



# Implementation of integrated hematopathological services: to improve patient care and reduce cost.

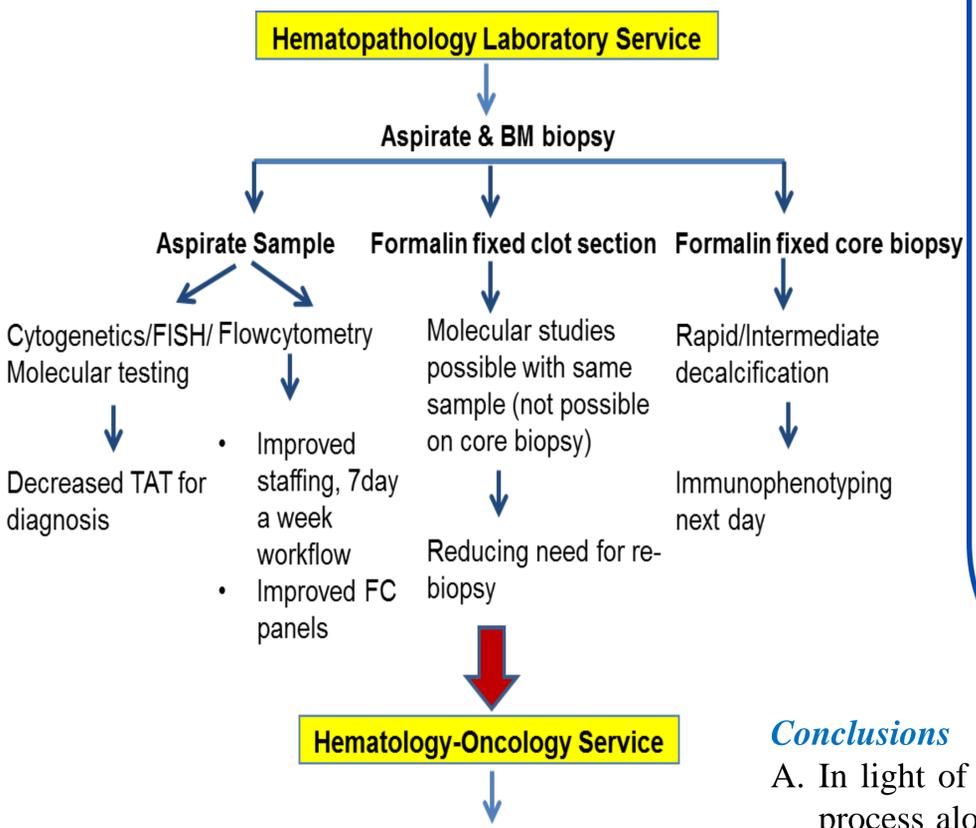
Ananya Datta Mitra<sup>1</sup> MD, Adam Stelling<sup>1</sup> MD, Saba Ali<sup>1</sup> MD, David Sun<sup>2</sup> MD, Dennis Dwyre<sup>1</sup> MD, Jeffery Gregg<sup>1</sup> MD, Helen Chew<sup>2</sup> MD, Hooman Rashidi<sup>1</sup> MD

<sup>1</sup>Department of Pathology & Laboratory Medicine, University of California Davis Medical Center, Sacramento, California

