



Newsline

California Association for Medical Laboratory Technology
Vol. 43 No.1

April, 2017

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CAML Political Update

LEGISLATURE

The 2017-18 Legislative Session was gavelled in on December 5, 2016 for the swearing-in of all Assembly Members and those Senate Members that stood election in November. Following a day of other ceremonies and celebrations, legislators returned to their home districts until January 4, 2017. The November election produced two-thirds super majorities of Democrats in both Houses of the Legislature, which was expected in the Assembly but not the Senate. While these super majorities will theoretically allow the Democrats to pass any and all things requiring a two-thirds vote, including, but not limited to taxes and constitutional amendments, given the number of "moderate" Democrats, specifically in the Assembly, many political pundits doubt there will be a flurry of taxes and other two-thirds vote issues pass, but those same pundits agree some high-profile measures will reach the Governor's desk.

The legislature has now passed the bill introduction period. The deadline to introduce legislation was February 17. As of this writing, a combined total of 2,672 bills have been introduced by the Senate and the Assembly. While we have heard that there will be legislation introduced to expand the scope of practice with regard to optometry, to date that has not happened. Public Policy Advocates will continue to monitor daily amendments that might adversely affect CAMLT.

WHAT DOES THIS MEAN FOR CAMLT?

For more than 50 years, CAMLT has successfully defended laboratory standards to protect patients as others have tried to convince legislators to dilute licensing and personnel standards. CAMLT membership is critical. CAMLT must be strong financially and in membership numbers to effectively execute a legislative program and to educate key legislators and government officials. CAMLT is the only professional organization that exclusively protects the legislative interests of CLS's MLT's and other laboratory personnel in the best interest of the patient and the laboratory profession. It is the **only** professional association representing clinical laboratory science personnel that retains a lobbying firm in Sacramento to be the voice for clinical laboratory personnel in Sacramento before the legislature and state government.

This last legislative session was rigorous in terms of bills legislating a frontal attack on the laboratory professions, depleting CAMLT resources. We expect more of the same during the 2017-2018 session. CLS's, MLT's and phlebotomists must ensure the growth and vibrancy of a strong, well financed, well organized CAMLT to protect the best possible patient safety in laboratory testing and the preservation of your critical profession. Build CAMLT membership. **Contribute to Lab-PAC.** Educate your own legislators. Only this will secure your future and the future of the patients that you serve.

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MORE
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Message From the President



RESPONSIBILITY – IT TAKES MANY FORMS

When are we responsible? When we live by our values (choosing to do the right thing). When we care for our family. When we support our profession (to ensure the health of our community).

Let’s all be responsible this year in getting the word out about CAMLT, its mission, and how it protects all laboratory personnel. We need every CLS to support us now. No longer can the few support the many. CAMLT has been supporting CLS’s for 77 years.

.....WHAT’S NEW?.....

RECOGNITION

LabWeekActivities offer recognition of our profession and our contribution to the health care team. We recognize the laboratory scientist’s dedication to their work. Across the state many sites will recognize a “Lab Person of the Year”.

CHAPTER ACTIVITIES

Spring Seminars have taken place in the past 6 weeks with the participation of many chapters and the Executive Office: in Sacramento, North Hollywood.

Visalia, Fresno, and the East San Gabriel Valley.

There is a special value when you hear excellent speakers in person and can learn even more from the discussions that ensue.

NEW STATEWIDE ACTIVITIES

We are starting a Mentoring Club where seasoned members can share their expertise with willing young CLS’s by engaging in quarterly activities. To join: Contact the office or volunteer on the website.

PREPARE NOW FOR JULY- our “LEADERSHIP MONTH”

We will empower members by offering a Leadership Retreat at 4 locations to be named. July 9, 15, 22 and 29. In this development course, participants will learn how to use leadership and management skills. Interested? Contact the office or volunteer on the website.

In life, everyone finds themselves in leadership roles. It happens when you become a parent or when your supervisor has the day off and the CAP inspectors arrive. Consider stepping up for CAMLT.

CHECK OUT OUR NEW WEBSITE. WE THINK YOU’LL LIKE IT!

CAMLT/NEWSLINE

Volume 43, No.1
Ilene Dickman, President

Editorial correspondence should be addressed to CAMLT/ *Newsline*, 39656 Mission Blvd., Fremont, CA 94539-3000.

Scientific articles submitted for publication in the CAMLT/ *Newsline* should be approximately 1,000 words in length or about three pages, double spaced, typed materials. Please include references when appropriate. Since the articles are relatively short, the editors do not feel that an abstract is necessary. All articles should be accompanied by a picture of the author.

Articles describing procedures should include materials and methods as well as results. All graphs and charts should be reducible. Abbreviation (except for those in common scientific usage) should be defined and introduced parenthetically when first used in text.

Advertising correspondence should be addressed to 39656 Mission Blvd., Fremont, CA 94539-3000, (510) 792-4441, FAX (510) 792-3045, e-mail: office@camlt.org.

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Sincerely,
Ilene Dickman
President, CAMLT

LEGISLATION

The following is legislation that PPA has identified through the bill introduction process that either directly or may through amendments affect CAMLT. Check the website for updates on bill status, amendments, Legislator lists, and Committee assignments.

AB 387 (Thurmond) Minimum Wage: Health Professionals: Interns, as introduced 2/9/17 – OPPOSE

- This bill will require health care entities to pay allied health students minimum wage for time spent in clinical or experimental training that is required for state licensure or certification
- Clinical laboratory trainees/interns cannot provide laboratory services except under direct and responsible supervision, and as such, they should not be redefined as employees and clinical laboratories should not be re-defined as trainee/intern employers
- Increasing the cost of student training may force some laboratories to reduce or stop providing clinical rotations and/or stymie new laboratories from providing clinical rotations which will further reduce the number of new laboratory professionals entering the workforce and exacerbate existing clinical laboratory personnel workforce shortages

AB 387 would expand the definition of “employer” to include a person who directly or indirectly, or through an agent or any other person, employs or exercises control over the wages, hours, or working conditions of a person engaged in a period of supervised work experience to satisfy requirements for licensure, registration, or certification as an allied health professional and that any person engaged in a period of supervised work experience to satisfy requirements for licensure, registration, or certification as an Allied Health Professional be subject to the minimum wage law.

Clinical laboratory trainees/interns cannot release results and cannot work without supervision. Clinical laboratory rotations are funded exclusively by the host laboratory; costs are not reimbursed by Medi-Cal, Medicare, private insurance or other resources. Increasing the cost of student training may force some laboratories to reduce or stop providing clinical rotations and/or stymie new laboratories from providing clinical rotations which will further reduce the number of new laboratory professionals entering the workforce and exacerbate existing clinical laboratory personnel workforce shortages. Currently, many laboratories training students already pay a stipend that meet or exceed the minimum wage requirement proposed by this bill. Instead of legislating a minimum salary that some laboratories cannot afford, individual training laboratories should decide what they can afford to pay students so not to jeopardize the existing pipe-

line of students who eventually qualify to enter the workforce. SEIU is the Sponsor of the bill. Location: Passed out of the Assembly Labor and Employment Committee on March 29. The bill will be heard in the Appropriations Committee next; no date set.

AB 443 (Salas) Healing Arts: Optometry: Required Examination: Notice, as introduced 2/13/17 - WATCH

This bill currently does not affect CAMLT, however, we have been told that it is a “spot” bill. We are tracking in the event the measure is amended and used as a vehicle for scope of expansion language.

AB 613 (Nazarian), Healing Arts: Clinical Laboratories, as amended 3/27/17 — OPPOSE

- Would allow High School graduates to perform the moderately complex total protein refractometer test on plasma donors at plasma collection centers.
- Standards outlined in the bill for high school students performing this test does not ensure the health and safety of plasma donors.

This measure is the reintroduction of AB 757 (Gomez) that CAMLT opposed and was ultimately vetoed by the Governor in 2015 due to concerns that the standards outlined in the bill for persons to perform this test does not ensure the health and safety of plasma donors. AB 613 authorizes a person with training set forth in the bill that exceeds federal Clinical Laboratory Improvement Amendments (CLIA) standards but lets non-qualified personnel under California laboratory law (BPC 1206.5(b)) perform moderate complexity testing with regard to plasma. AB 613 would allow lesser trained and educated persons than currently permitted by law to perform a total protein refractometer analysis, categorized as a moderately complex test by the Food and Drug Administration, in a licensed plasma collection facility. If the protein refractometer test and/or calibration is done incorrectly there is potential to cause donor harm. AB 613 is sponsored by the Plasma Protein Therapeutics Association and is supported by Grifols and the California Chronic Care Coalition.

