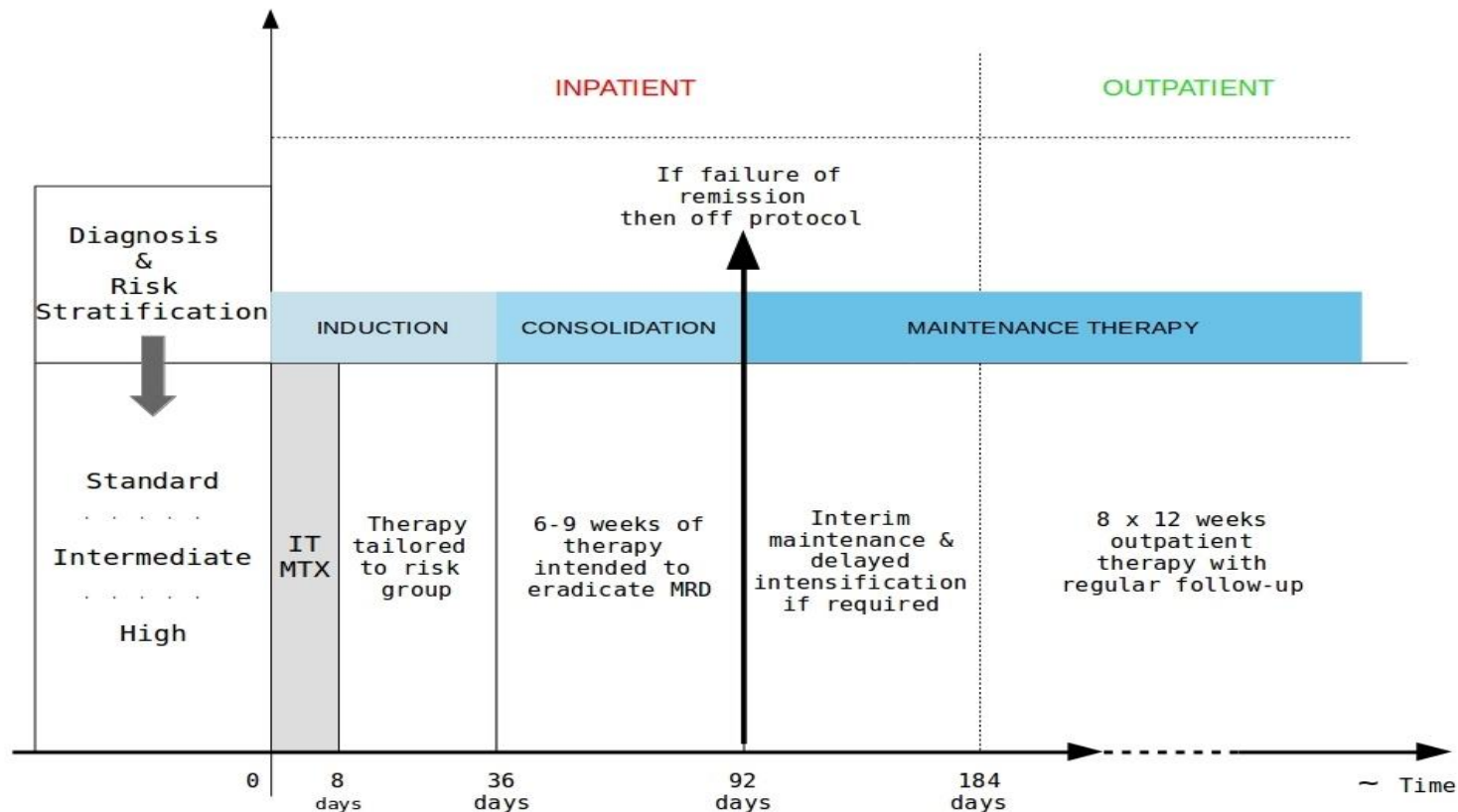
DECISION SUPPORT SYSTEM FOR SUPERVISION OF MAINTENANCE THERAPY



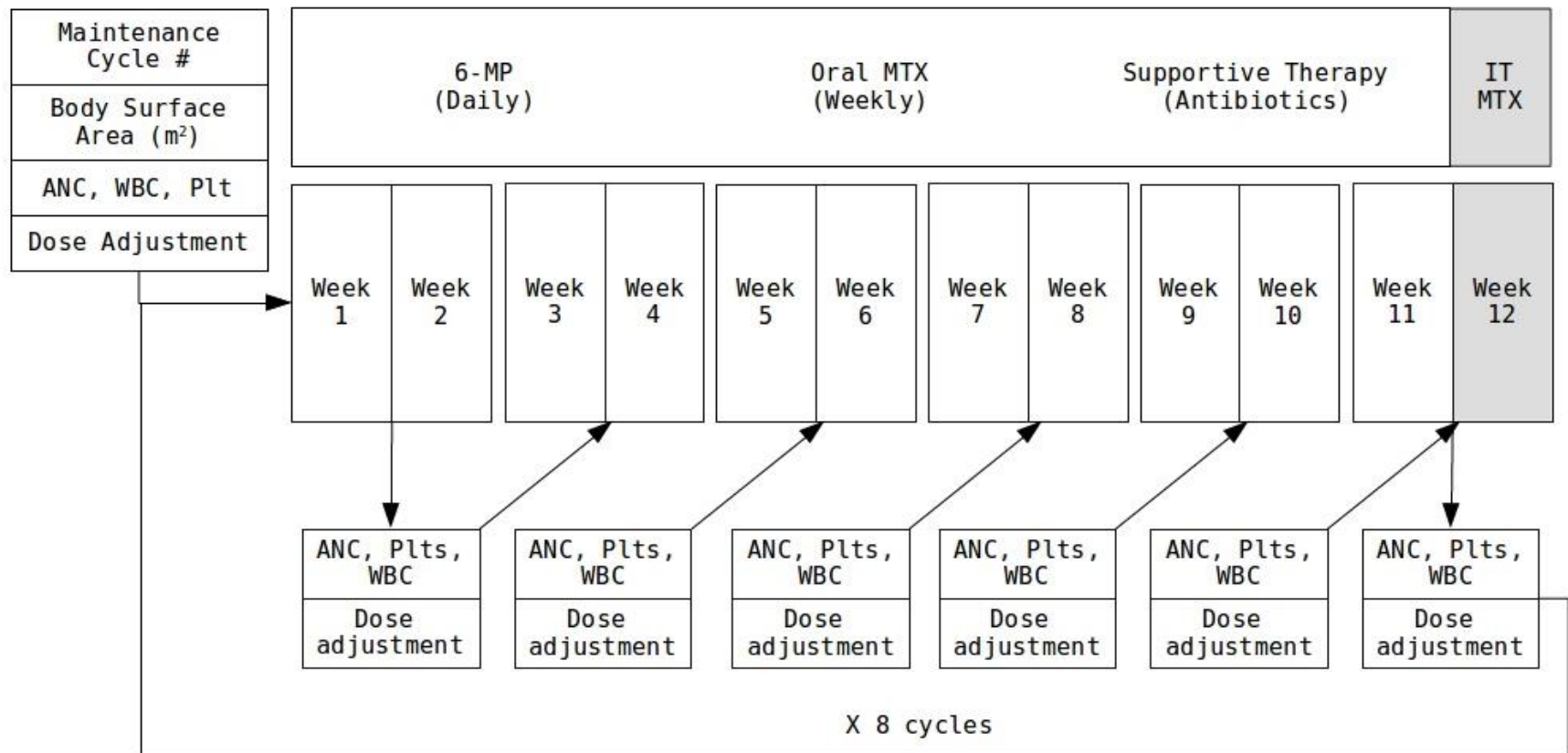
Tushar Mungle
Prof. Sangeeta Das Bhattacharya
Prof. Jayanta Mukhopadhyay
Dr. Shekhar Krishnan

ALL TREATMENT

- The standard treatment protocol for children diagnosed with ALL include *induction*, *consolidation* and *maintenance therapy*



