

# BUKU PROCEEDING 3 WORKSHOP

Continuing Professional Development  
in Clinical Pathology And Laboratory  
Medicine ( CPD - CPLM ) JogloSemar X

Tema: "Quality Assurance for Better Clinical Pathologist  
Profession and Laboratory Performance"

WNE PLAZA HOTEL  
Semarang, 26 -28 April 2018

Brown Canyon  
Pucang Gading  
Semarang

ISBN 978-602-5560-62-0 (jil.3)



BUKU PROCEEDING 3 WORKSHOP JOGLOSEMAR X

FAKULTAS KEDOKTERAN UNIVERSITAS DIPONEGORO  
SEMARANG

**Buku Proceeding 3 Workshop**  
**Continuing Professional Development on**  
**Clinical Pathology And Laboratory Medicine**  
**( CPD - CPLM ) (Joglosemar X**

**Tema : "Quality Assurance for Better Clinical  
Pathologist Profession and Laboratory Performance"**

**Editor :**

**Banundari Rachmawati**

**Nyoman Suci W**

**Meita Hendrianingtyas**

**Dwi Retnoningrum**

**Crowne Plaza Hotel**

**Semarang, 26 – 28 April 2018**

**Fakultas Kedokteran Universitas Diponegoro**  
**Semarang**

**Buku Proceeding 3 Workshop  
Continuing Professional Development on Clinical Pathology  
And Laboratory Medicine ( CPD - CPLM ) Joglosemar X**

**"Quality Assurance for Better Clinical Pathologist Profession and  
Laboratory Performance"**

**Semarang, 26 – 28 April 2018**

**Editor : Banundari Rachmawati, Nyoman Suci W, Meita  
Hendrianingtyas, Dwi Retnoningrum**

**Reviewer:**

**Imam Budiwiyo, dr., Sp.PK (K)**

**Pertama kali diterbitkan oleh :**

**Fakultas Kedokteran Universitas Diponegoro, Semarang  
Bekerja sama dengan Perhimpunan Dokter Spesialis Patologi Klinik  
dan Kedokteran Laboratorium (PDS PatKLIn) Cabang Yogyakarta, Solo,  
Semarang**

**Cetakan I : 2018**

**ISBN 978-602-5560-62-0**

**Copyright © 2018**

**Hak Cipta Dilindungi Undang-Undang**

**Dilarang memperbanyak, mencetak dan menerbitkan sebagian atau  
seluruh isi buku ini dalam bentuk apapun tanpa seizin penulis dan  
penerbit**

**Susunan Panitia**

|                   |                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pelindung         | -Kepala dinas Provinsi Jawa Tengah<br>-Ketua IDI Wilayah Jawa Tengah<br>-Prof. DR. Tri Nur Kristina, dr, DMM, Mkes<br>(Dekan Fakultas Kedokteran Universitas Diponegoro)                                                                                                                                                                                                     |
| Penasehat         | -Prof. DR. Ida Parwati, dr., Sp.PK (K), PhD<br>-Prof. Lisyani B. Suromo, dr., Sp.PK (K)<br>-Prof. DR. JB Suparyatmo, dr., SpPK (K)<br>-Prof. Budi Mulyono, dr., M.M, Sp.PK (K)                                                                                                                                                                                               |
| Pengarah          | -Tahono, dr, Sp.PK (K)<br>-DR. Osman Sianipar, dr, Sp.PK (K), DMM, MScMed                                                                                                                                                                                                                                                                                                    |
| Penanggung Jawab  | -DR. Purwanto AP, dr, Sp.PK (K)                                                                                                                                                                                                                                                                                                                                              |
| Ketua             | -DR. Banundari RH, dr, Sp.PK (K)                                                                                                                                                                                                                                                                                                                                             |
| Wakil Ketua       | -Siti Nurul Qomariyah, dr., Sp.PK                                                                                                                                                                                                                                                                                                                                            |
| Sekretaris        | -Bekti Mastiadji, dr., Sp.PK<br>-Ariosta, dr., Sp.PK<br>-Melia Setiawati, dr.<br>-Villa Sekar Cita, dr.<br>-Emelia Wijayanti, dr.<br>-Devina Kemalasari, Amd<br>-Rizky Dyaz, Amd                                                                                                                                                                                             |
| Bendahara         | -Dwi Retnoningrum, dr., Sp.PK<br>-Dian Widyaningrum, dr., Sp.PK<br>-Erwin Farida, dr.<br>-Monica Ariestha, dr.                                                                                                                                                                                                                                                               |
| Bidang Dana Usaha | -Indrayani P.S, dr., M.Si.Med, Sp.PK<br>-B. Rina Aninda Sidharta, dr., Sp.PK (K)<br>-Laily Adninta, dr., Sp.PK<br>-Windarwati, dr.,MSc, Sp.PK (K)<br>-Djoko Handojo, dr., Sp.PK                                                                                                                                                                                              |
| Seksi Seminar     | -DR. I Edward KSL, dr., M.M, M.H.Kes, Sp.PK, M.Si.Med<br>-Imam Budiwiyo, dr., Sp.PK (K)<br>-DR. Teguh Triyono, dr., Sp.PK (K), M.Kes<br>-Meita Hendrianingtyas, dr., Sp.PK, M.Si.Med<br>-Andreas Agung W, dr., Sp.PK, M.Kes<br>-Veronica Carolin Ina Saomi, dr.<br>-Syafriani Tarigan, dr.<br>-Obed Huger Nainggolan, dr.<br>-Diah Ayu Kusuma, dr.<br>-Okty Prahlanitya, dr. |

