

Contents lists available at ScienceDirect

Journal of Cancer Policy



journal homepage: www.elsevier.com/locate/jcpo

Health diplomacy in action: The cancer legacy of the Good Friday Agreement

Mark Lawler^{a,b,*}, Richard Sullivan^c, Ghassan K. Abou-Alfa^{d,e,f}, Karen McCloskey^a, Debbie Keatley^b, Jennifer Feighan^b, William Dahut^g, Eibhlin Mulroe^{b,h}, Robert Ladner^{a,i}, Mohamed Genead^{j,k}, Maeve Lowery^{b,1}, James L. Gulley^m, Christopher J. Scott^{a,b}, Daniel B. Longley^{a,b}, Aedin Culhane^{b,n}, William M. Gallagher^{b,o}, Nick Orr^a, Stephen J. Chanock^p, Satish Gopal^q

^h Cancer Trials Ireland, Royal College of Surgeons in Ireland, Dublin, Ireland

- ° UCD School of Biomolecular and Biomedical Science, UCD Conway Institute, University College Dublin, Ireland
- ^p Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA

^q Center for Global Health, National Cancer Institute, Bethesda, MD, USA

ARTICLE INF	FΟ
-------------	----

Keywords: Good Friday Agreement Cancer Consortium Health diplomacy Cancer research impact

ABSTRACT

2023 marks the 25th anniversary of the Good Friday Agreement, which led peace in Northern Ireland. As well as its impact on peace and reconciliation, the Good Friday Agreement has also had a lasting positive impact on cancer research and cancer care across the island of Ireland. Pursuant to the Good Friday Agreement, a Memorandum of Understanding (MOU) was signed between the respective Departments of Health in Ireland, Northern Ireland and the US National Cancer Institute (NCI), giving rise to the Ireland – Northern Ireland – National Cancer Consortium, an unparalleled tripartite agreement designed to nurture and develop linkages between cancer researchers, physicians and allied healthcare professionals across Ireland, Northern Ireland and the US, delivering world class research and better care for cancer patients on the island of Ireland and driving research and innovation in the US.

2023 marks the 25th anniversary of the Good Friday Agreement, which led to the peace accord in Northern Ireland, ending 30 years of conflict. As well as its impact on peace and reconciliation, the Good Friday Agreement has had a lasting positive impact on cancer research and cancer care collaboration across the island of Ireland. Between 1990 and 1996 Northern Ireland was a challenging environment for people with cancer [1,2]. Cancer services were fragmented and there was wide variation in treatment provision. For example, 64 % of surgeons in Northern Ireland treating breast cancer performed less than 10 operations per year [2]. Northern Ireland had the poorest outcomes in the United Kingdom for the majority of cancers [3]. The situation in the Republic of Ireland was little better, with almost 40 centres treating

https://doi.org/10.1016/j.jcpo.2023.100448

Received 13 June 2023; Accepted 10 October 2023

Available online 14 October 2023

^a Patrick G Johnston Centre for Cancer Research, Queen's University Belfast, UK

^b All-Island Cancer Research Institute, UK

^c Institute of Cancer Policy, Global Oncology Group, King's College London, UK

^d Memorial Sloan Kettering Cancer Center, New York, NY, USA

^e Weill Medical College at Cornell University, New York, NY, USA

^f Trinity College Dublin, Dublin, Ireland

^g American Cancer Society, 3380 Chastain Meadows Pkwy NW, Suite 200 Kennesaw, GA 30144, USA

ⁱ CV6 Therapeutics (NI) Ltd, Belfast, UK

^j Aviceda Therapeutics Inc, Cambridge, MA, USA

^k Aviceda Glycotech Ltd., Belfast, UK

¹ Trinity St James Cancer Institute, Ireland

^m Center for Immuno-Oncology, Center for Cancer Research, National Cancer Institute, Bethesda, MD, USA

ⁿ Limerick Digital Cancer Research Centre, Health Research Institute, University of Limerick, Ireland

^{*} Corresponding author at: Patrick G Johnston Centre for Cancer Research, Queen's University Belfast, UK. *E-mail address*: mark.lawler@qub.ac.uk (M. Lawler).