AB 658 (Waldron) Clinical Laboratories, as introduced 2/14/17 –NEUTRAL

This measure is a result of the release on September 10, 2015 from the office of the State Auditor a report on the Laboratory Field Services (LFS) branch of the Department of Public Health which noted in its audit findings that since 2008 LFS has collected more than \$12 million in lab fees that it has not spent. AB 658 proposes that by requiring LFS to suspend the annual licensure fee for clinical laboratories for two years (2018 & 2019), this will allow the Department to spend down the surplus in funds to an appropriate operating level. AB 658 is sponsored by the California Clinical Laboratory Association.

AB 659 (Ridley-Thomas) Medi-Cal Reimbursement Rates, as introduced 2/14/175 –NEUTRAL/WATCH

Current law provides for the Medi-Cal program, which is administered by the State Department of Health Care Services, under which qualified low-income individuals receive health care services. The Medi-Cal program is, in part, governed by, and funded pursuant to, federal Medicaid Program provisions. Existing law also restricts the Medi-Cal reimbursement rate for clinical laboratory or laboratory services, and also requires that laboratory service providers submit annual data reports to the department, for the purpose of establishing rates for clinical or laboratory services based on the lowest amounts other payers are paying providers for similar services. AB 659 would change the frequency for submitting those reports to every 3 years.

SB 43 (Hill) Antimicrobial-resistant Infection: Reporting, as amended 1/31/17 –WATCH

SB 43 would require general acute care hospitals and clinical laboratories to submit a report to the department, commencing July 1, 2018, and each July 1 thereafter, containing an antibiogram of the facility for the previous year. The bill would require the department, commencing January 1, 2019, and each January 1 thereafter, to publish and post on its Internet Web site a report, based on the data reported by hospitals and clinical laboratories, and from certificates of death, which would include designated information relating to the incidence, type, and distribution of antimicrobial-resistant infections and the number of deaths for which antimicrobial resistance is listed on the certificate of death as the disease or condition directly leading to death, an antecedent cause, or a significant condition contributing to death. SB 43 would also prohibit data collected pursuant to the bill from being disclosed to the public on a facility-specific basis, but would allow for the disclosure of case-specific information, under prescribed circumstances.

SB 247 (Moirlach) Licensing Requirements, as introduced 2/17/17 –WATCH

Current law establishes the Department of Consumer Affairs, which is comprised of various boards, bureaus, commissions, committees, and similarly constituted agencies that license and regulate the practice of various professions and vocations. SB 747 would state the intent of the Legislature to enact legislation that would reduce occupational licensing requirements. Although the Department of Consumer Affairs does not govern clinical labs, SB 747 in its current form is a spot bill, so we will be monitoring this measure for amendments to ensure that there is no intent to lower clinical laboratory licensing requirements.

SB 562 (Lara) Californians for A Healthy California Act, as introduced 2/17/17 –WATCH

SB 562 has been added to CAMLT's legislative tracking list simply because it is an important health care bill. This measure would enable the Legislature to enact legislation that would establish a comprehensive universal single-payer

health care coverage program and a health care cost control system for the benefit of all residents of that state.

HAVE YOU MET WITH YOUR LEGISLATORS? IF NOT, WHY NOT?

For the last twenty years, CAMLT has continued to successfully weather advertent or inadvertent legislative assaults on clinical laboratory testing that would jeopardize patient safety, but these assaults continue. **It is critical that CAMLT build its membership and engage with and educate California's elected officials.** Legislators are eligible to serve up to 12 years under our new term limit law. It is imperative to build "legislative champions" for clinical laboratory science and the patients who rely on educated, qualified laboratory personnel for accurate and reliable testing results.

Have you met with your legislators? Meet with your legislators in your district, send letters explaining CAMLT's philosophy, invite legislators and their staff to tour your laboratories, and introduce yourself as a constituent. The sponsors of legislation, such as optometrists and chiropractors, to expand their scope of practice into area of clinical laboratory testing are well heeled and well organized. It is imperative that CAMLT members engage in the process that affects the CLS profession.

Which Legislator represents your home or laboratory? Visit the CAMLT website for a current roster of Legislators and the cities they represent.

- **Visit their offices.** Make an appointment with your Legislators' District offices.
- **EDUCATE!** Explain to Legislators and their consultants what it takes to be a CLS; what you do; why it is important to maintain the integrity of the Laboratory Director when other personnel are doing laboratory tests, even if they are waived; why other allied health providers shouldn't be Laboratory Directors; the CLS shortage and what it takes to eliminate it.

STRENGTHEN YOUR VOICE: CONTRIBUTE NOW!

Please donate to the CAMLT Lab-PAC fund. Lab-PAC is a **critical** means of supporting and electing Legislators to the California Legislature who share a like-minded philosophy with CAMLT and who are open-minded to learning the issues and challenges facing your profession. Encourage the colleagues you work with. Get your chapters and chapter members to contribute. Talk to your vendors. Get involved! Your voice in the political process is much louder as CAMLT than as an individual. Contribute to the collective resources of CAMLT to grow your political clout. Visit the **Lab-PAC Page** for a donation form or to donate online. **Your gift in any amount will help your profession. Contribute now!**

Please mail donations made payable to:

CAMLT LAB-PAC

39656 Mission Blvd., Fremont, CA 94539

Please write a check to LAB-PAC now

or

Donate online at www.camlt.org

NOTES FROM CLTAC

The Clinical Laboratory Technology Advisory Committee (CLTAC), a legislatively mandated group that, as its name implies, advises the California Department of Public Health, Laboratory Field Services Section. CLTAC meets quarterly and reviews, among other things, current activities of the department as well as legislation and regulations that affect clinical laboratories in California. CLTAC is composed of pathologists, clinical laboratory scientists, and other laboratory professionals such as cytologists and microbiologists. The members of CLTAC serve four year terms and CAMLT routinely is asked to nominate participants to serve when vacancies exist. Currently, three CAMLT members are serving on CLTAC: Dora Goto, Kathleen Doty, and newly elected CLTAC Chair, Rebecca (Becky) Rosser.

CLTAC met March 3, 2017 and the following are some highlights of the meeting:

- Dr. Paul Kimsey, Deputy Director, Office of the State Public Health Laboratory Director, presented three issues on which the department is working: adding Public Health Microbiologists to the Health and Safety Codes, enforcement of Business and Professions Code Section 650, and improvements to the CA Department of Public Health website.
- Robert Thomas, Chief, Laboratory Field Services, reported on new LFS employees and introduced Ted Lee, Staff Services Manager for LFS who reported on the changes in efforts to fill the many LFS vacancies.
- Mary Wogec of LFS reported on current legislation that LFS is reviewing: AB613, AB658, SB43, and SB608. (See the Public Policy Update for CAMLT positions on these bills.)
- Sarah Rutschmann and Nga Tran of LFS reported on enhancements to several online systems, including Electronic Content Management (ECM), Personnel Licensing (PERL) and Electronic Laboratory Licensing and Registration for Facilities (ELLFS).
- Fred Ung, Chair of the California State Auditor Response subcommittee, reported that there is no update as the committee has yet to receive documents necessary for its review.
- Jonathan Bautista, Chair of the Recruitment and Retention subcommittee reported on efforts to recruit and retain LFS employees.
- Lorri Dean-Yoakum, Co-Chair of the Personnel Regulations subcommittee reported on the subcommittee's on-going efforts. They meet two times a month and also are in the position of requesting documents necessary for their continued work.
- Donna McCallum of LFS reported on the CLIA Survey Section of LFS. In 2015-2016, 831 surveys were conducted. In 2016-2017, 418 surveys have been conducted so far.
- Updates were also received from: the Tissue Bank, Blood Banks, and Biologics Section, the Facility Licensing Section and the On-site Licensing Section.
- A CLTAC Bylaws subcommittee was appointed.
- Suggestions for future items were solicited and a report on the Hospital Laboratory Workforce Initiative (HLWI) was requested.
- Finally, the remaining meeting dates for 2017 were agreed upon: May 26, September 8, and December 1.

Online Registration or PDF Registration Available Now for Spring Seminars North at UC Davis Medical Center Sacramento, April 22 & 23, 2017

It's a Capitol Affair! The event will be held at UC Davis Medical Center Campus, School of Medicine Building, 4610 X Street, Sacramento. Up to twelve CEUs are available at this two day event.

