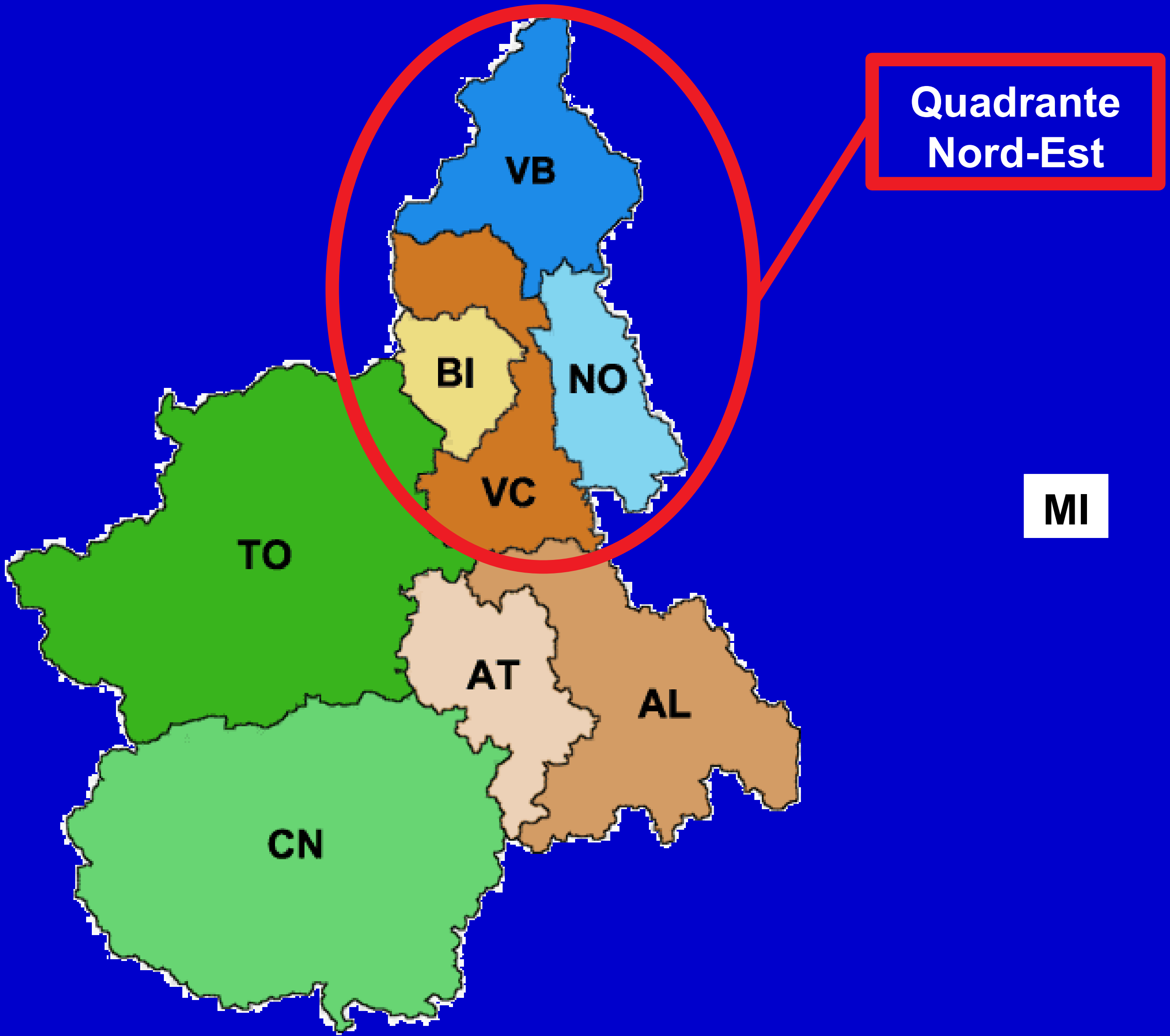
L'ANATOMIA PATOLOGICA DELL'OSPEDALE DI BIELLA

S.C. Anatomia Patologica ASL BI
Nuovo Ospedale degli Infermi
Ponderano (Biella)



