E-learning resources for radiology training: Is an ideal program available?

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Abstract : Objective and Rationale: Training of radiology residents hinges on practical, on-the-job training in all facets and modalities of diagnostic radiology. Although residency is structured to be comprehensive, clinical exposure depends on the case mix available locally and during the posting period. To supplement clinical training, there are several e-learning resources available to allow for greater exposure to radiological cases. The objective of this study was to survey residents and faculty on the usefulness of these e-learning resources. Methods: E-learning resources were shortlisted with input from radiology residents, Google search and online discussion groups, and screened by their purported focus. Twelve e-learning resources were found to meet the criteria. Both radiology residents and experienced radiology faculty were then surveyed electronically. The e-survey asked for ratings on breadth, depth, testing capability and user-friendliness for each resource, as well as for rankings for the top 3 resources. Statistical analysis was performed using SAS 9.4. Results: Seventeen residents and fifteen faculties completed an e-survey. Mean response rate was 54% ± 8% (Range: 14- 96%). Ratings and rankings were statistically identical between residents and faculty. On a 5-point rating scale, breadth was 3.68 ± 0.18, depth was 3.95 ± 0.14, testing capability was 2.64 ± 0.16 and user-friendliness was 3.39 ± 0.13. Top-ranked resources were STATdx (first), Radiopaedia (second) and Radiology Assistant (third). 9% of responders singled out R-ITI as potentially good but 'prohibitively costly'. Statistically significant predictive factors for higher rankings are familiarity with the resource (p = 0.001) and user-friendliness (p = 0.006). Conclusion: A good e-learning system will complement on-the-job training with a broad case base, deep discussion and quality trainee evaluation. Based on our study on twelve e-learning resources, no single program fulfilled all requirements. The perception and use of radiology e-learning resources depended more on familiarity and user-friendliness than on content differences and testing capability.