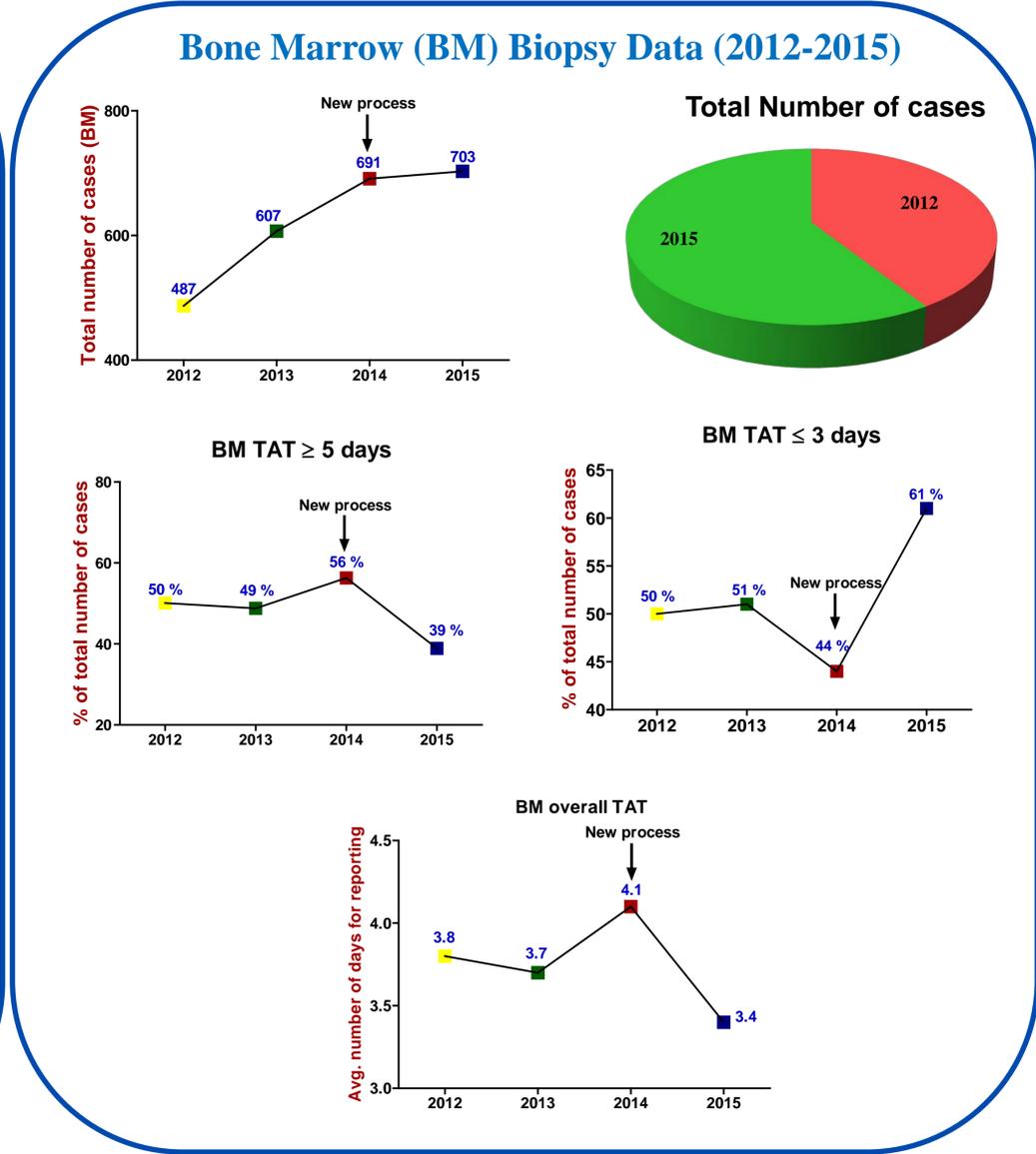
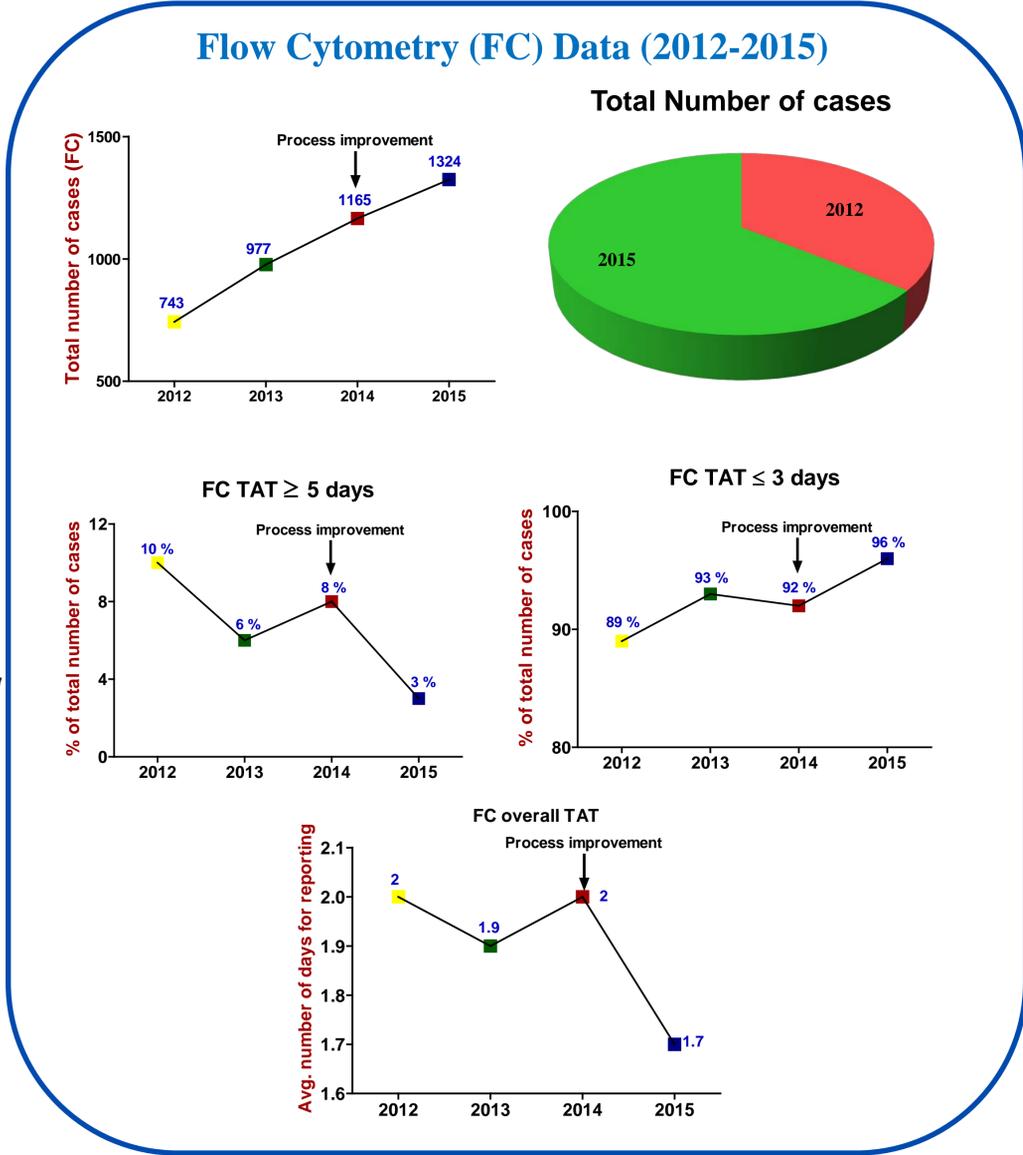
<sup>2</sup>Department of Internal Medicine, Division of Hematology and Oncology, University of California Davis Medical Center, Sacramento, California