Quadrante
Nord-Est
VB
BI
NO
VC
TO
AT
AL
CN
MI

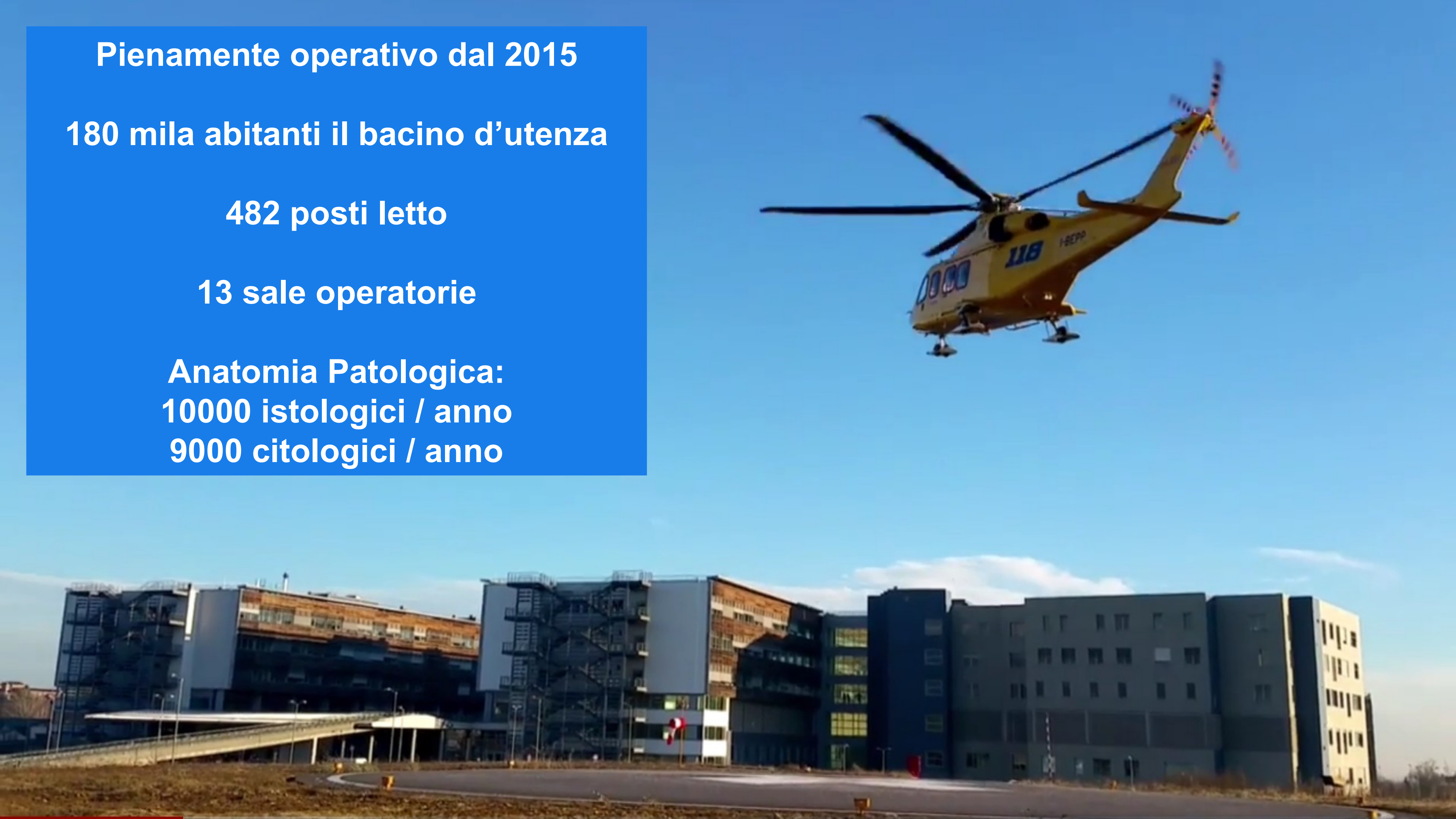
Pienamente operativo dal 2015

180 mila abitanti il bacino d’utenza

482 posti letto

13 sale operatorie

Anatomia Patologica:
10000 istologici / anno
9000 citologici / anno



- Chirurgia Generale
- Chirurgia Vascolare
- Breast Unit
- Gastroenterologia
- Ginecologia e Ostetricia
- Urologia
- Oncologia
- Otorinolaringoiatria
- Radiologia Interventistica
- Dermatologia
- Malattie Infettive
- Medicina Interna
- Ematologia
- Pneumologia
- Ortopedia
- Citometria a Flusso (laboratorio)

L’ANATOMIA PATOLOGICA DELL’OSPEDALE DI BIELLA

S.C. Anatomia Patologica ASL BI

Ubicazione:

-1 Piano Est

Telefono:

015 1515 4001

015 1515 4002

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La Segreteria

S.C. Anatomia Patologica ASL BI

La Sala Riduzione pezzi operatori

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Documentazione digitale dei pezzi operatori

S.C. Anatomia Patologica ASL BI

Documentazione digitale dei pezzi operatori

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Documentazione digitale dei pezzi operatori

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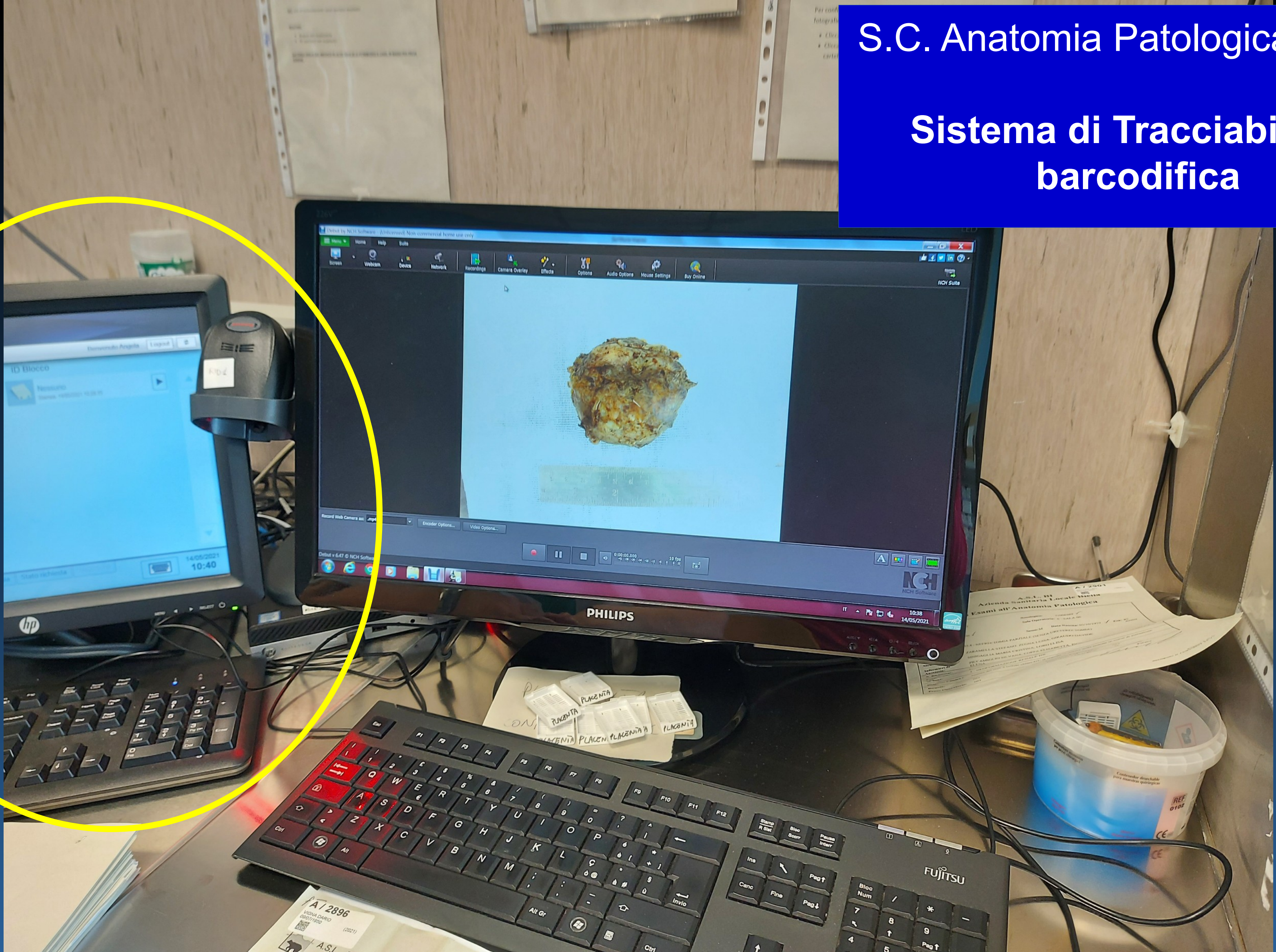
Sistema di Tracciabilità e barcodifica