|                                  |                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Seksi Workshop                   | <ul style="list-style-type: none"> <li>-Muji Rahayu, dr., M.Si.Med, Sp.PK</li> <li>-Santi Kristiani, dr., Sp.PK</li> <li>-Indah Susanti, dr., Sp.PK</li> <li>-Nuraddiyani Hidayah, dr.</li> <li>-Irenne Elly M.S., dr.</li> <li>-Angelina Barbara M., dr.</li> <li>-Dwi Fajaryani, dr.</li> <li>-Nalurita Ng. Dr.</li> </ul> |
| Bidang Makalah Bebas             | <ul style="list-style-type: none"> <li>-DR. Nyoman Suci W., dr., M.Kes, Sp.PK</li> <li>-Freddy Ciptono, dr.</li> <li>-Erwin farida, dr. (Presentasi Poster)</li> <li>-Ursula Nauli Malau, dr. (Presentasi Oral)</li> <li>-Katarina Noviyanti, dr. (TB Award)</li> </ul>                                                      |
| Bidang Malam Keakraban           | <ul style="list-style-type: none"> <li>-Meita Hendrianingtyas, dr., Sp.PK, M.Si.Med</li> <li>-Andreas Agung W., dr., Sp.PK, M.Kes</li> <li>-Monica Ariestha, dr.</li> <li>-Maulida Deviyanti, dr.</li> <li>-Dolly, dr.</li> </ul>                                                                                            |
| Malam Alumni                     | <ul style="list-style-type: none"> <li>-Bekti Mastiadji, dr., Sp.PK</li> <li>-Prihartiwi Purnamasari, dr.</li> <li>-Emi Setianingsih, dr.</li> </ul>                                                                                                                                                                         |
| Bidang Pameran                   | <ul style="list-style-type: none"> <li>-Ria Triwardhani, dr., Sp.PK</li> <li>-Hendro Pratomo S., dr., Sp.PK</li> <li>-Hadian Widyatmojo, dr.</li> <li>-Benyamin Massang, dr.</li> <li>-Bilma Riasari Guspa, dr.</li> </ul>                                                                                                   |
| Bidang Publikasi dan Dokumentasi | <ul style="list-style-type: none"> <li>-DR. Indranila Kustarini S., dr., Sp.PK (K)</li> <li>-Neysa Natalia Rahardjo, dr., Sp.PK</li> <li>-Peggy Loman, dr.</li> <li>-I Gede Ardy Surya, dr.</li> </ul>                                                                                                                       |
| Bidang Konsumsi                  | <ul style="list-style-type: none"> <li>-Herniah Asti Wulanjani, dr., Sp.PK</li> <li>-Yekti Hediningsih, dr., Sp.PK, M.Si.Med</li> <li>-Veronica Prawira, dr.</li> <li>-Cynthia, dr.</li> <li>-Dinda Kamilah, dr.</li> <li>-Anita Tri Hastuti, dr.</li> </ul>                                                                 |
| Bidang Perlengkapan              | <ul style="list-style-type: none"> <li>-Suparitriono, dr., Sp.PK, S.H</li> <li>-Guruh Adi Indrawan, dr.</li> <li>-Erik, dr.</li> <li>-Syaiful Anwar, dr.</li> <li>-Sabar Widodo, dr.</li> </ul>                                                                                                                              |

|                  |                             |
|------------------|-----------------------------|
| Bidang Akomodasi | -Annisa Maulidya, dr.       |
| Transportasi     | -Jhon Desel Sulistiana, dr. |
|                  | -Innike Priyanto H., dr.    |
|                  | -Alamsyah, dr.              |
|                  | -Ade Delpita, dr.           |