^{2213-5383/© 2023} The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

breast cancer, most at low volumes [4]. This reflected a deficit in specialised cancer care in each jurisdiction. Research activities (for both discovery and clinical cancer research) were also at a low level across the island [1].

One trailblazing individual had the foresight to recognise that the Good Friday Agreement had the potential to transform cancer research and care on the island of Ireland. Professor Patrick (Paddy) Johnston had been based at the National Cancer Institute in Bethesda, and had just returned to Northern Ireland in the mid-1990s to Queen's University Belfast (QUB) with a vision for developing a comprehensive cancer research and care programme. He saw in the Good Friday Agreement an opportunity to initiate a step-change in cancer research and care on the island, by creating what, at the time, was a unique initiative, brokered between the governments of Ireland, Northern Ireland and the United States (US). Pursuant to the Good Friday Agreement, Paddy pioneered a ground-breaking health diplomacy initiative [5], to forge critical partnerships that would lead to the signing of a Memorandum of Understanding (MOU) in November 1999 at Government Buildings in Stormont, Northern Ireland between the respective Departments of Health in Ireland, in Northern Ireland and the US National Cancer Institute (NCI) [6].

This MOU gave rise to the Ireland – Northern Ireland – National Cancer Institute Cancer Consortium, an unparalleled tripartite agreement designed to nurture and develop linkages between cancer researchers, physicians and allied healthcare professionals across Ireland, Northern Ireland and the US, with the aim of delivering world class research and better care for cancer patients on the island of Ireland and driving research and innovation in the US. The core aim of the Consortium, captured in the MOU, was "to reduce cancer incidence and mortality on the island of Ireland through cross-border and transatlantic collaborations in cancer research and education" [6].

Paddy's hard work and ambitious vision for improving world class cancer research and care on the island of Ireland was realized in his lifetime. Reflecting on breast cancer and the scenario indicated above in 1995, enhanced screening, early detection and a reorganisation of breast cancer services contributed to a decrease in breast cancer mortality in Northern Ireland by 29.6 % by 2006, while by 2013, survival for breast cancer at 81.9 % was the highest in the whole of the UK [7]. An overall analysis of the impact of the Consortium that was performed in 2020 indicated that collaborative cancer research had doubled between scientists in Ireland and Northern Ireland and also with researchers in premier US cancer research institutions [8]. There had also been a significant increase in the quality of the cancer research, reflected in increased citations and higher journal impact factors [8]. A more recent analysis confirms the significant impact of the Consortium on joint publications between Ireland, Northern Ireland and the US, both in terms of quantity and quality [9].

With respect to training and capacity building, over 550 clinicians, allied health care professionals and scientists received high quality training at the NCI from 2000 to 2020 and returned to bolster cancer research and cancer care on the island of Ireland [8]. Critically, in the context of enhancing clinical cancer research and clinical care, over 30, 000 patients have been enrolled in cancer clinical trials in the last two and a half decades, saving thousands of lives and enhancing quality-of-life [8]. Thus, the Consortium has delivered something truly transformative for the island of Ireland that is recognised internationally [10]. In March 2023, a QUB-NCI Symposium took place at the NCI in Bethesda, showcasing a joint QUB-NCI Doctoral Training Programme in Precision Cancer Medicine, where students, supervised by both QUB and NCI mentors, are publishing papers in high impact journals and receiving international prizes for their work, boding well for the next 25 years of the Consortium [11].