Help
Suite
Webcam
Device
Network
Recordings
Camera Overlay
Effects
Options
Audio Options
Mouse Settings
Buy Online
.mp4
Encoder Options...
Video Options...
NCH Software
0:00:00.000
19 fps

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Laboratorio di Istotecnica

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Laboratorio di Istotecnica

S.C. Anatomia Patologica ASL BI

Laboratorio di Immunoistochimica

S.C. Anatomia Patologica ASL BI

Laboratorio di Istochimica

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Laboratorio di Citologia

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Una Sala di Refertazione

DIGITAL PATHOLOGY

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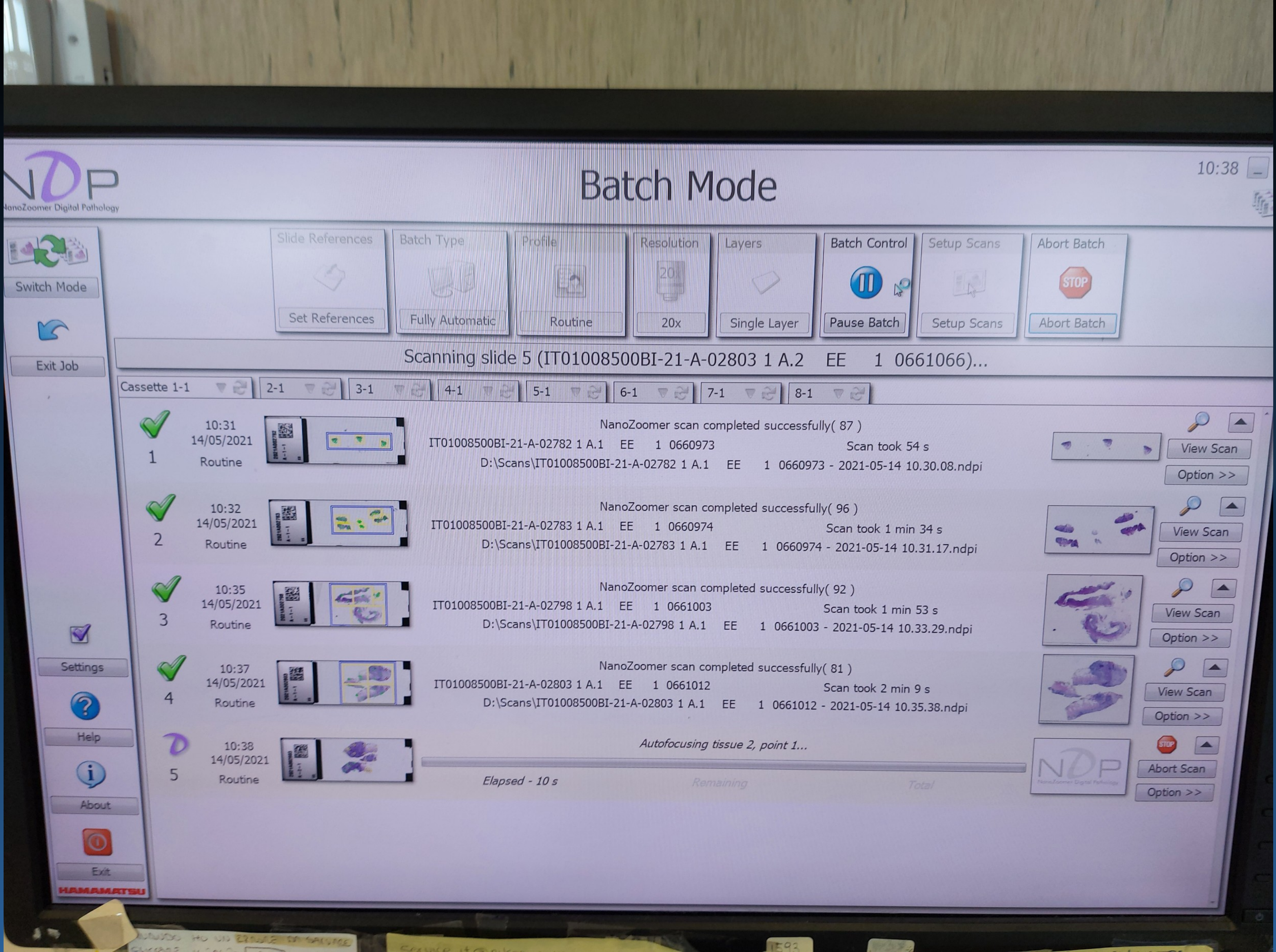
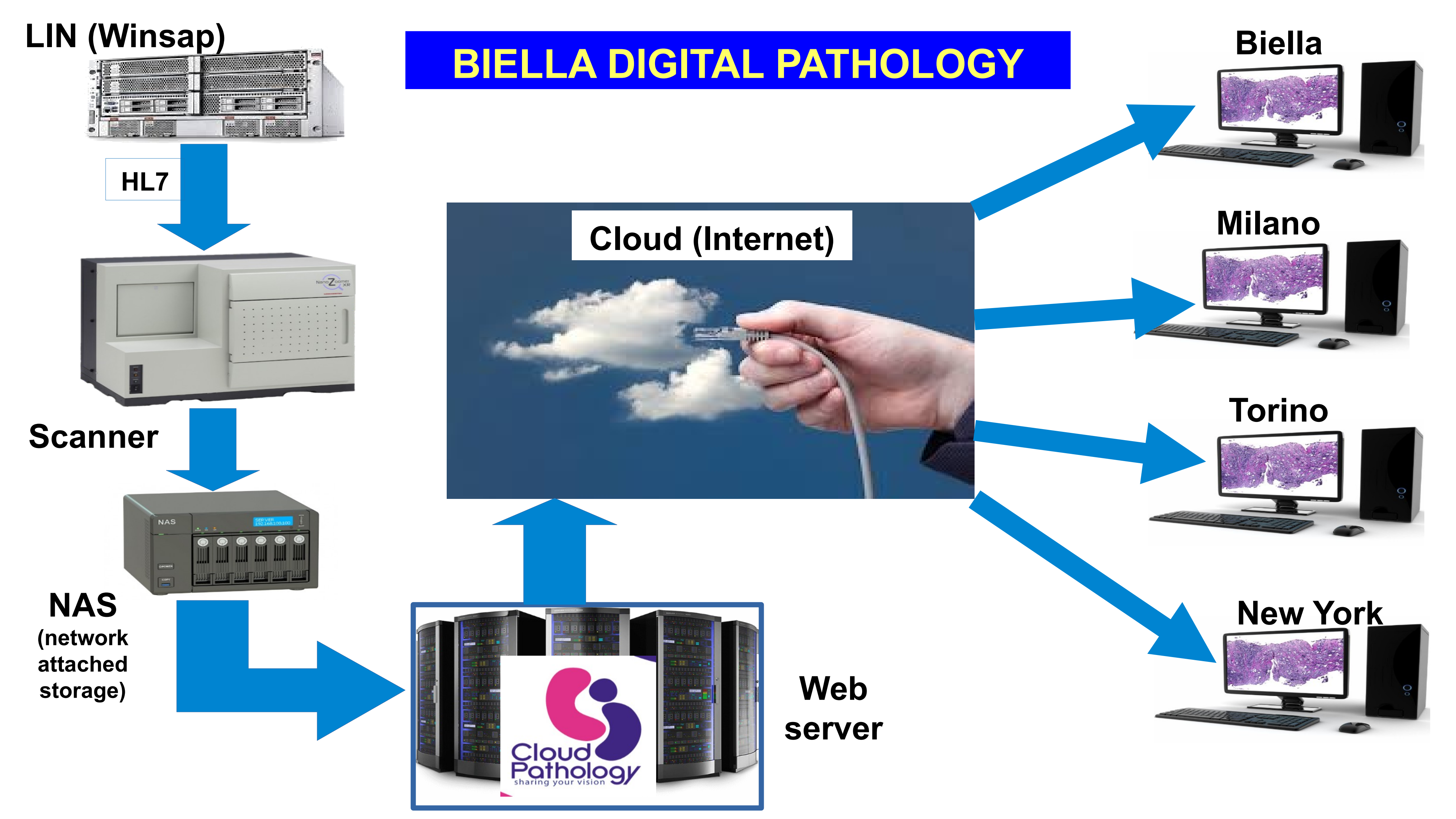
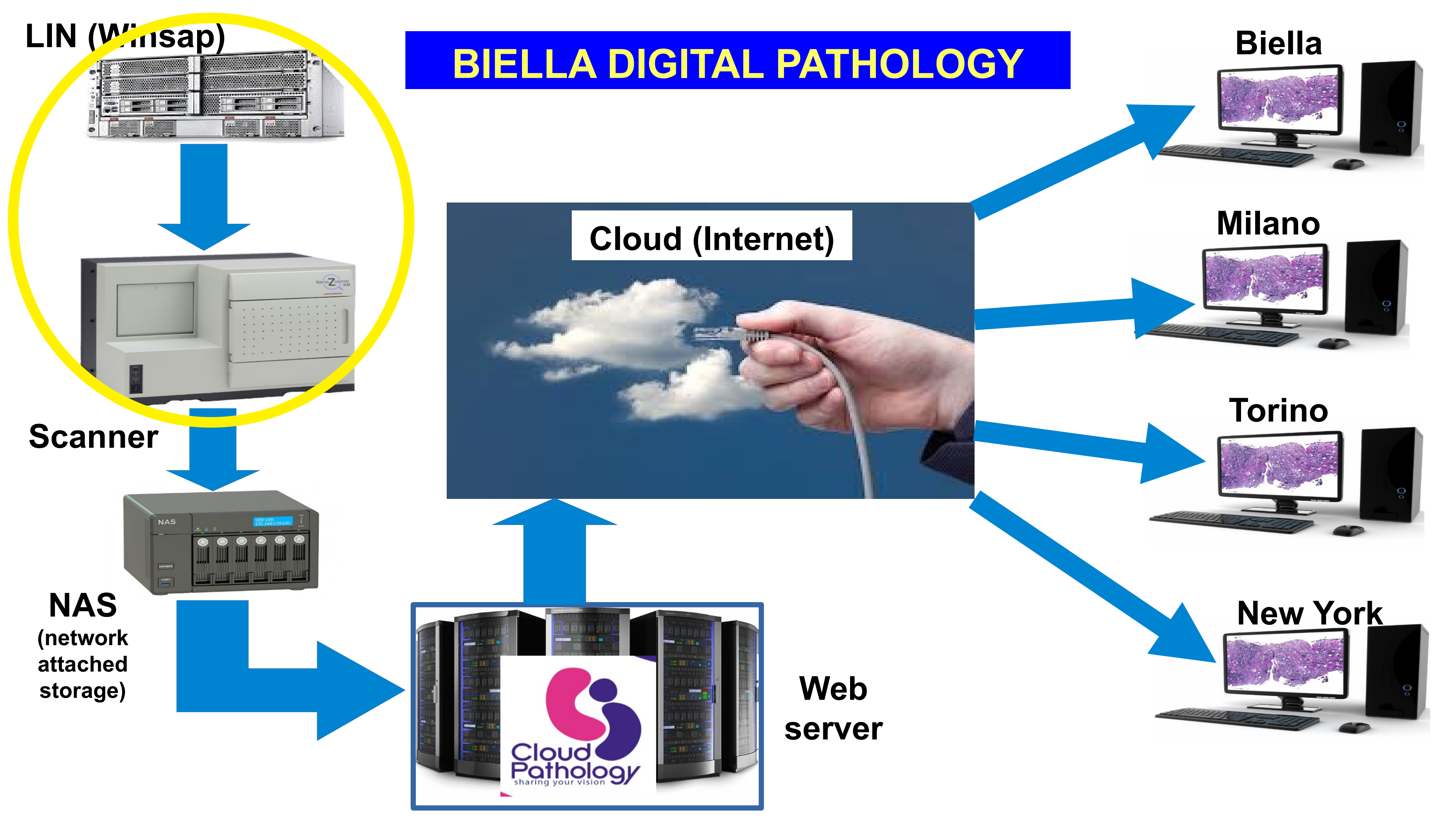
Dispositivo di Scansione