Titles include:

- 1) From the Basement to the Bedside: The Lab's New Role in Improving Patient Care Through Laboratory Stewardship
- 2) Improving the Laboratory Experience: CLS and MLT working together
- 3) Women's Health - Biomarkers in Clinical Practice and Further Approaches
- 4) Troponin: The New Generation and Cardiorenal Syndrome
- 5) Hemostasis is Unique - The Cascade, the Diseases and the Tests - All Mixed Up
- 6) Disseminated Intravascular Coagulation (DIC) and Thrombosis: The Critical Role of the Lab

See full program and information/registration packet in this issue or register online at www.camlt.org and follow the prompts.

Students: Workshops are free but you must register by completing the PDF form (do not use online registration) and return to CAMLT office with flat registration fee of \$10. Not a member or student? Join today for access to reduced registration fees and much more!

CAMLT 2017 SPRING SEMINAR NORTH GENERAL INFORMATION

Proudly sponsored by the
UCDMC Department of Pathology and Laboratory Medicine's Partners in Education (PIE).

Advance Registration: You have the best opportunity of securing a seat in your "first choice" sessions if you register early. Registration fees may be paid by check, VISA, MasterCard or money order. Sorry, American Express and Discover cards are not accepted.

Pre-registration Deadline: *Thursday, April 13, 2017 at Noon.*
Registrations received after above date/time will not be processed. To register on-site, arrive at least 40 minutes prior to the beginning of your first class. On-site registrations will be accepted subject to space availability.

Registration Fees: Note ... No price increase from 2016 rates!
A standard \$10.00 registration fee applies to all individuals.

Additional fees:

CAMLT Members: \$45.00 per workshop
Non-Members: \$75.00 per workshop
Students: Free workshops!

Non-Members: Become a CAMLT member and save! If you join CAMLT at the time of registration, you may apply the difference between member and non-member fees toward your annual membership dues.

For further details, contact CAMLT at 510-792-4441. You may also go to <http://camlt.org/membership/registration> to join online or download a membership application.

Payment:

Make checks payable to CAMLT and mail to:

CAMLT
39656 Mission Boulevard
Fremont, CA 94539-3000

Or fax credit card registrations to:

510-792-3045

Or scan/email registration form to: office@camlt.org

Accreditation: CAMLT is approved by the California Department of Public Health as a CA CLS/MLT/CPT Accrediting Agency (#21) for Continuing Education, and by the State of Nevada.

Refund Policy: CAMLT reserves the right to cancel any program with insufficient registration. Registrants will be immediately notified and will receive a complete refund for programs cancelled by CAMLT. There may be changes in program content or faculty due to circumstances beyond our control. CAMLT is not responsible for penalties incurred as a result of cancellation, including non-refundable transportation fees and hotel room deposits.

Cancellation Policy: For a full refund (less \$10.00 fee) written notice must be postmarked or faxed by March 24, 2017. Written cancellations postmarked or faxed after this date will be issued a full CREDIT (less a \$25.00 cancellation fee) toward a future CAMLT state seminar or convention. No refunds or credits after April 13, 2017.

Location Information:

Spring Seminar North:
UC Davis Medical Center Campus
School of Medicine Building
Rooms 2205 & 2206
4610 X St., Sacramento, CA 95817

Daily Parking: Park in Lot # 14, one-day permits can be purchased at dispensing machine via cash or credit card. Lot 14 entrance at 45th Street and 2nd Avenue.

Hotel Room Block: Not negotiated for this seminar

Lunch: A cafeteria is located on the first floor of the Surgical and Emergency Services Pavilion across the street from the Med Center. There are fast food restaurants a few blocks away but for convenience and safety, the cafeteria is suggested ... or, bring your own lunch.

Note: No part of the seminar handouts or presentation (no tape, video or digital recorders please) may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recorded, or otherwise, without prior written permission from CAMLT.

Disclaimer: CAMLT hereby disclaims any liability for, or endorsement of, any products, services or information presented.

Attendance Policy: Choice of workshops may NOT be changed on-site. In compliance with state accreditation requirements, participants must attend the entire workshop to receive credit. Partial credit cannot be awarded for late arrivals or early departures. Excessive absences from a workshop for any circumstance may result in forfeiture of CE credit. NO EXCEPTIONS.

REGISTER NOW for CAMLT's 2017 Spring Seminar North

Location: UC Davis Medical Center Campus (School of Medicine Building)
4610 X Street, Sacramento, CA 95817

SCHEDULE-AT-A-GLANCE

Complete abstracts/objectives available online: www.camlt.org/calendar

We are pleased to have the following speakers join us:

SATURDAY, APRIL 22, 2017 – REGISTRATION: 7:45 – 8:30 AM

172-100 (3.0 CE) - Morning: 8:30 – 11:30 AM (*Note: you must attend both parts to receive credit*)

Kyle Dean Hueth, MS candidate, MLS(ASCP)^{CM} | Healthcare Consultant | ARUP Laboratories | Salt Lake City, Utah
Dora W. Goto, MS, CLS, MLS(ASCP)^{CM} | Past President | California Association for Medical Laboratory Technology | Fremont, California

Part I: From the Basement to the Bedside: The Lab's New Role in Improving Patient Care Through Laboratory Stewardship

Part II: Improving the Laboratory Experience: CLS and MLT working together

Level: Intermediate | *Sponsor (Part I): ARUP Laboratories*

Abstract (Part I): The American healthcare system is rapidly evolving into a system with a greater focus on value and quality. All clinical service lines must too evolve and demonstrate their impact on improved quality and efficiencies within their health system. The laboratory has historically been the silent player on the clinical care team—a silent player that impacts the majority of clinical decisions. We must advance the visibility of the lab to the forefront to fully demonstrate the value that is “in the basement”. This can be achieved through Laboratory Stewardship. **Objectives (Part I):** Upon completion of this course, the participant will be able to: 1) understand the role of the lab and the laboratorian in the evolving health care system; 2) list and discuss successful techniques for establishing Laboratory Stewardship and how to integrate into clinical & quality oversight committees; and 3) identify high-impact opportunities where the lab has a direct effect on downstream care quality and efficiency. **Abstract (Part II):** Until December 19, 2007, only Clinical Laboratory Scientists (CLS) were recognized as testing personnel in California laboratories. A newer category of laboratory testing personnel known as Medical Laboratory Technicians (MLT) had begun to be recognized as testing personnel in California as well. In addition, regulations certifying Phlebotomists (CPT) have been in effect since 2003. Official recognition of these categories provides a “career ladder” within our laboratories and will help staff laboratories with appropriately trained personnel. Licensure of mid-level testing personnel as MLTs will positively impact the laboratory personnel workforce shortage in California, but will not solve all of our staffing issues nor take the place of the CLS. **Objectives (Part II):** Upon completion of this course, the participant will be able to: 1) discuss the critical role laboratories play in the delivery of healthcare; 2) recognize the five major categories of laboratory personnel; 3) discuss laboratory test complexity; 4) discuss several tests and procedures that may be performed by California MLT; and 5) describe work scenarios where MLT are integrated in California laboratories.

172-200 (3.0 CE) - Afternoon: 1:00 – 4:00 PM (*Note: you must attend both parts to receive credit*)

Ursula Klause, PhD | Senior Scientific Affairs Manager | Roche Diagnostics Corporation | Indianapolis, IN

Theresa Joseph, RN | Medical Scientific Liaison, RN | Roche Diagnostics Corporation | Indianapolis, IN

Part I: Women's Health – Biomarkers in Clinical Practice and Future Approaches

Part II: Troponin: The New Generation, and Cardiorenal Syndrome: The Heart-Kidney Connection

Level (Part I): Basic; Level (Part II): Intermediate | *Sponsor of both parts: Roche Diagnostics Corporation*

Abstract (Part I): The presentation will cover diseases that are specific to female patients (breast- and ovarian cancer) or have a significantly higher prevalence in women (osteoporosis) or are related to pregnancy (preeclampsia). We will discuss the use of biomarkers for screening, diagnosis, therapy monitoring or recurrence testing and how new biomarkers might influence and improve clinical practice. **Objectives (Part I):** Upon completion of this course, the participant will be able to: 1) describe the prevalence, morbidity, and mortality of diseases that are specific to women; 2) explain the pathology of these diseases; 3) define approaches for the use of biomarkers for diagnosis or patient management; and 4) list new biomarkers for these diseases and their possible role in clinical practice.

Abstract (Part II): Myocardial infarction (heart attack) is one of the leading causes of death in the United States. Troponin has long been identified as the preferred biomarker, as an aid in the diagnosis of myocardial infarction. This session will cover the history and evolution of the cardiac biomarkers, especially Troponin, including release kinetics, diagnostic and prognostic capabilities, analytical and clinical considerations, and the advent of highly sensitive Troponin assays. Cardiorenal syndrome will also be covered; discussion will include the close relationship between the heart and kidneys, shared risk factors for cardiovascular and renal disease, and the utility of Troponin in patients with renal disease. **Objectives (Part II):** Upon completion of this course, the

participant will be able to: 1) describe the history of cardiac biomarkers used in the diagnosis of myocardial infarction; 2) identify changes that have occurred in troponin assays over time and the rationale behind the changes; 3) define Cardiorenal Syndrome; and 4) identify common risk factors for renal disease and cardiovascular disease.