We stand at a significant inflection point for cancer research and cancer care, not only on the island of Ireland, but also in the wider US and European context, made all the more urgent by the recent disastrous impact of the COVID-19 pandemic on cancer services and cancer

patients [12]. Crucially, we have shown through the recent Lancet Oncology European Groundshot Commission (the most comprehensive analysis of cancer research activity in Europe ever performed) that cancer patients treated in research-active hospitals have significantly better outcomes than those who are not, emphasising the imperative to deliver the very latest advances in cancer research directly to our patients [13]. The European Cancer Groundshot, which resonates strongly with and in support of the US Cancer Moonshot, also reimagines cancer research and its implementation for optimal clinical care [13]. From an Ireland - Northern Ireland - NCI perspective, the joint discovery research and its translation that we are espousing, allied to collaborative cancer clinical trials between Ireland, Northern Ireland and the US is compelling. Cancer knows no borders, neither should we [10]. On the island of Ireland, the creation of the All Island Cancer Research Institute (AICRI; https://www.aicri.org) is significant, and exemplifies shared values on the island. Universities and their associated clinical cancer centres are working together, developing ambitious goals and activities to reduce the burden of cancer. Such pan-island partnerships were unimaginable 25 years ago, and may not have been possible without Paddy's pioneering foresight to deliver a health diplomacy agenda.

The other big change has been in the area of patient advocacy and Patient and Public Involvement and Engagement (PPIE) in research. Whereas 25 years ago there was essentially no opportunities for patient or members of the public to have any say in the research agenda, organisations such as the Northern Ireland Cancer Research Consumer Forum and the Patient Voice in Cancer Research have been extremely active in ensuring that patients and public both make meaningful contributions to cancer research at all levels, while the PPIE subgroup of DATA-CAN, the UK's Health Data Research Hub for Cancer are an exemplar of how best to drive the patient and public agenda of influencing and enhancing cancer reseach and ensuring its timely implementation [14].

In April 2023, as part of the Agreement 25 Conference at QUB to recognise the 25th Anniversary of the Good Friday Agreement, we hosted a Cancer Showcase event, "Cancer Knows No Borders" [15] where we highlighted the substantial impact that the Good Friday Agreement has had on cancer research and cancer care on this island, highlighting not only the health benefits that have been delivered, but also the economic dividend that the Ireland – Northern Ireland – US partnership has and will continue to bring to this island. In this regard, nurturing the academia-industry-innovation intersect [1] is crucial, reflected in the Belfast Region Growth Deal and its ambition to deliver interdisciplinary Innovation Centres that address some of the most relevant health and life sciences challenges that we face as a society.

Advancing the cancer and health care agenda has been an integral element of the sustained peace, security, and justice on the island that have resulted from the Good Friday Agreement. Indeed, the fundamental importance of health in global political and economic stability was aptly demonstrated during the recent COVID-19 pandemic - healthy populations build healthy economies. It is estimated that the cost of cancer to the global economy will reach 25.2 trillion international dollars between 2020 and 2050, according to an analysis of 29 cancers across 204 countries [16].

Both the Ireland – Northern Ireland – National Cancer Institute Cancer Consortium and the All Island Cancer Research Institute will work together to expand cancer research and improve patient care and ensure cancer's place at the centre of public health policy on the island of Ireland, making us optimistic for what can be achieved in the next 25 years. Plans are in place to deliver an All Island – National Cancer Institute Doctoral Training Programme in Precision Cancer Medicine. Closer collaboration with Cancer Trials Ireland will explore the potential for transatlantic clinical trials. Three all island research programmes (AICRI-Start, the All Island e-Health Hub for Cancer and the All Ireland Cancer Liquid Biopsies Consortium are being supported through the North South Research Programme (NSRP), an initiative of the Shared Island Fund. Working together and in close cooperation with our prestigious US partner, we can be a formidable team, delivering unparalleled benefits, both for our citizens and for our societies. To paraphrase our dear departed friend Paddy Johnston, – "Dream no little dreams, for they stir not the hearts of men nor women". We need to be bold, we need to be ambitious and, most of all, we need to work together. We have an opportunity to do something that can be truly transformative for our planetary health – let's not shirk our global responsibility.