NDP
NanoZoomer Digital Pathology
Batch Mode
10:38
Switch Mode
Exit Job
Settings
Help
About
Exit
HAMAMATSU
Slide References
Set References
Batch Type
Fully Automatic
Profile
Routine
Resolution
20x
Layers
Single Layer
Batch Control
Pause Batch
Setup Scans
Setup Scans
Abort Batch
STOP
Abort Batch
Scanning slide 5 (IT01008500BI-21-A-02803 1 A.2 EE 1 0661066)...
Cassette 1-1
2-1
3-1
4-1
5-1
6-1
7-1
8-1
1
10:31
14/05/2021
Routine
NanoZoomer scan completed successfully(87)
IT01008500BI-21-A-02782 1 A.1 EE 1 0660973
Scan took 54 s
D:\Scans\IT01008500BI-21-A-02782 1 A.1 EE 1 0660973 - 2021-05-14 10.30.08.ndpi
View Scan
Option >>
2
10:32
14/05/2021
Routine
NanoZoomer scan completed successfully(96)
IT01008500BI-21-A-02783 1 A.1 EE 1 0660974
Scan took 1 min 34 s
D:\Scans\IT01008500BI-21-A-02783 1 A.1 EE 1 0660974 - 2021-05-14 10.31.17.ndpi
View Scan
Option >>
3
10:35
14/05/2021
Routine
NanoZoomer scan completed successfully(92)
IT01008500BI-21-A-02798 1 A.1 EE 1 0661003
Scan took 1 min 53 s
D:\Scans\IT01008500BI-21-A-02798 1 A.1 EE 1 0661003 - 2021-05-14 10.33.29.ndpi
View Scan
Option >>
4
10:37
14/05/2021
Routine
NanoZoomer scan completed successfully(81)
IT01008500BI-21-A-02803 1 A.1 EE 1 0661012
Scan took 2 min 9 s
D:\Scans\IT01008500BI-21-A-02803 1 A.1 EE 1 0661012 - 2021-05-14 10.35.38.ndpi
View Scan
Option >>
5
10:38
14/05/2021
Routine
Autofocusing tissue 2, point 1...
Elapsed - 10 s
Remaining
Total
Abort Scan
Option >>


