



ATOM
Access to Oncology Medicines



An analysis of access-related capacity building gaps and opportunities in ATOM Coalition countries

Research Summary



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Launched in May 2022, the Access to Oncology Medicines (ATOM) Coalition is a global partnership spearheaded by the Union for International Cancer Control (UICC) that currently brings together 40 leading organisations from civil society, and the public and private sectors in a shared ambition to reduce suffering and deaths caused by cancer in low- and lower middle-income countries (LLMICs) through improved access to and use of essential cancer medicines

In the first phase of operations, the ATOM Coalition will focus its efforts on increasing access to essential oncology medicines in 46 LLMICs. In parallel, capacity building activities will be launched in a subset of 10 of the 46 LLMICs agreed by ATOM Coalition partners based on analysis conducted in 2022-23 on a range of readiness criteria, including the current presence of ATOM Coalition partners, health systems readiness, diagnostic capability, the number of essential medicines already listed on their national EMLs, the existence of other access programmes in the country and the willingness of manufacturers to make their medicines available in those countries (see Figure 1).

The primary objective of the Coalition's capacity building efforts is to address critical challenges and barriers affecting access to essential oncology medicines. Leveraging the resources and expertise within the Coalition, the capacity building programme outlined in the ATOM Coalition operational plan will focus on key access challenges across four critical areas:

1. registration
2. supply chain management
3. pathology and diagnostic infrastructure
4. appropriate use with patients.

INTRODUCTION

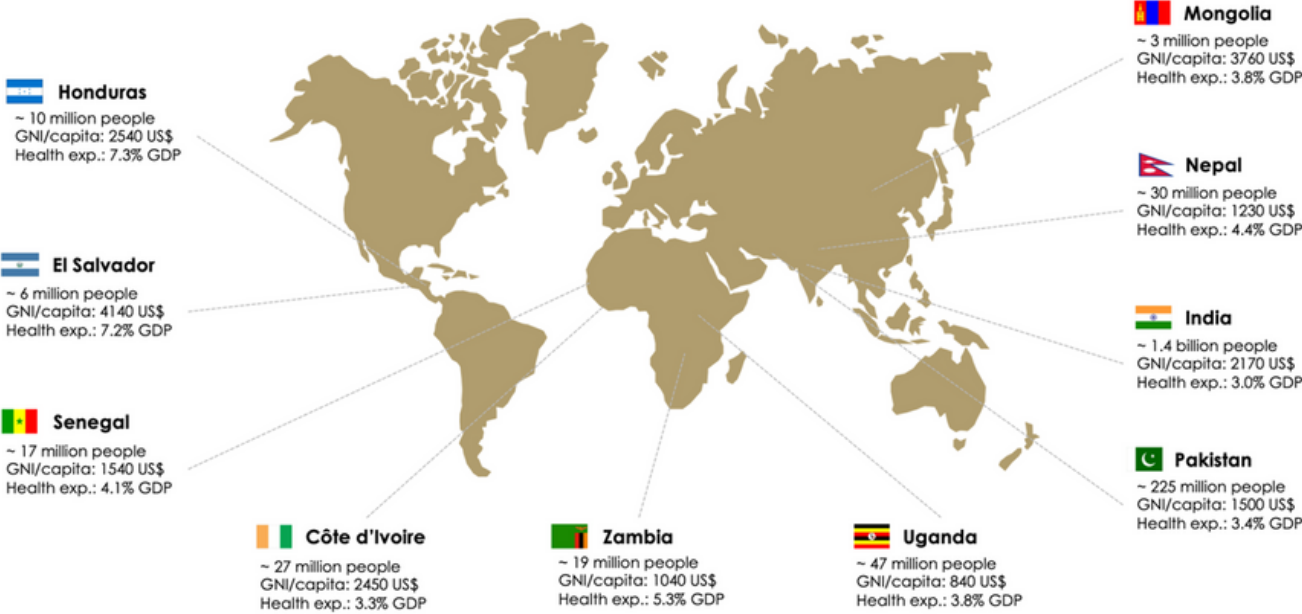
While there are common access challenges affecting LMICs, the ATOM Coalition operates on a needs-basis to respond to the most critical barriers of access to cancer medicines for each country. The objective is to use capacity building as a mechanism to support the identification and prioritisation of actions by local stakeholders and implement systems change through the development of tailored and adequate solutions that take into account the local context in an agile and effective manner. Moving forward, a robust country-level situational assessment and a formal engagement process with national and local stakeholders will be developed to support the implementation of capacity building activities.