MAINTENANCE THERAPY



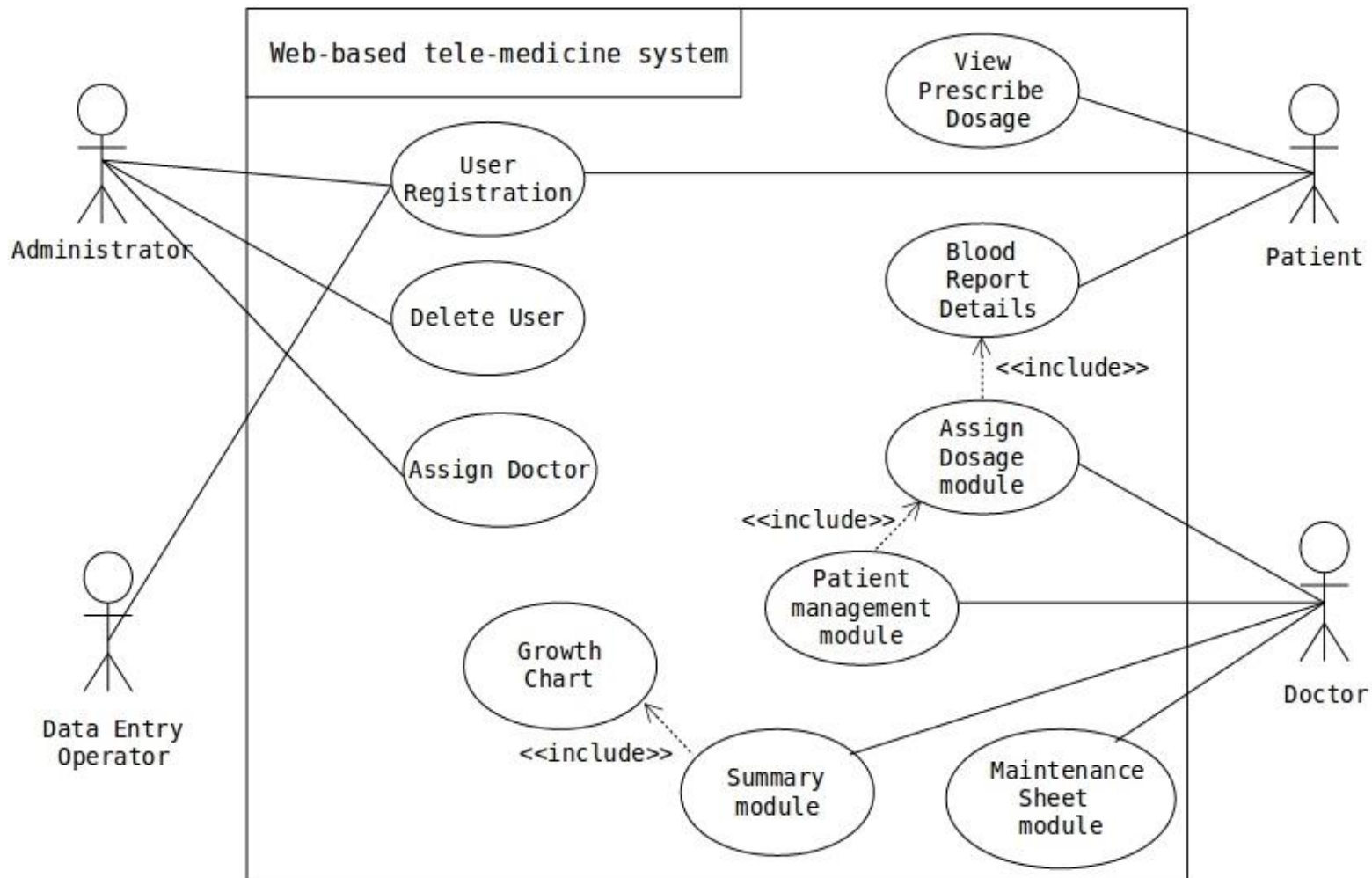
CHALLENGES

- Regular check-up procedures during rigorous follow up treatment in ALL cancer patients overburdens the specialists.
- Children and their families have to travel frequently from remote locations which adds to the mental, physical and financial concerns.

SOLUTION

- Clinical Decision Support System which can assist health practitioners to better monitor patients' condition on a regular basis
- Designing a system that allows *effortless* and *safe* communication between parents and physicians.

WEB BASED MEDICAL INFORMATICS SYSTEM – A DECISION SUPPORT SYSTEM



SYSTEM

iMediX x

Not secure | 10.5.25.93:8080/iMediX/index.jsp

Welcome to ALL Maintenance Management Center

Username

password

LOGIN

Not yet registered? [Create an account](#)

