

1125-G1-512      **Khairul Islam\*** ([kislam@emich.edu](mailto:kislam@emich.edu)), Mathematics Department, Ypsilanti, MI 48197. *Examples of Inquiry-Based Teaching and Learning: Applications with Public-use Cancer Data.*

Does cancer discriminate? How to justify any existence of discrimination? Can the discrimination, if exists, be attributable to gender or ethnicity? Such questions were asked while teaching fitting models in a Calculus - I or Introductory Statistics class, where optimization (maximum or minimum) criteria are being introduced. Other questions were asked as well for similar inquiries. Objectives were to assess the level of understanding of forms of models (linear and/or non-linear) being attempted in problem solving, and to see how students approach answering some pre-assigned questions. In this presentation, some examples and applications of model-based teaching and learning will be addressed using public-use cancer data, where students can be active learners guided by the instructor. Such approaches help students understand the underlying mathematical tools effectively, with positive attitudes towards further learning. (Received September 04, 2016)