

Research paper 11

Analysis of immuno-histochemistry markers and costs incurred at a tertiary referral centre for precise cancer diagnosis

K. K. S. Lakshika¹, B. Y. Hettiarachchi¹, H. D. Wijesinghe^{1,2}, M. V. C. de Silva^{1,2}¹Centre for Diagnosis and Research in Cancer, University of Colombo, Sri Lanka²Department of Pathology, Faculty of Medicine, University of Colombo, Sri Lanka

Introduction and objective: Immunohistochemistry (IHC) though essential for diagnosis of difficult cases, incurs a heavy cost. This is an audit of utility and cost of IHC at a tertiary centre for cancer diagnosis.

Methodology: All cases referred to the Centre for Diagnosis and Research in Cancer (CeDARC), Faculty of Medicine, University of Colombo from January 2022 to May 2023 were reviewed. Details of IHC tests were obtained from laboratory records.

Results: From a total 265 cases received at CeDARC, 181(68.03%) required 941 IHC tests. Seventy-nine cases were received with initial IHC done at referring hospital (345 tests). Fifty-five required further IHC testing, whilst 102 had all IHC tests done at CeDARC (total=157 cases). An average of five tests were done per case (range 1-23). Estimated price per marker ranged from LKR8,140–25,900 with an estimated total cost of LKR10,103,540(181 cases) and an average cost of LKR55,820 per case(range=LKR8,620-251,300). The most often used IHC markers were Ki67(n=71), S100(n=42), PanCK(n=38), CD20(n=35), SMA(n=33), CD3(n=32), CD34(n=27), Desmin(n=26), CD10(n=23), and CK7(n=22). Of the tests done at CeDARC(n=596), 37.24%(n=222) were haematopathology, 14.93%(n=89) basic immunohistochemical, 13.75%(n=82) soft tissue, and 11.57%(n=69) breast and gynaepathology markers. Markers available only at CeDARC and utilized included IDH-1(n=18), IgG4(n=9), PAX-8(n=7), INI-1(n=7), SOX10(n=6), Glypican3, TLE-1(n=5 each), MDM-2, kappa, lambda(n=4 each), HBME-1, STAT-6, myeloperoxidase(n=3 each), DOG-1, BerEP4, Granzyme-B, SAL-4, ERG(n=2 each), c-myc and PD1(n=1 each).

Discussion and conclusion: The most used markers at CeDARC were haematopathology, basic immunohistochemical and soft tissue markers. Costs incurred for IHC testing in the diagnosis of the referred cases was considerable with an average cost of LKR55,820 per case.

Keywords: immunohistochemistry, referral centre, cancer diagnosis, cost

Corresponding author: Ms, KKS Lakshika
Centre for Diagnosis and Research in Cancer,
University of Colombo, Sri Lanka
kkslakshika96@gmail.com



This is an open access article licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/). (CC BY-SA 4.0), which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are attributed and materials are shared under the same license.