Declaration of Competing Interest

ML declares honoraria from Bayer, Carnall Farrar, Novartis, Pfizer and Roche unrelated to this work, GKA declares research support from Agenus, Arcus, Astra Zeneca, BioNtech, BMS, Elicio, Genentech/Roche, Helsinn, Parker Institute, Pertzye, Puma, QED, Yiviva, and consulting support from Astellas, Astra Zeneca, Autem, Berry Genomics, BioNtech, Boehringer Ingelheim, BMS, Eisai, Exelixis, Fibriogen, Genentech/ Roche, Incyte, Ipsen, Merck, Merus, Neogene, Novartis, Servier, Tempus, Thetis, Vector, Yiviva unrelated to this work RDL declares interests as Founder of CV6 Therapeutics (NI) Ltd, Belfast, UK unrelated to this work MAG declares interests as Founder of Aviceda Therapeutics and Aviceda Glycotech and as an equity shareholder of Aviceda Glycotech Ltd and Aviceda Therapeutics Inc unrelated to this work MLo declares advisory roles with AstraZeneca, Roche/Genentech, Servier and research funding from Astellas Pharma, Basilea, Exelixis and MSD unrelated to this work WMG declares interests as Co-Founder and Chief Scientific Officer, OncoAssure and Scientific Advisory Board member, Carrick Therapeutics unrelated to this work RS, KDMcC, DK, JF, WD, EM, JLG, CJS, DBL, ACC, NO, SJC, SG declare no competing interests, The opinions expressed in this article are the authors own and do not reflect the view of the National Institutes of Health, the Department of Health and Human Services, or the United States Government.

Acknowledgements

ML is supported by a grant from Health Data Research and through AICRI-Start, a Strand III project and the eHealthHub - All Island Research Hub for Federated Analysis of Cancer Data, a Strand II project, both funded under the North-South Research Programme (NSRP). The eHealth Hub is co-led by University of Limerick and Queen's University Belfast and AICRI-Start is co-led by University College Dublin and Queen's University Belfast. The NSRP is a collaborative scheme funded through the Government's Shared Island Fund. It is being administered by the Higher Education Authority (HEA) on behalf of the Department of Further and Higher Education, Research, Innovation and Science.

AC is supported through the eHealthHub - All Island Research Hub for Federated Analysis of Cancer Data, a Strand II project funded under the North-South Research Programme (NSRP) which is co-led by University of Limerick and Queen's University Belfast. The NSRP is a collaborative scheme funded through the Government's Shared Island Fund. It is being administered by the Higher Education Authority (HEA) on behalf of the Department of Further and Higher Education, Research, Innovation and Science.

WG is supported AICRI-Start, a Strand III project funded under the North-South Research Programme (NSRP) which is co-led by University College Dublin and Queen's University Belfast. The NSRP is a collaborative scheme funded through the Government's Shared Island Fund. It is being administered by the Higher Education Authority (HEA) on behalf of the Department of Further and Higher Education, Research, Innovation and Science.