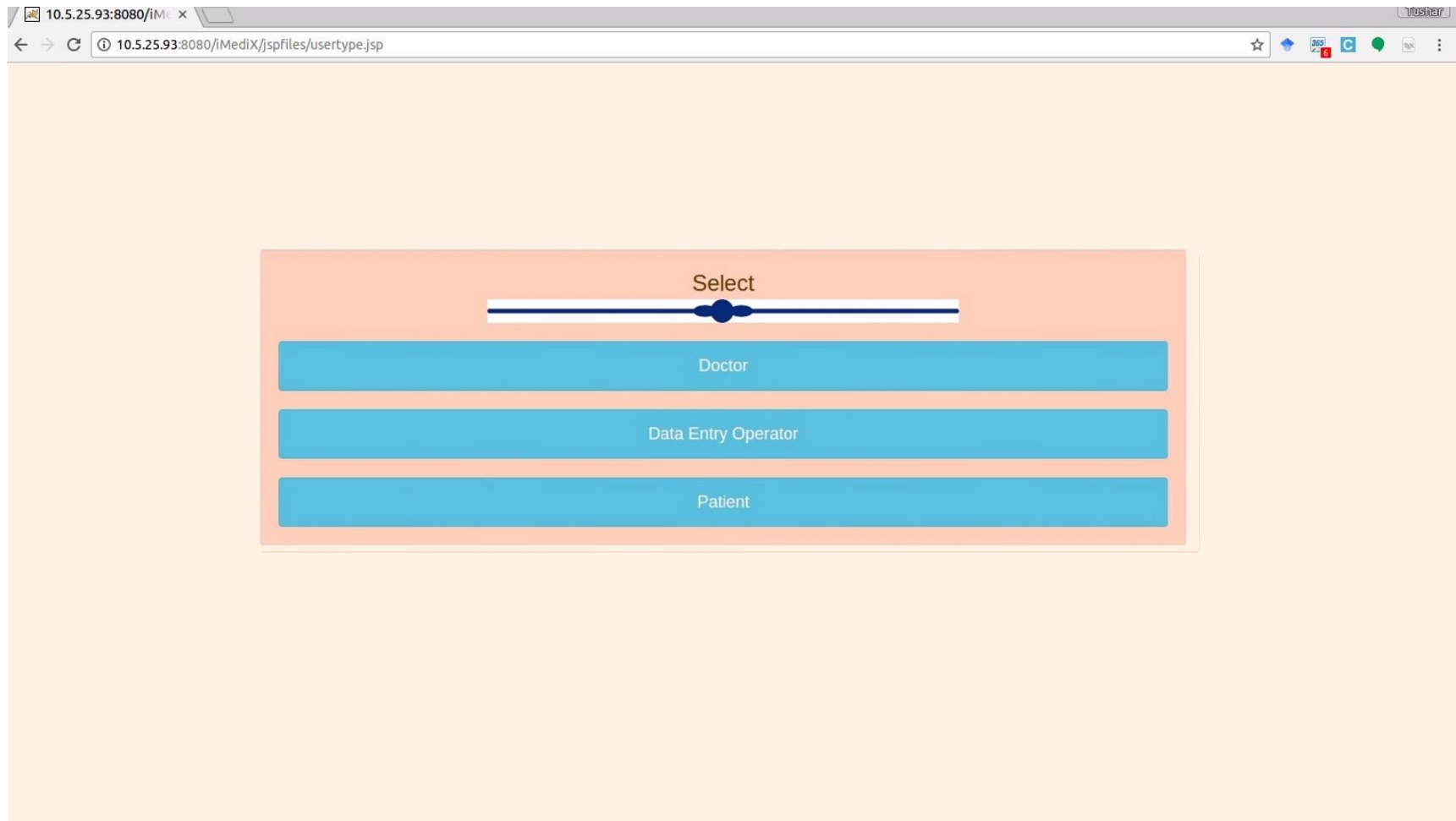
GODADDY VERIFIED & SECURED

Disclaimer: This is a non-commercial website meant only for research purposes and building awareness about telehealth. The site may be withdrawn for technical and/or administrative reasons without prior notice. Maintaining security of patients' identity and sensitive medical data is the user's responsibility. The information and advice published or made available through this web site and iMediX-ALL System is not intended to replace the services of a physician, nor does it constitute a doctor-patient relationship. Information on this web site is not a substitute for professional medical advice. Physicians should apply their own discretion to use the information on this web site for diagnosing or treating a medical or health condition. IIT Kharagpur is not liable for any direct or indirect claim, loss or damage resulting from use of this web site and/or any web site(s) linked to/from it.