SUNDAY, APRIL 23, 2017 – REGISTRATION: 7:45 – 8:30 AM

172-300 (3.0 CE) - Morning: 8:30 – 11:30 AM

James F. DeMase, BS | Senior National Technical Sales Manager | Precision BioLogic, Inc. | Dartmouth, Nova Scotia, Canada

Hemostasis is Unique – The Cascade, the Diseases, and the Tests – All Mixed Up

Level: Intermediate | Sponsor: Precision BioLogic, Inc.

Abstract: This session will review the basics of hemostasis in the coagulation lab and enhance the basic understanding of hemostasis and thrombosis, describing the stages of hemostasis as well as common bleeding and clotting disorders. We will define hemophilia, and review its symptoms, diagnosis, and common treatments. The methods and clinical application of mixing studies will be outlined. Case studies will be used throughout the workshop to help attendees relate their learnings to real-world situations.

Objectives: Upon completion of this course, the participant will be able to: 1) describe the stages of hemostasis as well as common bleeding and thrombotic disorders; 2) explain the types of hemophilia, symptoms, diagnosis, and common treatments; and 3) relate the methods and clinical application for a mixing study and the steps to perform one.

172-400 (3.0 CE) - Afternoon: 1:00 – 4:00 PM

Paul Riley, PhD, MBA | Scientific Business Development Manager | Diagnostica Stago, Inc. | Parsippany, New Jersey

Disseminated Intravascular Coagulation (DIC) and Thrombosis: The Critical Role of the Lab

Level: Intermediate | Sponsor: Diagnostica Stago, Inc.

Abstract: Disseminated Intravascular Coagulation (DIC) is a serious hypercoagulable disorder which can occur in hospitalized patients which can result in a high degree of morbidity and mortality. DIC is a confusing disorder from both diagnostic and therapeutic standpoints resulting from several unrelated diseases which can trigger DIC, along with a lack of uniformity in clinical manifestation, laboratory diagnostic practices, and consensus on patient management. The laboratory, by implementing the correct panel of testing methodologies, can greatly assist clinicians in patient management. This lecture will describe the laboratory testing in order to illuminate this condition for laboratory scientists. **Objectives:** Upon completion of this course, the participant will be able to: 1) describe the basic pathophysiology of DIC; 2) demonstrate a diagnostic and management approach for DIC; 3) compare markers of thrombin & plasmin generation in DIC, including D-Dimer, Fibrin Monomers/soluble fibrin, and fibrin degradation products (FDPs); and 4) correlate DIC theory and testing to specific clinical cases.

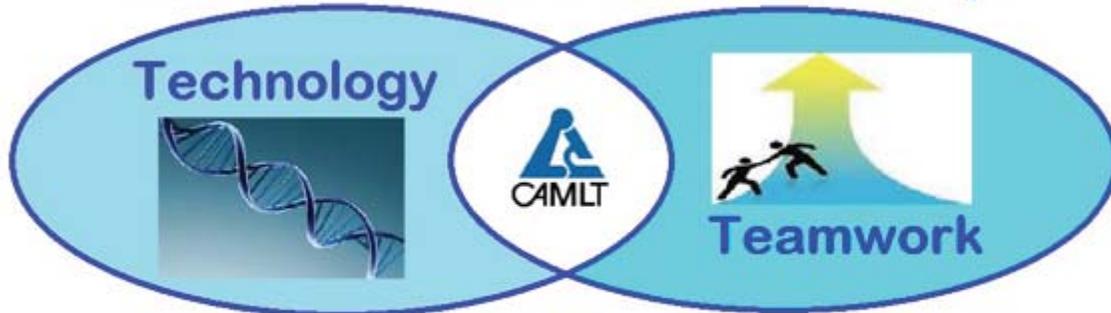
2017 Spring Seminar North – Registration Form

April 22 & 23, 2017

Location: UC Davis Medical Center Campus
School of Medicine Building
4610 X Street, Sacramento, CA 95817

<p>Name: _____</p> <p>CLS/MLT License / CPT Cert. #: _____</p> <p>Address: _____</p> <p>City: _____ State: _____ Zip: _____</p> <p>Daytime Phone: _____</p> <p>Preferred Email: _____</p> <p>Employer: _____</p> <p>Work Address: _____</p> <p>City: _____ State: _____ Zip: _____</p> <p>Work Phone: _____</p> <p>CAMLT Member? [<input type="checkbox"/>] Yes [<input type="checkbox"/>] No</p> <p>Member # / Chapter: _____</p> <p>If member, do you have 20/20 Option? [<input type="checkbox"/>] Y [<input type="checkbox"/>] N</p>	<p style="text-align: center;">Check Your Selected Courses – 3.0 CE Each (Note: if a session is in two parts, you must attend both to receive credit)</p> <p>Saturday, AM – 4/22/2017 (8:30 – 11:30 AM) [<input type="checkbox"/>] 172-100 – Part I: From the Basement to the Bedside: The Lab's New Role in Improving Patient Care Through Laboratory Stewardship Part II: Improving the Laboratory Experience: CLS and MLT working together</p> <p>Saturday, PM – 4/22/2017 (1:00 – 4:00 PM) [<input type="checkbox"/>] 172-200 – Part I: Women's Health – Biomarkers in Clinical Practice and Further Approaches. Part II: Troponin: The New Generation and Cardiorenal Syndrome: The Heart-Kidney Connection</p> <p>Sunday, AM – 4/23/2017 (8:30 – 11:30 AM) [<input type="checkbox"/>] 172-300 – Hemostasis Is Unique – The Cascade, the Diseases and the Tests – All Mixed Up</p> <p>Sunday, PM – 4/23/2017 (1:00 – 4:00 PM) [<input type="checkbox"/>] 172-400 – Disseminated Intravascular Coagulation (DIC) and Thrombosis: The Critical Role of the Lab</p>												
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<p>FEE SCHEDULE: Course fees are based upon a base registration fee of \$10.00, plus a fee based upon the number of continuing education units.</p>	<ul style="list-style-type: none"> • Make check payable and mail to: CAMLT 39656 Mission Boulevard Fremont, CA 94539-3000 • FAX: 510.792.3045 • Scan/email to: office@camlt.org <p style="text-align: center;">Questions? Contact CAMLT Executive Office: 510.792.4441</p> <p style="text-align: center;">Returned checks subject to a \$20 fee</p> <p style="text-align: center;"><u>Pre-Registration Deadline:</u> <u>Thursday, April 13, 2017 at Noon</u></p> <p style="text-align: center;">(Registrations received after this date will not be processed and certificates will be mailed post-seminar. Please register on-site.)</p>												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Registration Fee:</td> <td style="width: 20%; text-align: right;">\$10.00</td> </tr> <tr> <td># of CE workshops _____ x \$ _____ (example: 2 x \$45.00 = \$90.00)</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>Members: \$45.00 per 3 CE workshop (\$15.00/unit) Non-Members: \$75.00 per 3 CE workshop (\$25.00/unit) Student Member: Free</td> <td></td> </tr> <tr> <td>Subtotal:</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>Less 20/20 Option Discount (if applicable): (20% off registration & workshop fees if paid with membership)</td> <td style="text-align: right;">-\$ _____</td> </tr> <tr> <td>Total Due:</td> <td style="text-align: right;">\$ _____</td> </tr> </table>	Registration Fee:	\$10.00	# of CE workshops _____ x \$ _____ (example: 2 x \$45.00 = \$90.00)	\$ _____	Members: \$45.00 per 3 CE workshop (\$15.00/unit) Non-Members: \$75.00 per 3 CE workshop (\$25.00/unit) Student Member: Free		Subtotal:	\$ _____	Less 20/20 Option Discount (if applicable): (20% off registration & workshop fees if paid with membership)	-\$ _____	Total Due:	\$ _____	
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CAMLT - A Smart Partnership



78th Annual Meetings and Exhibits

September 15 - 17, 2017

Santa Clara Hilton

**Save the Date for: CAMLT 78th Annual Meeting and Exhibits
CAMLT – A Smart Partnership**

When: Friday-Sunday, September 15-17, 2017

Where: Santa Clara Hilton Hotel, Santa Clara

The CAMLT Board of Directors and the 2017 Convention Committee are working on plans for a great 2017 Convention.