References

- [1] M. Lawler, A. Gavin, M. Salto-Tellez, R.D. Kennedy, S. Van Schaeybroeck, R. H. Wilson, D.P. Harkin, M. Grayson, R.E. Boyd, P.W. Hamilton, D.G. McArt, J. A. James, T. Robson, R.D. Ladner, K.M. Prise, J.M. O'Sullivan, T. Harrison, L. J. Murray, P.G. Johnston, D.J. Waugh, Delivering a research-enabled multistakeholder partnership for enhanced patient care at a population level: the Northern Ireland comprehensive cancer program, Cancer 122 (2016) 664–673, https://doi.org/10.1002/cncr.29814. PMID: 26695702.
- [2] Cancer Services Investing for the Future 1996. Department of Health and Social Services, Northern Ireland https://www.hse.ie/eng/services/list/5/cancer/pubs/ reports/national%20cancer%20strategy%201996.pdf.
- [3] Fitzpatrick D.A. and Gavin A.T. Survival of Cancer Patients in Northern Ireland 1993–1996. N. Ireland Cancer Registry https://www.qub.ac.uk/research-centres/ nicr/FileStore/PDF/NIrelandReports/Filetoupload,531935,en.pdf.
- (https://www.hse.ie/eng/services/list/5/cancer/pubs/reports/development -of-radiation-oncology-in-ireland.pdf).
- [5] A. Ruckert, R. Labonté, R. Lencucha, V. Runnels, M. Gagnon, Global health diplomacy: a critical review of the literature (Apr), Soc. Sci. Med 155 (2016) 61–72, https://doi.org/10.1016/j.socscimed.2016.03.004.
- [6] P.G. Johnston, P.A. Daly, The NCI-Ireland consortium: a unique international partnership in cancer care, Oncologist 6 (5) (2001) 453–458, https://doi.org/ 10.1634/theoncologist.6-5-453. PMID: 11675524.
- [7] R. De Angelis, M. Sant, M.P. Coleman, S. Francisci, P. Baili, D. Pierannunzio, A. Trama, O. Visser, H. Brenner, E. Ardanaz, M. Bielska-Lasota, G. Engholm, A. Nennecke, S. Siesling, F. Berrino, R. Capocaccia, EUROCARE-5 Working Group. Cancer survival in Europe 1999-2007 by country and age: results of EUROCARE-5a population-based study, Lancet Oncol. 15 (1) (2014) 23–34, https://doi.org/ 10.1016/51470-2045(13)70546-1. Epub 2013 Dec 5.PMID: 24314615.
- [8] G. Lewison, A. Gavin, K. McCallion, R. McDermott, R. Sullivan, M. Lawler, The 'Good Friday Agreement' and cancer research on the island of Ireland: evidence for the impact of a tripartite cancer research partnership, Eur. J. Cancer 129 (2020) 15–22, https://doi.org/10.1016/j.ejca.2020.01.014. PMID: 32114365.
- [9] M. Lawler, G. Lewison, R. Sullivan, Recognising the health dividend of peace: cancer and Northern Ireland, Eur. J. Cancer (2023) (in press)).
- [10] (https://ascopost.com/issues/august-10–2022/cancer-knows-no-borders/).
- [11] (https://www.qub.ac.uk/News/Allnews/featured/queens-us-symposium-cross-bor der-transatlantic-collaboration-cancer-research.html).
- [12] M. Lawler, M. Crul, Data must underpin our response to the covid-19 pandemic's disastrous impact on cancer, BMJ 376 (2022) o282, https://doi.org/10.1136/bmj. o282. PMID: 35115384.
- [13] M. Lawler, L. Davies, S. Oberst, K. Oliver, A. Eggermont, A. Schmutz, C. La Vecchia, C. Allemani, Y. Lievens, P. Naredi, T. Cufer, A. Aggarwal, M. Aapro, K. Apostolidis, A.M. Baird, F. Cardoso, A. Charalambous, M.P. Coleman, A. Costa, M. Crul, C. L. Dégi, F. Di Nicolantonio, S. Erdem, M. Geanta, J. Geissler, J. Jassem, B. Jagielska, B. Jonsson, D. Kelly, O. Kelm, T. Kolarova, T. Kutluk, G. Lewison, F. Meunier, J. Pelouchova, T. Philip, R. Price, B. Rau, I.T. Rubio, P. Selby, M. Južnič Sotlar, G. Spurrier-Bernard, J.C. van Hoeve, E. Vrdoljak, W. Westerhuis, U. Wojciechowska, R. Sullivan, European groundshot-addressing Europe's cancer research challenges: a Lancet Oncology Commission (Jan), Lancet Oncol. 24 (1) (2023) e11–e56, https://doi.org/10.1016/S1470-2045(22)00540-X. Epub 2022 Nov 16.PMID: 3640010.
- [14] P. Wheatstone, J. Gath, C. Carrigan, G. Hall, Y. Cook, A. DATA-CAN Sujenthiran, J. Peach, C. Davie, M. Lawler, DATA-CAN: a co-created cancer data knowledge network to deliver better outcomes and higher societal value, BMJ Partnersh. Pract. (2021). (https://blogs.bmj.com/bmj/2021/08/11/data-can-a-co-create d-cancer-data-knowledge-network-to-deliver-better-outcomes-and-higher-societal -value/).
- [16] F. Kreier, Cancer will cost the world \$25 trillion over next 30 years, Mar 7, Nature (2023), https://doi.org/10.1038/d41586-023-00634-9. Online ahead of print. PMID: 36882543.