BIELLA DIGITAL PATHOLOGY
LIN (Winsap)
HL7
Scanner
NAS
(network
attached
storage)
Cloud (Internet)
Cloud
Pathology
sharing your vision
Web
server
Biella
Milano
Torino
New York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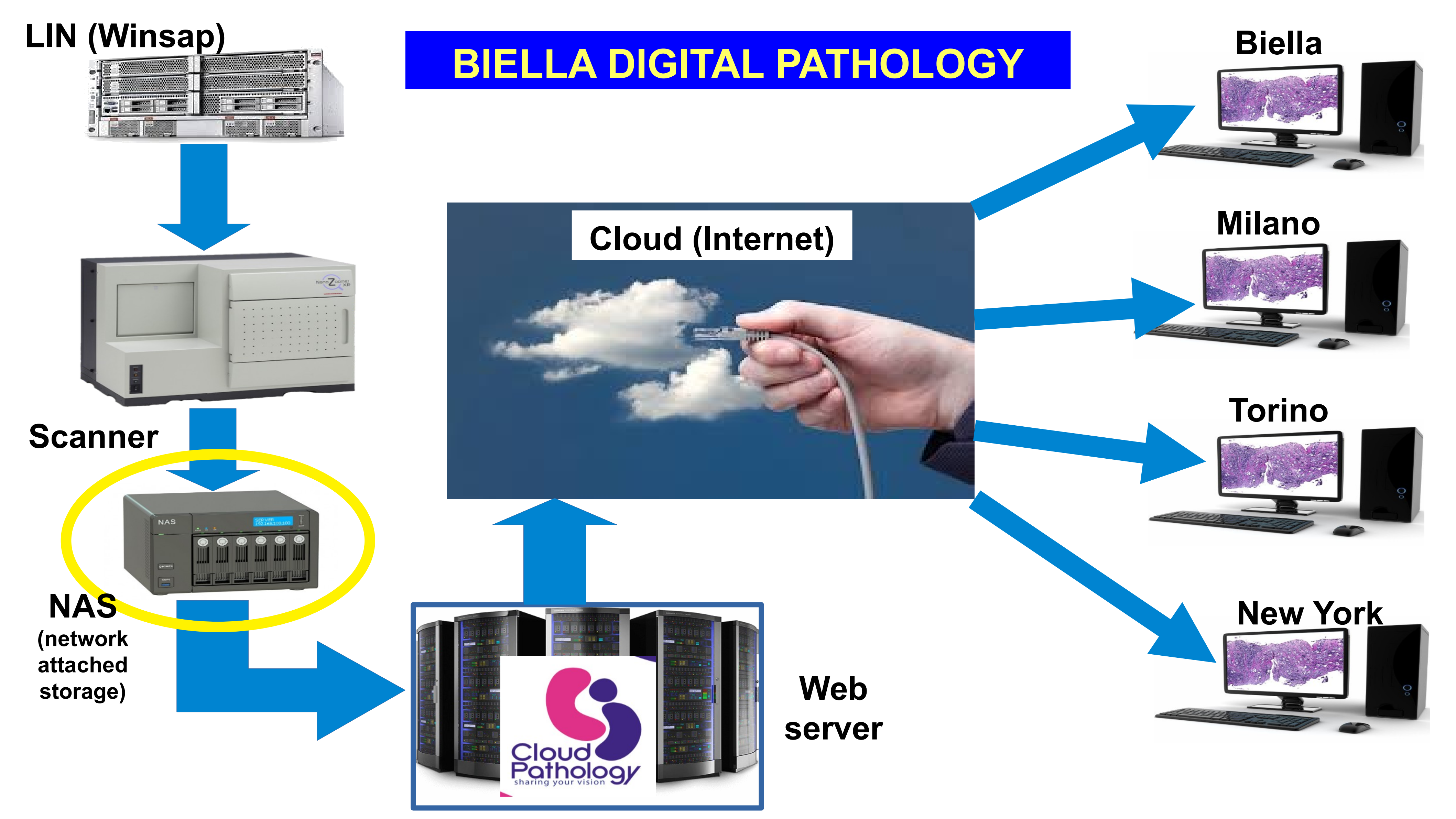
BIELLA DIGITAL PATHOLOGY
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NAS
(network
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Web
server
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Pathology
sharing your vision
Biella
Milano
Torino
New York

Whole-Slide Imaging Allows Pathologists to Work Remotely in Regions with Severe Logistical Constraints Due to Covid-19 Pandemic

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Submitted: 14-Apr-2020 Revised: 18-May-2020 Accepted: 18-May-2020 Published: 28-Jul-2020

Abstract

Introduction: In this study, we report on our experience using digital pathology to overcome the severe limitations imposed on health care by the Covid-19 outbreak in Northern Italy. Social distancing had a major impact on public transportation, causing it to run with reduced timetables. This resulted in a major challenge for hospital commuters. To limit the presence in our hospital of no more than two pathologists at a time out of four, a web-based digital pathology system (DPS) was employed to work remotely. **Subjects and Methods:** We used a DPS in which a scanner, a laboratory information system, a storage device, and a web server were interfaced so that tissue slides could be viewed over the Internet by whole-slide imaging (WSI). After a brief internal verification test, the activity on the DPS was recorded, taking track of a set of performance and efficiency indicators. At the end of the study, 405 cases were signed out remotely. **Results:** Of 693 cases, 58.4% were signed out remotely by WSI, while 8.4% needed to be kept on hold to return to the original microscope slide. In three cases, at least one slide had to be rescanned. In eight cases, one slide was recut. Panel discussion by WSI was necessary in 34 cases, a condition in which all pathologists were asked for their opinion. A consultation with a more experienced colleague was necessary in 17 cases. **Conclusions:** We show that WSI easily allows pathologists to overcome the problems caused by the severe social distancing measures imposed by the Covid-19 pandemic. Our experience shows that soon there will not be alternatives to digital pathology, given that there is no assurance that other similar outbreaks will not occur.

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Laboratorio di Digitalizzazione

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Laboratorio di Digitalizzazione

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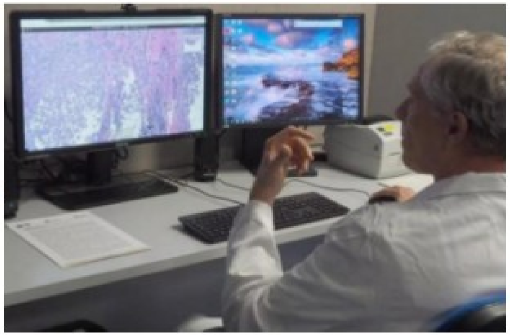
Sistema di Archiviazione