A Linux Based Open Source Multi-Tier Secure Telemedicine System to provide internet based management support to hospitals/doctor

Developed and designed at Computer Science & Engineering Department + School of Medical Science & Technology, IIT Kharagpur
Contact: Prof. Jayanta Mukhopadhyay, jay@cse.iitkgp.ernet.in, Phone: +91-3222-283484

SYSTEM



The screenshot shows a web browser window with the address bar displaying "10.5.25.93:8080/iMediX/jspsfiles/usertype.jsp". The page content features a light orange background with a central white box. Inside this box, there is a "Select" label above a horizontal slider control. Below the slider are three blue rectangular buttons stacked vertically, labeled "Doctor", "Data Entry Operator", and "Patient".

SYSTEM

10.5.25.93:8080/iMediX

10.5.25.93:8080/iMediX/jspfiles/savemed_1.jsp?username=testpat10&pre=Mr&pat_name=testpat10&m_name=&l_name=patient&religion=Not+Known&m_status=ntst&sex=M&dateofbirth

10.5.25.93:8080 says:
Successfully registeredTMCK0709170000

CancelOK

Mrtestpat10

Middle Name

patient

Not Known

Not Stated

Male

American Indian/Eskimo/Aleut

Patient's Details

Address of Patient

Police Station

1223344

City

District

Madhya Pradesh

India

12444

Contact Person Details

Name

Relation with Patient

Address

*(star) mark is mandatory field.

uZVwL

uZVwL

Submit

Reset

Waiting for 10.5.25.93...

SYSTEM

Not secure | 10.5.25.93:8080/iMediX/index.jsp

Welcome to ALL Maintenance Management Center

testpat10

LOGIN

[Not yet registered? Create an account](#)

GODADDY VERIFIED & SECURED

Disclaimer: This is a non-commercial website meant only for research purposes and building awareness about telehealth. The site may be withdrawn for technical and/or administrative reasons without prior notice. Maintaining security of patients' identity and sensitive medical data is the user's responsibility. The information and advice published or made available through this web site and iMediX-ALL System is not intended to replace the services of a physician, nor does it constitute a doctor-patient relationship. Information on this web site is not a substitute for professional medical advice. Physicians should apply their own discretion to use the information on this web site for diagnosing or treating a medical or health condition. IIT Kharagpur is not liable for any direct or indirect claim, loss or damage resulting from use of this web site and/or any web site(s) linked to/from it.

A Linux Based Open Source Multi-Tier Secure Telemedicine System to provide internet based management support to hospitals/doctor

Developed and designed at Computer Science & Engineering Department + School of Medical Science & Technology, **IIT Kharagpur**
Contact: Prof. Jayanta Mukhopadhyay, jay@cse.iitkgp.ernet.in, Phone: +91-3222-283484

SYSTEM

10.5.25.93:8080/iMediX x

10.5.25.93:8080/iMediX/jspfiles/header2menu.jsp?templateid=3&menuid=head2

testpat10 [] Records Investigations Log Out

Blood Test Details
ALL Maintenance Protocol

Patient Entry Sheet

Maintenance Cycle	1	Week	1
Height	123	Current Count Check Date	01-05-2017
Weight	55		