The Theme: CAMLT – A Smart Partnership, will emphasize merging Technology with Teamwork.

A full schedule of Workshops will be complemented by:

- **Exhibits featuring the latest in Laboratory Technology as well as recruiters looking for new team members.**
- **The Student Forum bringing Clinical Laboratory Science Interns and other students together with Educators and CAMLT Leaders to shine a light on the upcoming members of California's Laboratory Team.**
- **The House of Delegates, the yearly meeting of the CAMLT Team to celebrate successes and plan for the future. And, best of all,**
- **Fun Nite and the Installation Banquet where you can relax and enjoy yourself!**

So Save The Dates - September 15, 16 and 17. We look forward to seeing you then!

HEMATOLOGY CASE STUDIES: PLATELETS

OBJECTIVES:

After completing this course the participant will be able to:

1. Differentiate among the causes of thrombocythemia.
2. Explain how to determine the platelet count when the count is above the upper reportable range of the analyzer.
3. Estimate the platelet count from the blood smear.
4. List the signs and symptoms of Essential Thrombocythemia.
5. Enumerate the causes of thrombocytopenia.
6. Discuss the causes of pseudothrombocytopenia.
7. Explain the methods of determining the causes of pseudothrombocytopenia.

Case #1

A 44-year-old woman comes in for a complete blood count (CBC) as part of a routine physical exam. The results from the hematology analyzer, Cell-Dyn 1700 ® (Abbott Diagnostics), are:

WBC	7.5 K/ μ L	RBC	4.22 M/ μ L
Lym	28.7 %	HGB	12.4 g/dL
MID	10.4 %	HCT	38.6 %
Gran	60.9 %	MCV	91.4 fL
		MCH	29.3 pg
PLT	>>>> K/ μ L	MCHC	32.0 g/dL
		RDW	13.5 %

MID cells may include less frequently occurring and rare cells correlating to monocytes, eosinophils, basophils, blasts, and other precursor white cells.

Questions:

1. What is abnormal about her CBC?
2. Which parts can be reported?
3. What procedures can be done regarding the abnormal result?

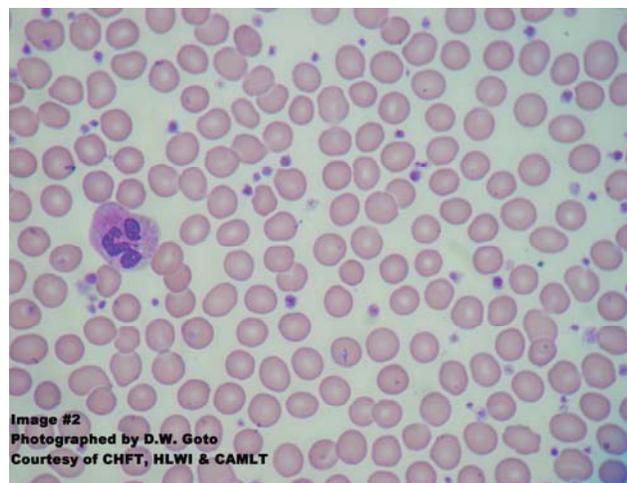
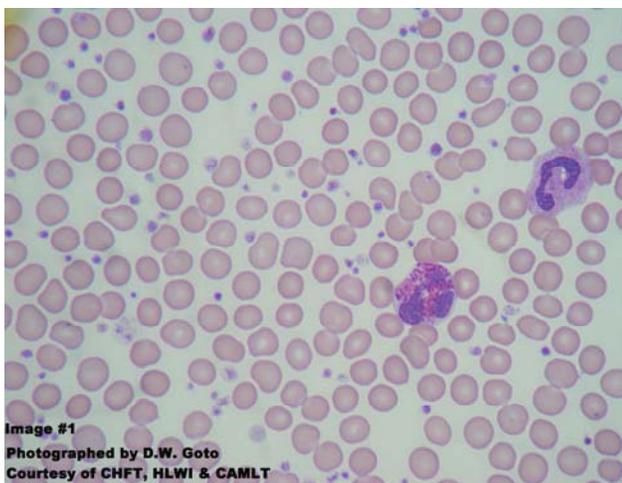
Answers:

1. The platelet count is above the upper reportable range.
2. The WBC histogram and 3-part differential are normal and can be reported. The RBC histogram is normal and can be reported.
3. To determine the platelet count:
 - a. Make a 1:1 dilution of the whole blood and re-run the platelet count. Correct the platelet count for the dilution.
 - b. Make a smear of the whole blood and examine for platelet morphology and numbers.

Discussion:

The platelet count on 1:1 diluted blood was 534, so the platelet count is $2 \times 534 = 1,068$ K/ μ L (normal is 150-400 K/ μ L).

On blood smears made from EDTA-blood and stained with a Romanowsky stain, platelets are round or oval, 2-4 μ m in diameter, and separated from one another. The platelet count can be estimated from the smear. At 1000x magnification (oil immersion), this is equivalent to about 7-30 platelets per oil immersion field (OIF). Count the number of platelets in 10 oil immersion fields. Divide the total by 10 to get the average number of platelets per field. Each platelet seen on the smear equates to approximately 15,000/ μ L. Multiply the average number per OIF to get the platelet estimate¹. See Image #1. In this case the average number of platelets per field was 70. The estimate equals $70 \times 15,000 = 1,050$ K/ μ L. Thus the platelet estimate derived from the smear in Images #1 and #2 correlates with the corrected platelet count of 1,068 K/ μ L.



The causes of increased platelet counts include:

- | | |
|-------------------------------------|-------------------------------|
| Inflammatory disorders | Iron deficiency anemia |
| Splenectomy | Chronic granulocytic leukemia |
| Polycythemia vera | Undetected cancer |
| Essential (primary) thrombocythemia | |

Since the patient had no symptoms, no history of splenectomy, and normal WBC and RBC hemograms, all except essential (primary) thrombocythemia can be eliminated or are unlikely.

Essential (Primary) Thrombocythemia²

Essential thrombocythemia (ET) is a myeloproliferative disease. These diseases are a group of disorders that share features that include the clonal overproduction of one or more blood cell lines. Clonal diseases begin with a mutation in one or more bone marrow cell lines. Myeloproliferative diseases include polycythemia vera, myelofibrosis, chronic granulocytic leukemia, and essential thrombocythemia.

In ET there is overproduction of megakaryocytes, the precursor to platelets (thrombocytes). Abnormalities in platelet aggregation and adhesiveness tests suggest defective platelet function³. In about half the patients with ET there is a mutation of the JAK2 (Janus kinase 2) gene in their blood cells. In the others the cause is unknown.

ET occurs mostly in adults. There are about 0.1 to 2.4 new cases per 100,000 in the U.S. each year. The disease does not ordinarily shorten life expectancy, but serious complications can occur, so the patient needs to be followed by a physician.

Many patients have no symptoms. In others signs, symptoms and complications of ET result from the increased numbers of platelets in the peripheral blood. Since platelets are involved in the process of clot formation in response to blood vessel injury, the most common complication of ET is blockage of blood vessels by excess platelets (thrombosis). Less often the increased platelets cause bleeding.

Signs, symptoms, and complications include:

- Burning or throbbing in the feet
- Headache, dizziness, and weakness or numbness on one side to the body or other signs of inadequate blood flow to the brain
- Thrombosis (abnormal clotting)
- Unexpected or exaggerated bleeding (infrequent, associated with very high platelet count)
- Enlarged spleen
- Complications of pregnancy

Diagnosis of ET may occur when a higher than normal platelet count occurs on a routine blood count (as with this patient), or on a blood count that is ordered on a patient who has a blood clot, unexpected bleeding, or an enlarged spleen and there is no other cause for the increased numbers of platelets. In ET the platelet count is over 600 K/ μ L blood and remains high in subsequent counts. Although the diagnosis cannot be made by laboratory tests alone, the following may be useful: JAK2 mutation in blood cells, slightly lower than normal blood hemoglobin and slightly higher WBC count, no evidence of other myeloproliferative diseases, and an examination of the bone marrow. The bone marrow will show a significant increase in megakaryocytes and masses of platelets.

Treatment of patients with ET is based on the risk of clotting or bleeding complications. If there are no signs or symptoms, the patient is seen for regular checkups. If the patient has high risk as determined by previous clotting or bleeding episodes, a history of a clot, cardiovascular risk factors--diabetes, high cholesterol, smoking, hypertension, obesity--therapy may be considered.

Drug therapy may include aspirin, hydroxyurea, anagrelide, or interferon alfa. Aspirin, although decreasing clotting, may increase the risk of bleeding. When the platelet count is very high and the patient suffers acute clotting, plateletpheresis may be done on an emergency basis.

