A FOOT IN BOTH CAMPS: APPLYING PHILOSOPHY TO GENE CHIP VERSUS TRADITIONAL ASSESSMENTS OF KIDNEY TRANSPLANT BIOPSIES.

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Objectives: Traditional diagnostic assessment of kidney transplant biopsies using the Banff classification with semiquantitative lesion scoring has received extensive clinical validation over fifteen years, especially showing the value of intimal arteritis as a specific marker of acute rejection, but also using tubulitis and interstitial inflammation as less specific markers. Technology is providing new tools for both treatment and biopsy assessment of rejection - novel antirejection treatments such as lymphocyte depletion protocols that completely change the pathologic landscape – genomics approaches to biopsy analysis that open up a wealth of quantitative data and bring us closer to the basic elements of pathogenesis. So much is changing in both spheres that it seems desirable to employ an approach which takes nothing for granted and questions everything, the approach of classical philosophy, which we have used in the present study of transplant biopsies.

Methods: We compared histological analysis of renal allograft biopsy assessed by the Banff criteria to biological evidence of T cell mediated rejection assessed by Affymetrix microarrays and clinical evidence of rejection based on retrospective chart review in 30 biopsies for cause with tubulitis. We applied various philosophers' approaches to truth and meaning to "clinical truth", the diagnosis at the time of biopsy as assessed by chart review, and to what "seeing" means when we say we "see" biopsy evidence of specific disease processes, drawing from the writings of Dewey, Kierkegaard, Fromm, Foucault, Polanyi, Stempsey, and Beard.

Results: Questions of diagnosis when biopsy histopathology, gene chip analysis, and clinical data appear in conflict give rise to circular arguments, which are clarified and made easier to accept when philosophical concepts such as Socratic dialogue, tacit knowing, the epistemic gap, and 'thing knowledge' are applied. Cases where there is agreement on basic diagnosis but disagreement on severity or duration of the process also can be better understood applying these philosophical approaches to the data available from the three modalities; 30% of biopsy cases (9 of 30) had data in conflict and benefited from applying philosophy. Conclusions: Philosophy has not been much applied to mainstream medicine beyond bioethics. Its principles are useful in providing clarity in analysis of situations where new technology and traditional histopathology seem in conflict during the present metastable period in which it may be hard to decide which diagnostic modality to trust and how to combine very different sorts of information. One can imagine a future time when gene chip analysis is fully integrated into therapeutic decision-making (and a new Banff classification) and philosophy fully integrated into conceptualization in transplant medicine.