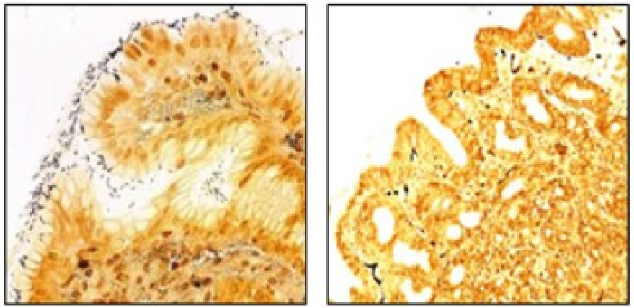
BIG DATA

S.C. Anatomia Patologica ASL BI
Intelligenza Artificiale



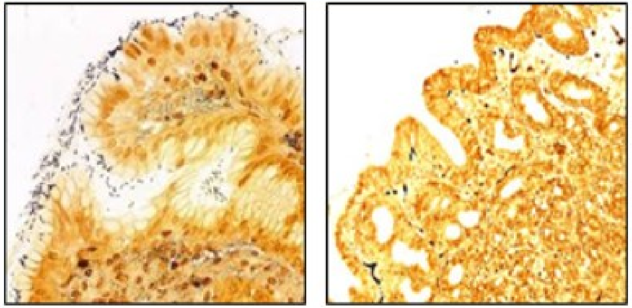
HELICOBACTER PYLORI DIAGNOSIS BY DIGITAL PATHOLOGY

TRAINING



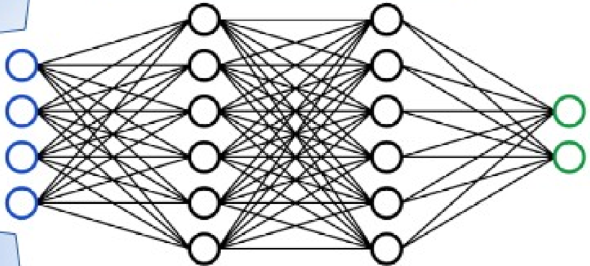
229 HP + **239 HP -**

TESTING



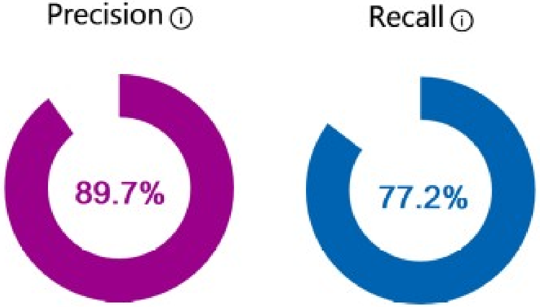
69 HP + **141 HP -**

Custom Vision Service Classifier



convolutional neural network (CNN)

RESULTS



Model performance

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Lettura “full Digital”

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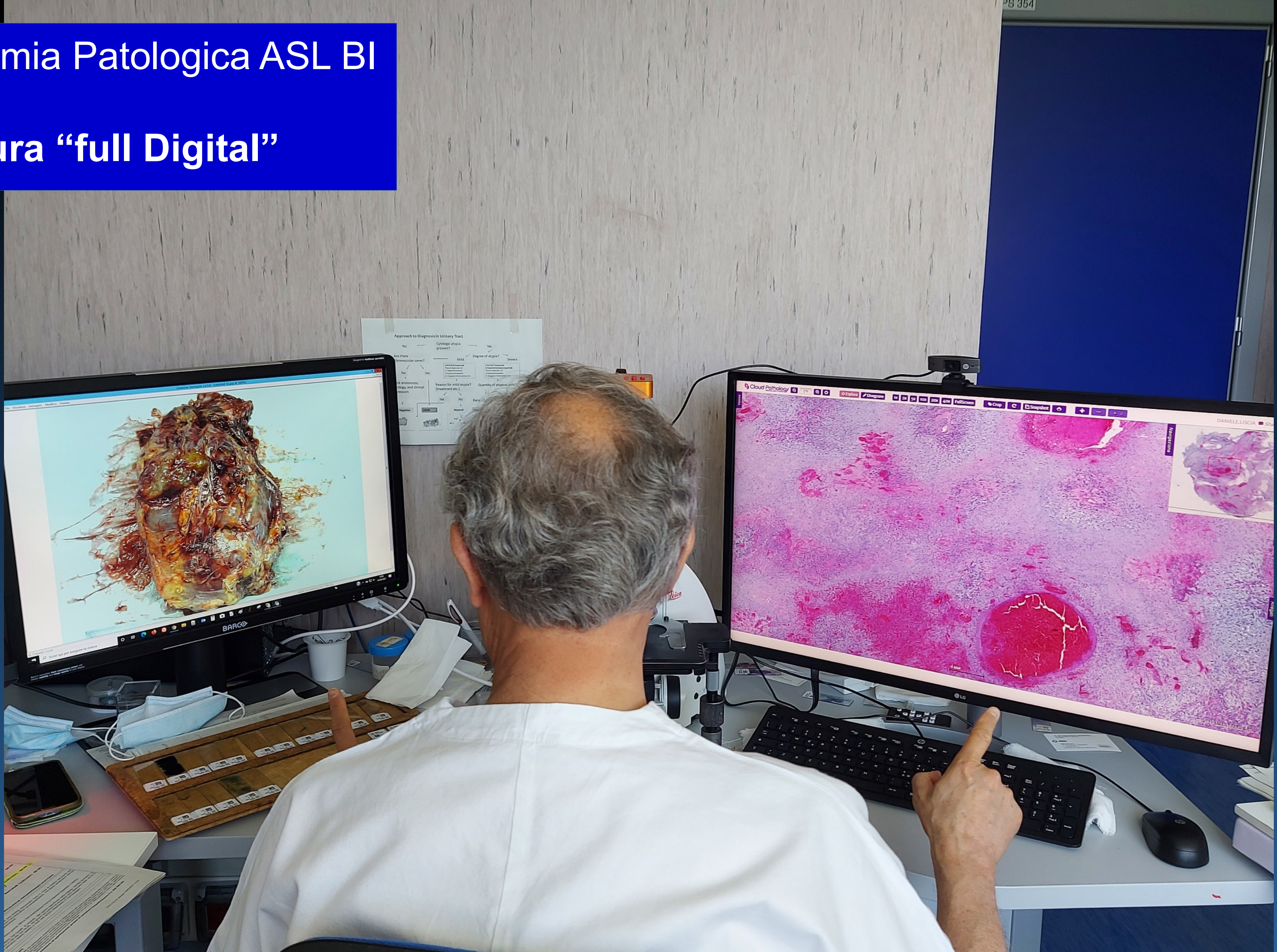
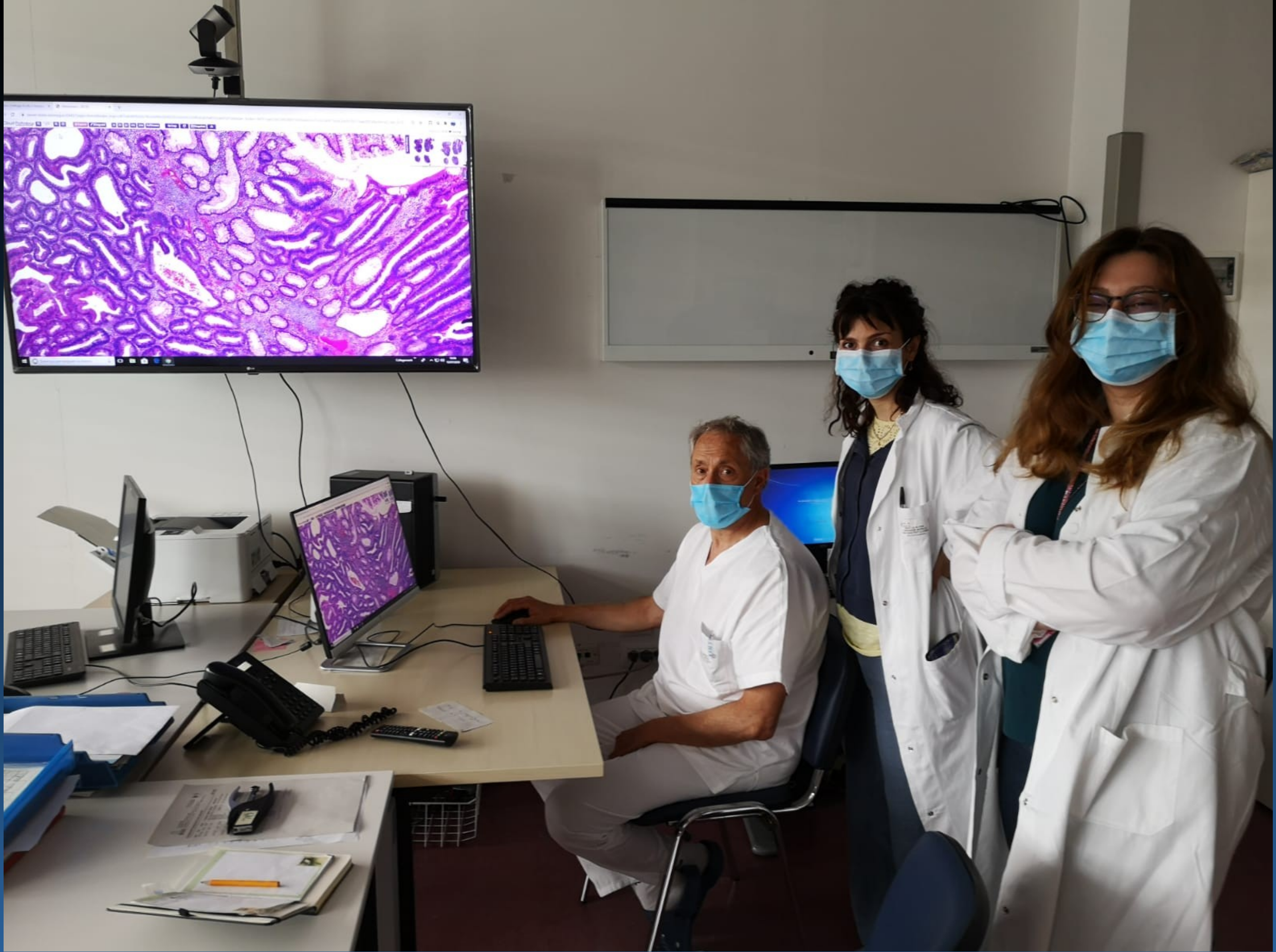
Lettura “full Digital”