Through strengthened coordination among Coalition partners, in October 2022 the ATOM Coalition facilitated the launch of an innovative model to increase access to essential oncology medicines at the global scale. For the first time ever, a pharmaceutical company - Novartis - signed a licence with the Medicines Patent Pool to voluntarily licence a patented essential medicine for the treatment of a cancer. This has led to additional partner companies engaged in discussions with the ATOM Coalition to offer to the Coalition other priority essential cancer medicines within their portfolios through various access mechanisms. As noted in the ATOM Coalition operational plan for 2023-24, the Coalition will prioritise work with its network of partners to substantially increase access to essential cancer medicines through a variety of channels, including reduced pricing, donations and public health-oriented voluntary licensing mechanisms. ATOM's capacity building programme is also expected to support the implementation of such global initiatives.

The following report provides a summary of the research undertaken by the ATOM Coalition Secretariat, including methodology, activities and main findings to support the decision-making process and initial design of the ATOM Coalition capacity building programme, including the roll-out of a proof-of-concept in three of the 10 countries capacity building countries agreed by ATOM Coalition partners.

ATOM Coalition Capacity Building Countries

Fig 1.



To determine the initial group of LLMICs to implement the ATOM Coalition capacity building programme, a survey was conducted among all Coalition partners to gain insight into the scope and breadth of capacity building activities implemented by partners in the 10 ATOM Coalition capacity building countries. An analytical framework was also developed to assess the potential impact and feasibility of a Coalition capacity building programme in the 10 capacity building countries (Figure 2).

All ATOM Coalition partners, including their network of members, were invited to complete an online survey in October–November 2022. New partners who joined the Coalition while the survey was ongoing were also invited to respond to the survey by January 2023.

The survey aimed to understand how the ATOM Coalition could potentially support partners’ ongoing efforts as well as address existing access gaps from various partner perspectives. (See Annex I for survey questionnaire).

In addition, key informant interviews were conducted in January 2023 with eight Coalition partners. Those interviews were designed to collect more qualitative data on their specific capacity building programmes and potential integration within the ATOM Coalition’s capacity building implementation plans.

An analytical framework was developed based on survey data, UICC in-house knowledge base, and desk research on the health systems of the 10 capacity building countries. The framework comprises 55 weighted indicators across seven pillars of analysis to estimate potential feasibility and impact of capacity building activities in the target country group. (See Annex II for the list of indicators used).

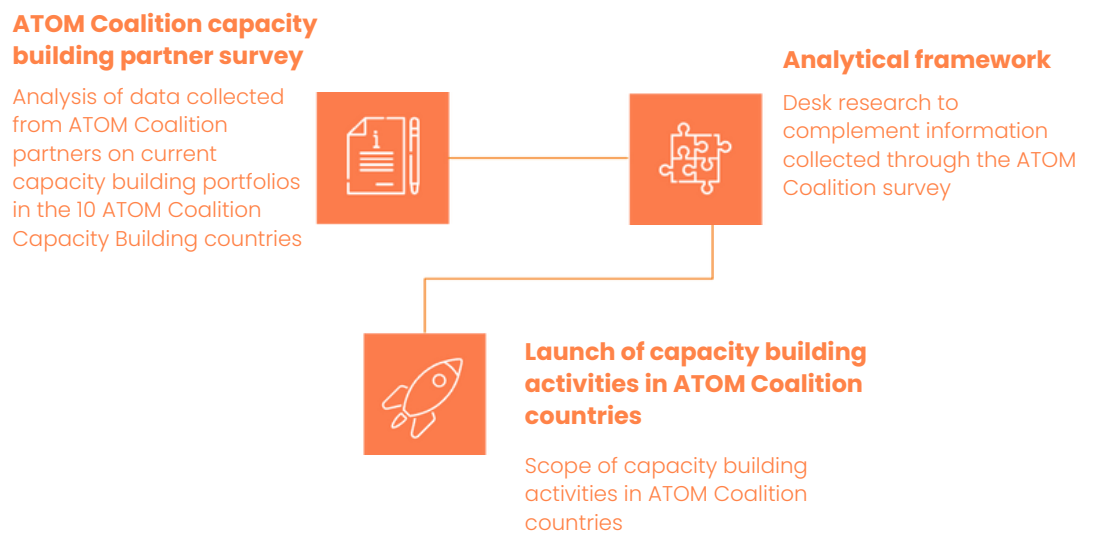
For indicators related to the presence of a particular enabler or capacity (e.g., national essential medicines list), scores ranged from 1 (existence) to 0 (absence). For indicators related to comparative figures (e.g., number of specialists per 10,000 people), scores were assigned in relation to global averages.