## Daftar Isi

|                                                                                                                                         | Hal |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----|
| Cover .....                                                                                                                             | i   |
| Halaman ISBN .....                                                                                                                      | ii  |
| Susunan Panitia .....                                                                                                                   | iii |
| Daftar Isi .....                                                                                                                        | vi  |
| Kata Pengantar Ketua Panitia CPD-CPLM Joglosemar X.....                                                                                 | ix  |
| Kata Pengantar Pengurus Pusat PDS PatKLIn .....                                                                                         | x   |
| Daftar Kontributor Tulisan .....                                                                                                        | xii |
| <b>Kumpulan Naskah</b> .....                                                                                                            | 1   |
| The Interpretation and standard report of Peripheral Blood Smear in<br>Chronic and Acute Leukemia<br>Tahono, dr.,Sp.PK (K) .....        | 1   |
| The Role Of Flowcytometry On Diagnosis Of Hematologic<br>Malignancies<br>Paulus Budiyo Natapura, dr., Sp.PK .....                       | 2   |
| Pemeriksaan Hormon Pada Infertilitas<br>Indrayani PS, dr., Msi. Med, Sp.PK .....                                                        | 13  |
| TORCH test for incemination screening<br>Amiroh Kumiaty, dr., Mkes, Sp.PK .....                                                         | 24  |
| Standard report of sperm analysis based on WHO guidelines<br>Achmad Zulfa Juniarto, dr.,Msi. Med, Sp.And, PhD ....                      | 34  |
| The Comparison of Microscopic Examination Method of Urine<br>Flowcytometry with Imaging Method<br>Ira Puspitawati, dr.,Sp.PK (K) .....  | 41  |
| The Internal and External Quality Control of Urinalysis and The<br>Standard of Urinalysis Report<br>Harjo Mulyono, dr., Sp.PK (K) ..... | 53  |
| The Microscopic Diagnosis to detect the pathologic crystal<br>DR. Indranila KS, dr.,Sp.PK (K) .....                                     | 60  |
| ABO & RhD Bloodgrouping : Are they enough?<br>DR. Banundari Rachmawati, dr., Sp.PK (K) .....                                            | 70  |

|                                                                                                                                                                                                                                                                                                                                               |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Immediate spin and complete major crossmatch<br>Kunti Dewi Saraswati, dr., Sp.PK, M.Kes .....                                                                                                                                                                                                                                                 | 83  |
| Autocontrol and minor crossmatch<br>Julia Setyati, dr, Sp.PK.....                                                                                                                                                                                                                                                                             | 97  |
| Measurement of anti HFA (High Frequency Antigen)<br>DR. Teguh Triyono, dr., Sp.PK (K), M.Kes .....                                                                                                                                                                                                                                            | 107 |
| Processing hematopoietic stem cell<br>Muji Rahayu, dr.,Msi. Med, Sp.PK.....                                                                                                                                                                                                                                                                   | 110 |
| Transplantasi Sel Punca Sebagai Pilihan Terakhir Pengobatan<br>Herniah Asti Wulanjani, dr., Sp.PK (K) .....                                                                                                                                                                                                                                   | 116 |
| Screening of Thalassemia using Complete Blood Count and<br>Haematology Analyzer<br>DR. Tri Ratnarningsih, dr., M.Kes, Sp.PK (K) .....                                                                                                                                                                                                         | 126 |
| The Molecular Diagnostic of Thalassemia/ Hemoglobinopathy in<br>Indonesia- The Epidemiology aspect (The Distribution of<br>Gene Mutations), Handling of Specimen and Procedure of<br>Diagnostic of Thalassemia/ Hemoglobinopathy in Bijkman<br>Institute<br>DR. Ita Margareta Nainggolan, S.Si, M.Biomed (Eijkman<br>Institute Jakarta) ..... | 127 |
| The Identification and Management of Hazardous Chemical in<br>Laboratory<br>DR. Purwanto AP,dr.,Sp.PK (K).....                                                                                                                                                                                                                                | 136 |
| The system of packaging, labeling, symbolization and storage of<br>waste of Hazardous and Toxic Materials in Laboratory<br>Clinics according to laboratory accreditation<br>Windarwati, dr.,MSc, Sp.PK (K).....                                                                                                                               | 141 |
| Manajemen pada pitfalls pemeriksaan kimia klinik<br>Ria Triwardhani, dr., Sp.PK.....                                                                                                                                                                                                                                                          | 142 |
| The Calculation Strategy of National Health Care System's<br>Laboratorium Package for BPJS<br>Tonang Dwi Ardyanto, dr.,Sp.PK, PhD. ....                                                                                                                                                                                                       | 147 |
| Laboratory accreditation : National and International Standard<br>DR. Sri Hartini, dr., Sp.PK, MARS .....                                                                                                                                                                                                                                     | 157 |

# CERTIFICATE

*This is to certify that*

**Dr.dr. Indranila K. S, Sp.PK (K)**

has been participated as

**SPEAKER**

**on Continuing Professional Development on Clinical Pathology  
and Laboratory Medicine JOGLOSEMAR X Morning Workshop**

Semarang, April 26, 2018



CPD CPLM X Joglosemar  
Chairman of Committee

Dr. dr. Osman Sianipar, SpPK(K), DMM  
CPD CPLM X Joglosemar  
Stering Committee

dr. Tahono, SpPK  
CPD CPLM X Joglosemar  
Stering Committee

Dr. dr. Purwanto AP, SpPK(K)  
CPD CPLM X Joglosemar  
Stering Committee

Dr. dr. Banundari RH, SpPK(K)  
IACPLM Semarang Region