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Riunioni Multidisciplinari con la Digital Pathology

MOLECULAR PATHOLOGY

L’Anatomia Patologica collabora con il Laboratorio di Oncologia Molecolare (LOM) della Fondazione Tempia

LOM
Laboratorio
Oncologia Molecolare

FONDAZIONE onlus
EDO ed ELVO TEMPIA
per la lotta contro i tumori
dal 1981

Il Laboratorio adotta un **sistema di gestione per la qualità ISO 9001**

LOM è accreditato presso **ACCREDIA** come Laboratorio Medico (M 0017) per esami nella disciplina genetica Medica

Il dettaglio degli esami accreditati è disponibile sul sito www.FondazioneTempia.org/Laboratorio-Oncologia-Molecolare


Thermo
MILESTONES IN CANCER RESEARCH
3500 Dx
Genetic Analyzer

METODICHE E STRUMENTAZIONI

Next-Generation Sequencing (NGS)

- Sequencing by Synthesis (MiSeq, Illumina)
- Ion Torrent (PGM, Thermo Fisher Scientific)
  - Grazie a queste metodiche è possibile analizzare numerosi geni in contemporanea, a partire da un quantitativo molto ridotto di materiale biologico (DNA, RNA) su tessuto o biopsia liquida

Sequenziatore automatico del DNA

- AB3500dx (Life Technologies)
  - Il sequenziamento diretto consente di identificare qualsiasi tipo di alterazione nella composizione in basi del DNA (mutazioni puntiformi, delezioni, inserzioni, etc...)
  - Il Sequenziatore viene inoltre utilizzato per l'analisi di frammenti ad alta risoluzione

Real-time PCR

- Aria Dx qPCR (Agilent - Diatech Pharmacogenetics)
  - utilizzato in abbinamento a kit commerciali certificati per la diagnostica in vitro CE-IVD al fine di identificare mutazioni a livello del DNA nei principali geni a valenza predittiva di risposta alle terapie e farmacogenetica.

Reverse dot-blot

- Tendigo (Fujirebio)
  - utilizzato per la genotipizzazione molecolare del virus HPV tramite kit commerciale CE-IVD con metodica reverse dot-blot.


GRAZIE PER L’ATTENZIONE