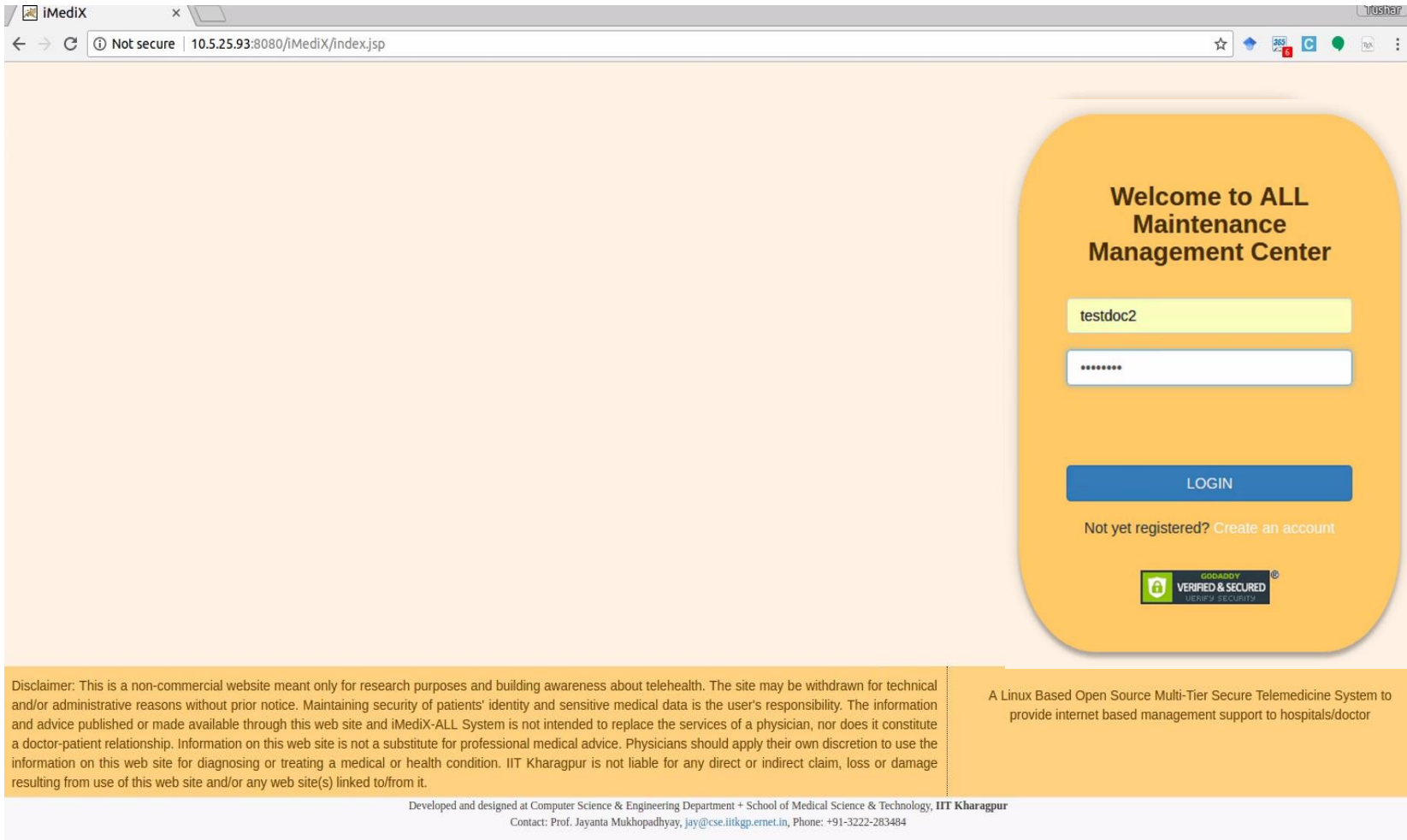
Date of IT Methotrexate

WBC	10000
Neutrophils	23
Platelets	435000

Test date 01-05-2017

Submit

SYSTEM



The screenshot displays a web browser window with the address bar showing "10.5.25.93:8080/iMediX/index.jsp". The page features a large orange rounded rectangle containing the text "Welcome to ALL Maintenance Management Center". Below this, there are two input fields: the first contains "testdoc2" and the second contains masked characters "*****". A blue "LOGIN" button is positioned below the input fields. Underneath the button, it says "Not yet registered? [Create an account](#)". At the bottom of the orange box is a "GODADDY VERIFIED & SECURED" logo. The footer of the page contains a disclaimer and contact information for IIT Kharagpur.

Disclaimer: This is a non-commercial website meant only for research purposes and building awareness about telehealth. The site may be withdrawn for technical and/or administrative reasons without prior notice. Maintaining security of patients' identity and sensitive medical data is the user's responsibility. The information and advice published or made available through this web site and iMediX-ALL System is not intended to replace the services of a physician, nor does it constitute a doctor-patient relationship. Information on this web site is not a substitute for professional medical advice. Physicians should apply their own discretion to use the information on this web site for diagnosing or treating a medical or health condition. IIT Kharagpur is not liable for any direct or indirect claim, loss or damage resulting from use of this web site and/or any web site(s) linked to/from it.