This patient had no symptoms and was given follow-up appointments.

Case #2

A 38-year-old female inpatient has the following results on her initial complete blood count on Coulter Gen-S ® (Beckman-Coulter):

WBC	8.9 K/ μ L	RBC	4.86 M/ μ L
NE	57.9 %	HGB	14.4 g/dL
LY	33.4 %	HCT	42.5 %
MO	6.3 %	MCV	87.4 fL
EO	1.9 %	MCH	29.8 pg
BA	0.5 %	MCHC	34.0 g/dL
		RDW	12.5 %
		PLT	64 K/fL
		MPV	6.9 fL

Suspect/Definitive Messages/Flags:

Micro/Fragmented Red Cells

Giant Platelets

Platelet clumps

R flag on Platelet Count & MPV

Comments:

Do not verify platelets; review first and redraw if necessary

Questions

1. What is abnormal about the blood count?
2. Which parts of the CBC can be reported?
3. What would you do to investigate the abnormal result?

Answers:

1. The platelet count is abnormally low and there are flags for microcytic or fragmented RBC, giant platelets, or platelet clumps.
2. The WBC histogram and differential are normal and can be reported.
3. The platelet and RBC histogram patterns are consistent with platelet clumps, fragmented red cells, or microcytic red cells. Make and review the smear (See Image #3) for platelet clumps, fragmented red cells, or small red cells before verifying the platelet count.



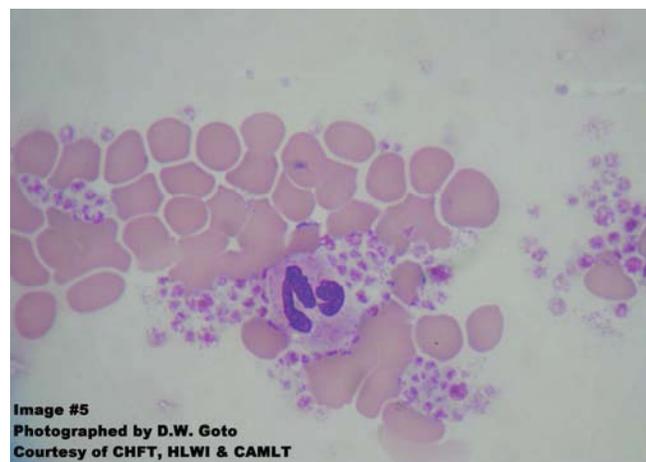
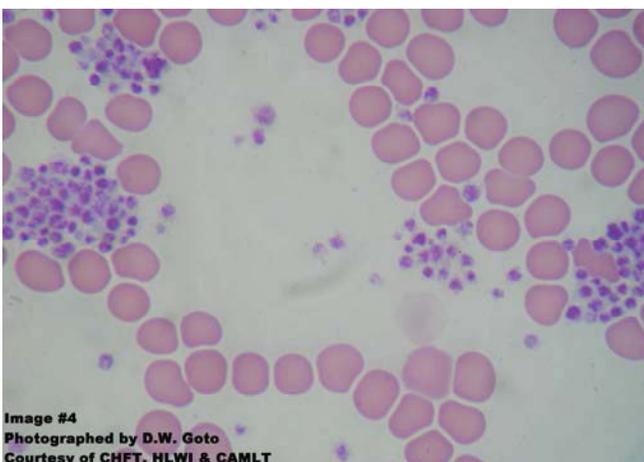
Discussion:

The platelet count was below normal, a condition known as thrombocytopenia. The causes of decreased platelet counts are⁴:

- Decreased Production
 - Leukemia or lymphoma
 - Cancer treatments such as radiation or chemotherapy
 - Various anemias
 - Toxic chemicals
 - Medications: diuretics, chloramphenicol
 - Viruses: chickenpox, mumps, Epstein-Barr, parvovirus, AIDS
 - Alcohol in excess
 - Genetic conditions: Wiskott-Aldrich, May-Hegglin, Bernard-Soulier syndromes
- Abnormal distribution
 - Splenomegaly with sequestration in the spleen
- Increased destruction
 - Autoimmune diseases: Idiopathic (immune) thrombocytopenic purpura
 - Medications: quinine, antibiotics containing sulfa, Dilantin®, vancomycin, rifampin, heparin-induced thrombocytopenia
 - Surgery: man-made heart valves, blood vessel grafts, bypass machines
 - Infection: septicemia
 - Pregnancy: about 5% of pregnant women develop mild decrease
 - Thrombotic thrombocytopenic purpura
 - Disseminated intravascular coagulation
- Pseudothrombocytopenia
 - Partial clotting of specimen
 - EDTA-platelet clumping
 - Platelet satellitism around WBCs
 - Cold agglutinins
 - Giant platelets

Results of the blood smear evaluation (Case #2, Image #3):

The smear showed numerous platelet clumps (make sure to examine the edges of the smear since the clumps may migrate there; Images #4 and #5). There were no giant platelets, fragmented RBC, or small RBC. To obtain an automated platelet count, obtain a blood specimen drawn into Sodium Citrate (NaCitrate).

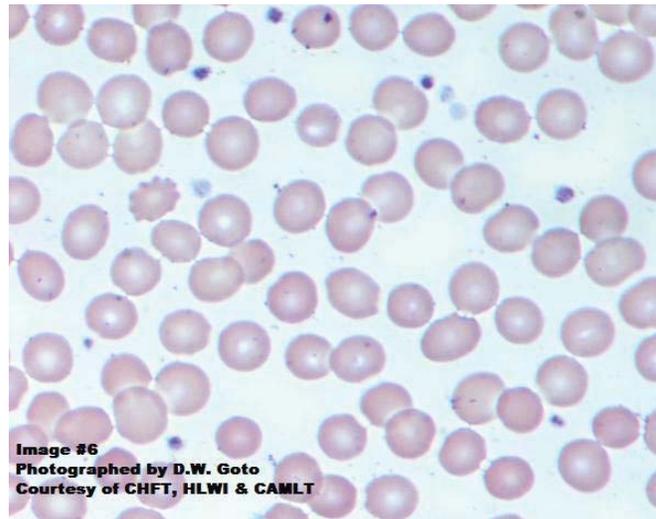


Results of the platelet count on the NaCitrated specimen (Case #2, Image #6):

There were no flags or error messages. The platelet count of 289 K/ μ L needs to be corrected for the dilution of the blood by liquid NaCitrated as follows:

$$289 \times 1.1 \text{ (dilution factor)} = 318 \text{ K}/\mu\text{L}$$

The diagnosis is EDTA-platelet clumping. This condition may persist for decades without any evidence of abnormal hemostasis. EDTA-platelet clumping needs to be recognized and documented in the patient's chart to prevent unnecessary treatment for thrombocytopenia, and to guide future laboratory tests.



Causes of pseud thrombocytopenia are as follows:

Partial clotting of the specimen:

With a low platelet count the first procedure is to examine the specimen for evidence of clotting as well as to make a smear and look for evidence of platelet clumping. When blood clots, platelets adhere to the clot and are removed from the fluid blood. If evidence of micro-clots or clumping is seen, obtain a new specimen.

EDTA-Induced Platelet Agglutination (EIPA) (EDTA-platelet clumping):

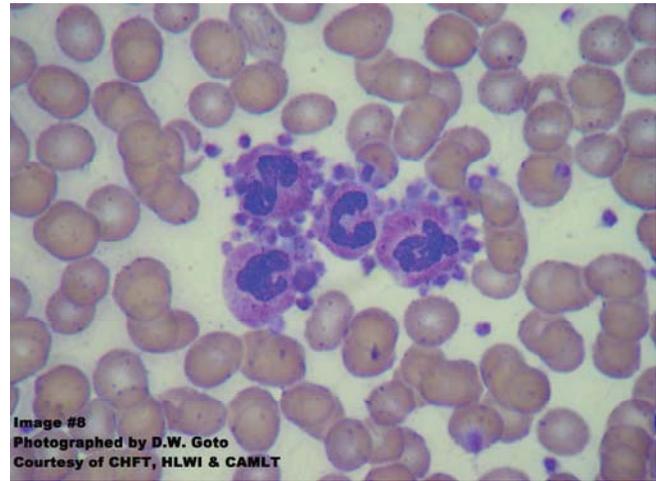
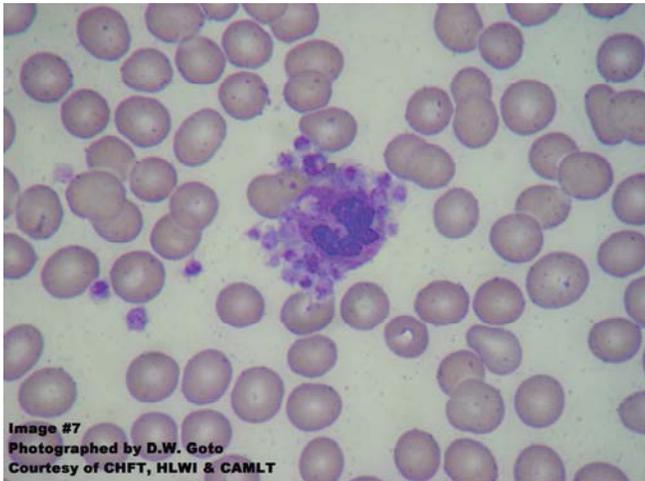
EIPA is an *in-vitro* phenomenon due to the presence of naturally occurring autoantibody against a cryptantigen on the GPIIb/IIIa platelet receptor. Under normal *in vivo* conditions this antigen is not accessible for antibody binding (crypt or hidden antigen). When calcium is chelated by EDTA, the GPIIb protein undergoes a structural change that exposes the cryptantigen. The antibody can then bind to the exposed site and crosslink to other platelets causing agglutination. The condition occurs in 0.1 to 2% of hospitalized patients⁵.