## Clinical Problem

Effective management of patients with hematologic malignancies depends upon prompt and precise diagnosis. In most instance, planning appropriate treatment according to disease stage and patient prognosis requires trephine bone marrow (BM) biopsies. Diagnostic delay as well as the potential for repeated bone marrow biopsies due to specimen inadequacy or poor quality can cause patient dissatisfaction and can be deleterious for both patients and their families and potentially delay care.



- Early diagnosis → Patient satisfaction
- Reduced rate of BM re-biopsies → Improved patient Quality of life
- Early treatment → Reduced hospital stay → Reduced hospital cost
- Change of send out testing from ARUP/Mayo to Neogenomics → Decreased cost to hospital system



## Conclusions

- A. In light of a marked increase in the overall volume of biopsies and FC, the rapid decalcification process along with several process improvements in FC have reduced the turn-around time (TAT) for the final diagnosis (from 2 day to 1.7 day for FC and from 4 days to 3.4 days for BM).
- B. Number of cases signed out within 3 days have significantly improved.
- C. Number of cases signed out exceeding 5 days have significantly been reduced.
- D. For FC cases, the number of cases signed out beyond 7 days no longer exists now.
- E. Lack of clot section in the past resulted in some delayed diagnosis and more importantly restricted molecular studies on the samples. The clot section improvements have not only helped in the diagnostic work up but also allowed molecular studies.
- F. In late 2015, due to a change in molecular send outs, > 50% of cases (59%) are now being 3<sup>rd</sup> party billed accounting for over \$270,000 in savings to UCDMC over the first 6 months.
- G. These new molecular send outs also showed a drastic improvement in molecular diagnosis TAT.

## Future directions

- A. Look at the process input and cost saving in molecular studies moving forward.
- B. Look at the inpatient cost saving as related to overall FC and BM TAT and molecular TAT improvements as noted above for our inpatient versus outpatient population.
- C. We will also look at the patient satisfaction data as it relates to the TAT enhancements.