Developed and designed at Computer Science & Engineering Department + School of Medical Science & Technology, IIT Kharagpur
Contact: Prof. Jayanta Mukhopadhyay, jay@cse.iitkgp.ernet.in, Phone: +91-3222-283484

A Linux Based Open Source Multi-Tier Secure Telemedicine System to provide internet based management support to hospitals/doctor

SYSTEM

10.5.25.93:8080/iMedix x Tushar

10.5.25.93:8080/iMedix/jspfiles/headermenu_sk.jsp?templateid=1&menuid=head1#

iMedix-ALL Local Pat Q Patients' Due Edit Profile Log Out

Local Patient Queue (Tata Medical Center, Kolkata)

Number of Patient(s) : 5

Show 5 entries Search:

SNo	PatientID	Summary	Category	EntryDate
3	TMCK0709170000	Summary	General Medical	2017/09/07
2	TMCK0609170000	Summary	General Medical	2017/09/06
5	TMCK1808170000	Summary	General Medical	2017/08/18
4	TMCK1708170000	Summary	General Medical	2017/08/17
1	TMCK0308170000	Summary	General Medical	2017/08/03

Previous 1 Next

Page 1 of 1

Please Note: This drop down fetches 25 records per navigation

10.5.25.93:8080/iMedix/jspfiles/showpatdata.jsp?id=TMCK0709170000&...

SYSTEM

10.5.25.93:8080/iMediX

10.5.25.93:8080/iMediX/jspfiles/header2menu.jsp?templateid=3&menuid=head2

☆ 360 C 100

Mr testpat10 patient [9 Month(s), 6 Day(s)]

SummaryRecordsMaintenance SheetsInvestigationsBack

Form Records

Print this Document

Select for Teleconsultation

ID: TMCK0709170000

All Fields

Patient Entry Sheet

Maintenance Cycle	: 1	Week	: 1
Height	: 123 cm	Current Count Check Date	: 2017-05-01
Weight	: 55 kg		

WBC	: 10000 /cumm
ANC	: 2300 /cumm
Platelets	: 435000 /cumm

Test date: 01-05-2017

Current Maintainance Cycle Table

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9	week 10	week 11	week 12
--	--------	--------	--------	--------	--------	--------	--------	--------	--------	---------	---------	---------

SYSTEM

10.5.25.93:8080/iMediX

Tushar

10.5.25.93:8080/iMediX/jspfiles/header2menu.jsp?templateid=3&menuid=head2

Mr testpat10 patient [9 Month(s), 6 Day(s)]

SummaryRecordsMaintenance SheetsInvestigationsBack

Form Records

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9	week 10	week 11	week 12
Date	2017-05-01											
Neutrophil count	2300											
Platelet Count	435000											
6-Mercaptopurine (60mg/m ²)												
Methotrexate (20mg/m ²)												

Maintainance Week 1

DOSAGE

Suggested Dosage of 6MP for week 1

575 mg/week

Suggested Dosage of MTX for week 1

27.5 mg/week

Next Check Up Date

2017-05-15

WAS THERE ANY TOXICITY ?

Please mention

DO YOU AGREE?

☒ Yes ☐ No

Conditions to consider

Lineage

BCP ALL

Cytogenetics

BCR-ABL

rontline Treatment Protocol

ICiCLe

Prednisolone Response

Poor

MRD

Positive

CNS

Risk Group

SR

Important History

Patient is intolerant to high dose 6 MP

Toxicity History

19

Patient Name: patient1
Date of Birth: 2017-06-01

Weekly Medication Advice Page

Maintainance Cycle	1
Maintainance Week	2
Weight	150.0 kg
Height	54.0 cm
BSA	1.5 m ²

WBC	10000 /cumm
Neutrophil Count	2400 /cumm
Platelets	270000 /cumm

Suggested Dosage of 6 MERCAPTOPURINE(6MP) for week 2 = 650 mg/week

Days	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Dosage(mg)	100	75	100	75	100	100	100
Tablet	● ●	● ◐	● ●	● ◐	● ●	● ●	● ●
Amount	2	1½	2	1½	2	2	2

SYSTEM

Suggested Dosage of METHOTREXATE (MTX) for week 2 = 30.0 mg/week

Days	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Dosage(mg)	0	0	0	30.0	0	0	0
Tablet	0	0	0	●	0	0	0

Check up Dates

Current Visit Date

2017-08-11

Next Visit Date

2017-08-25

Consulting Doctor: Test Doc Two Signature & Date: _____

DEPLOYMENT

- We are planning to deploy the system at Tata Medical Center, Kolkata. (Pilot study)
 - Check the how the decision support system would help doctors and patients in Maintenance therapy

FUTURE WORK

- Deploy the system on internet
- Mobile application
 - To remind the patients of their daily dose intake
 - To monitor the adherence rate for patients' daily dosage
 - To upload the blood report details and get the weekly medication advice from the doctor

Thank You