Platelet satellitism

In this phenomenon platelets rosette around neutrophils or rarely around other cells. The satellite platelets are not counted by automated cell counters, resulting in spurious thrombocytopenia. Platelet satellitism is caused by EDTA-dependent antiplatelet and antineutrophil IgG antibodies in the patient's plasma (5).

The phenomenon has not been associated with any disease state or drug and is thought to be benign.

The diagnosis is made by making a blood smear and looking for platelet rosettes: Images #7 and #8. This needs to be documented in the patient's chart.

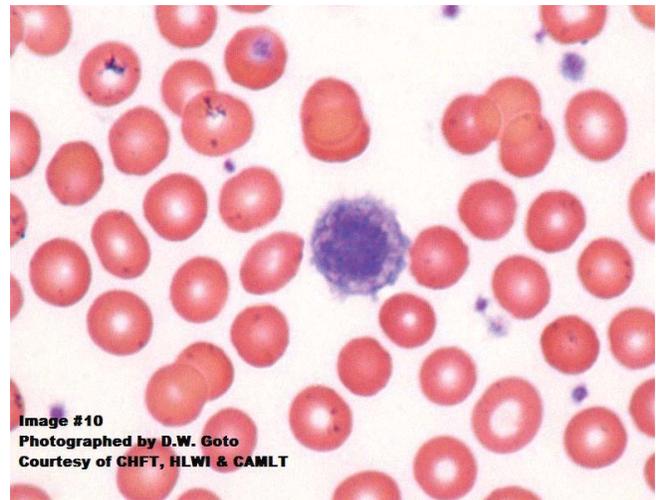
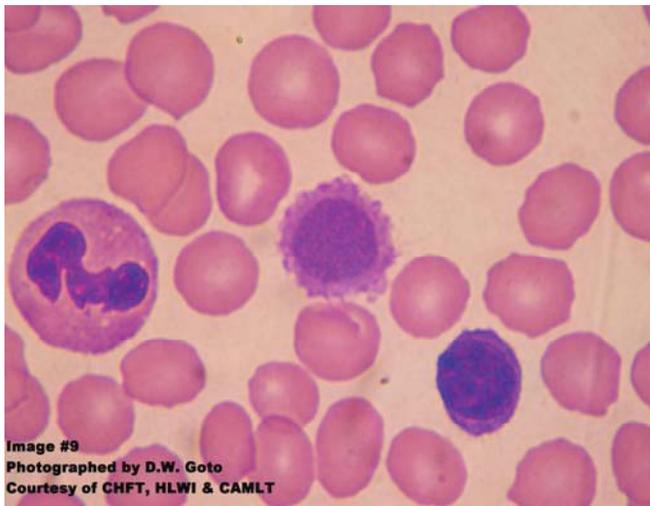


Cold agglutinins

Spontaneous EDTA-independent agglutination associated with cold antibodies is rare. The condition should be considered when agglutination occurs in citrate and heparin as well as EDTA anticoagulants. This phenomenon is temperature dependent. The specimen should be maintained at 37° C or warmed to 37° C to obtain an accurate platelet count⁶.

Giant platelets

Giant platelets that are 36 fL or larger will be counted as red cells (See Images #9 and #10) in most automated electronic platelet counters, resulting in spuriously low platelet counts. Low platelet counts along with instrument flagging of giant platelets should prompt the operator to confirm the abnormal platelet count by blood smear review/platelet estimate or perform a manual platelet count. The confirmatory method of choice employs a manual platelet count using phase-contrast microscopy. Manual platelet counts include three steps: dilution of the blood with simultaneous lysis of RBCs with ammonium oxalate; sampling the diluted suspension into a measured volume using a hemocytometer; and counting the platelets in that volume¹. When significant numbers of giant platelets are counted as red cells, spuriously low platelet counts cannot be reported. The platelet estimate or manual platelet count must be reported in the place of automated platelet count.



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Review Questions

Course #DL-985

Chose the **one** best answer.

1. 360 platelets are counted in 10 oil immersion fields on a conventionally made blood smear. The platelet estimate is
 - a. 36,000/ μ L
 - b. 54,000/ μ L
 - c. 360,000/ μ L
 - d. 540,000/ μ L
2. If the number of platelets is above the reportable range on an automated instrument, the first recommended procedure is to
 - a. prepare a smear and count the number of platelets/10 OIF
 - b. do a manual platelet count
 - c. report the number of platelets beyond the reportable range without further analysis
 - d. dilute the blood and run the diluted blood through the automated instrument
3. Causes of increased platelet counts include all but which of the following:
 - a. splenectomy
 - b. platelet satellitism
 - c. Chronic granulocytic leukemia
 - d. Essential Thrombocythemia
4. The most common symptom of Essential Thrombocythemia is
 - a. thrombosis
 - b. bleeding
 - c. burning of the feet
 - d. enlarged spleen
5. Of the following causes of thrombocytopenia which is classified as increased destruction?
 - a. chickenpox
 - b. disseminated intravascular coagulation
 - c. chloramphenicol
 - d. May-Hegglin Anomaly
6. EDTA induced platelet aggregation is caused by
 - a. fibrin strands in the blood specimen
 - b. EDTA bridges between platelets
 - c. a cryptantigen-antibody reaction
 - d. reaction between platelets and the glass slide

7. A blood specimen is taken in NaCitrate. The platelet count on an automated instrument is 305,000/ μ L. What is the corrected platelet count?
 - a. 33,550/ μ L
 - b. 277,300/ μ L
 - c. 335,500/ μ L
 - d. 305,000/ μ L

8. A blood smear is made on a patient with a low platelet count. Platelets are seen attached to the periphery of neutrophils. Which of the following applies to this finding?
 - a. Neutrophils are attempting to phagocytose platelets.
 - b. The patient may exhibit bleeding problems.
 - c. It is found in patients who are taking sulfonamides.
 - d. It is caused by an EDTA dependent antiplatelet-antineutrophil antibody.

9. The best part of the smear to see agglutinated platelets is
 - a. the edge
 - b. the central part
 - c. the thick part
 - d. agglutinated platelets are not seen on smears

10. Cold agglutinin-caused platelet agglutination can be diagnosed by
 - a. drawing blood into NaCitrate.
 - b. maintaining blood at 37° C.
 - c. drawing blood into heparin.
 - d. cooling the blood to 15° C.

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DL-963	Patient Identification [B]	DL-905	The Bug Everyone Has/ Epstein-Barr Virus Case Study [B]		
DL-958	A Plaque on U.S. [B]				
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&

Answer Sheet

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Home Address: _____

City: _____ State: ____ Zip: _____

Home Tel: (____) _____ -- _____ X _____

Work Tel: (____) _____ -- _____ X _____

Employed at: _____

CDPH License/Certificate # _____

METHOD OF PAYMENT:

() Member () Non-member

() Check Payable to: CAMLT
(Returned checks subject to a \$20 fee)

() VISA or () MasterCard (indicate card type)

Card #: _____ Exp. Date: _____

3 digit security code on back of card: _____

Signature: _____

Course Title: _____

Course Number: _____ - _____

SIGNATURE (REQUIRED FOR PROCESSING)

circle the one best answer

1. a 7. a 13. a 19. a 25. a
b b b b b
c c c c c
d d d d d

2. a 8. a 14. a 20. a 26. a
b b b b b
c c c c c
d d d d d

3. a 9. a 15. a 21. a 27. a
b b b b b
c c c c c
d d d d d

4. a 10. a 16. a 22. a 28. a
b b b b b
c c c c c
d d d d d

5. a 11. a 17. a 23. a 29. a
b b b b b
c c c c c
d d d d d

6. a 12. a 18. a 24. a 30. a
b b b b b
c c c c c
d d d d d

Distance Learning Evaluation Form

This evaluation form MUST BE RETURNED TO CAMLT along with your review questions. Your comments help us to provide you with better continuing education materials in the home study format. We welcome and encourage any additional comments. Please respond to the following statements by circling the number that agrees with your assessment of the statement with "5" meaning you strongly agree, "4" meaning you agree, "3" meaning you have no opinion, "2" meaning you disagree and "1" meaning you strongly disagree.

1. Overall, I was satisfied with the quality of this course.
5 4 3 2 1

2. The objectives of this course were met.
5 4 3 2 1

3. Difficulty was consistent with the no. of CE hours.
5 4 3 2 1

4. I will use what I learned from this course.
5 4 3 2 1

5. It took me _____ hours to complete this course.

6. What did you like or dislike about this program?

California CLS/MLT Licensure Examination Review Seminars 2017**

This program was initially held in 2004 and repeated in 2005-16. Evaluation of the California CLS and MLT exam results show that participants in our review classes passed the exam at significantly higher rates than historical passing rates. Therefore, CAMLT will be presenting review sessions in 2017. These seminars are directed toward persons preparing for the California CLS or MLT licensing and/or certifying examinations and licensed individuals in need of a comprehensive review.

This review seminar is not eligible for continuing education credit for current licensees.

Dates	Presentation Location	Time	Cost
August 12, 13, 26, 27 & September 9, 10 Sat & Sun	John Muir Medical Center (Concord) 2540 East Street Concord, CA	8:30am - 6pm all days	\$80 per day or \$375 for all 6 days

Additional information, exact locations of seminars, seminar abstract, registration forms, and related educational/course material for purchase are updated regularly at www.camlt.org and click on the Education and then the Examination Review Seminars course link.

****Sponsored in part by: John Muir Health**

Request for Nominations for 2017-2018 State Offices and Committees

Nominations are now being accepted for CAMLT State Officers and Committee Chairpersons. If you are interested in serving in a State office as a member of the Board of Directors, or in a State Committee Chairperson position, or know of someone who is a good candidate, complete this form and submit to Alicia Santos, Nominations Chairperson.

Deadline for submission is **July 15, 2017** to allow time for the Nominations Committee to determine eligibility and to contact the prospective candidate. Please include your name, address, telephone number and e-mail address. Submit to:

Alicia Santos
952 Monica Way
Walnut, CA 91789
 e-mail: alicia.santos@cshs.org
 or
 the CAMLT office at office@camlt.org

The following positions are open:

- President -Elect (one-year term)**
- Treasurer (two-year term)**
- Secretary (one-year term)**
- District I Consultant (two-year term)**
- District III Consultant (two-year term)**
- District V Consultant (two-year term)**
- Bylaws Chair (two-year term):**
- Judicial Committee (two-year term) – Two Positions**
- Nominations Committee (one-year term) – Five Positions**
(Districts I through V)



California Association for Medical Laboratory Technology Membership Application

Personal Information:

Name _____

Check one: () Ms. | () Mrs. | () Mr. | () Dr.

Address _____

City _____ State ____ Zip _____

LFS License/Certificate # _____

Day Phone _____

Preferred Email address:

Check here to opt out of email list

Employment Information:

Employer _____

Address _____

City _____ State ____ Zip _____

Work Phone _____

CAMLt asks you to contribute to one or both of these worthwhile entities:

LAB-PAC

The CAMLT Political Action Committee helps your association advocate on behalf of you and your profession. Help support quality clinical laboratory medicine in the California legislative arena.

LAB-PAC contributions are NOT tax deductible.

You must be a U.S. citizen to donate.

Education and Research Foundation

Your tax deductible contribution supports scholarship programs, outreach efforts and students pursuing careers in the clinical laboratory sciences.

Separate checks should be enclosed for each of these worthy causes.

Applicants are considered for membership in the category which meets their maximum qualifications.

I declare that in making application for membership, I have met the qualifications listed for the category to which I am applying.

Applicant Signature _____

Recruiter (if known) _____

CAMLt's new address as of July 10, 2015:

39656 Mission Blvd., Fremont, CA 94539

Scan/email to: office@camlt.org

Fax to: 510-792-3045 Voice Phone: 510-792-4441

Membership Categories:

Active - \$120 annually

An individual who 1) Holds a license or certification in a clinical laboratory profession issued by the California Department of Public Health or 2) Holds a baccalaureate degree from an accredited college or university and is eligible to sit for a CDPH approved examination; or 3) Holds a Masters or Doctorate degree in science, education or administration and is actively employed in clinical laboratory science.

Collaborative - \$65 annually

An optional special non-voting, non-office holding membership category open to licensed Medical Laboratory Technicians or Certified Phlebotomy Technicians, who desire to support the association. All other membership benefits are afforded. These members are also eligible to apply for active membership if they desire to vote and/or hold office in the association.

Associate - \$75 annually

An individual who has an interest in the field of clinical laboratory science and/or supporting the purposes or goals of CAMLT, but is not otherwise eligible for membership.

Student - \$10 annually

An individual who possesses a valid training license from Laboratory Field Services or who is enrolled in an LFS approved program leading to licensing as a CLS, or MLT or certification as a CPT. Students at accredited universities or colleges that lead to eligibility for licensure or certification from LFS are also eligible to join as student members.

Lifetime - \$1250 one time fee

Meets Active member requirements and submits the one time application fee.

20/20 Option - Additional \$20 annually

An additional \$20 payment at the time of application or renewal entitles the member a 20% discount on CAMLT state sponsored C.E. fees for the year (not applicable to Distance Learning).

Membership Dues _____

20/20 Option _____

Total payable to CAMLT _____

LAB-PAC Contribution (separate check) _____

E & R Foundation Donation (separate check) _____

AUTOMATIC RENEWAL AVAILABLE! You now have a convenient new option to pay your CAMLT membership dues!

Automatic renewal: Credit card listed will be charged on the renewal date each year for the same member category. Notice of renewal will be sent fifteen (15) days before the charge is entered to allow for changes in member category or updates to credit card information.

Sign here to enroll for the automatic renewal option: _____ Date: _____

Checks to: CAMLT, LAB-PAC and/or E & R as appropriate - OR -

Credit Card Payment: Visa Master Card

Card# _____ Exp. _____

Three-digit security code (on back of credit card): _____

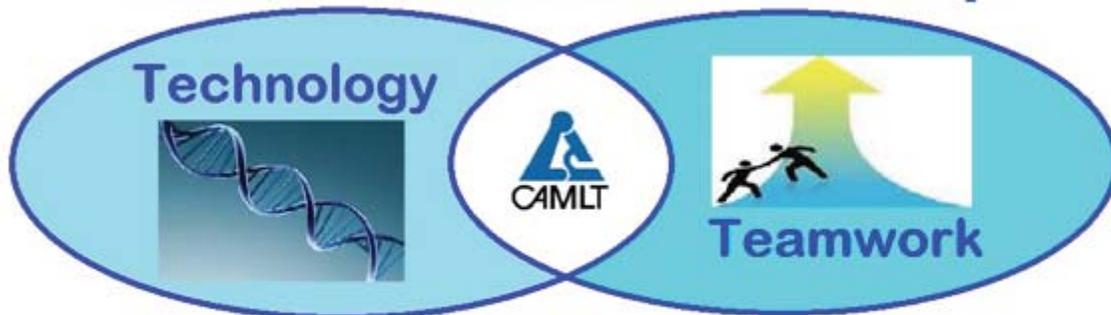
Date _____ Signature _____

2017 CONTINUING EDUCATION CALENDAR

Program planning in progress
Watch www.camlt.org/calendar for details

- April 22-23 Spring Seminar North
UC Davis Medical Center, Sacramento
- September 15-17 CAMLT's 78th Annual Meeting, Exhibits & Workshops
Hilton Santa Clara

CAMLT - A Smart Partnership



78th Annual Meetings and Exhibits

September 15 - 17, 2017
Santa Clara Hilton

WANT MORE INFORMATION? CONTACT:

TEL: 510/792-4441

FAX: 510/792-3045

WEBSITE: WWW.CAMLT.ORG

CAMLT EXECUTIVE OFFICE
39656 Mission Blvd.
FREMONT, CA 94539-3000