For the purpose of this analysis, the selected indicators were weighted as either critical, high, medium or low. The different weights were attributed based on perceived correlation of each indicator to the overall feasibility and impact scores as well as the accuracy and precision of data.

It is important to note that the analytical framework is a work in progress; the Secretariat expects that additional indicators will be added once pilot activities are launched. The analytical framework will also help to determine key performance indicators to support monitoring and evaluation of ATOM Coalition capacity building activities in countries moving forward.

Research Framework

Fig 2.



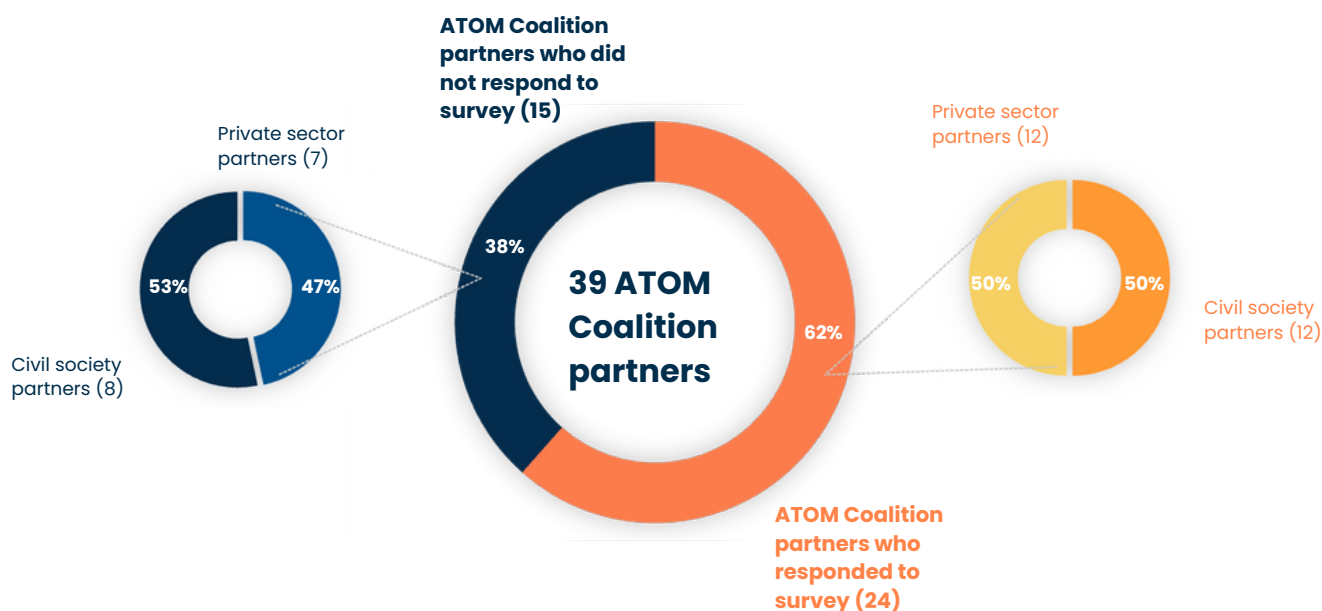
MAIN FINDINGS

A total of 22 partners completed the online survey, with two additional partners providing their responses via email or video call, representing 62% of the current ATOM Coalition partnership base. Figure 3 below illustrates the breakdown of respondents by civil society and private sectors. The results can be considered a reliable representation of the current capacity building activities carried out by ATOM Coalition partners and the potential for future coordinated efforts by the Coalition in the various countries.

For this summary report, main findings have been aggregated noting thematic trends and programmatic overlaps based on survey and key informant interview responses. Conclusions drawn from the survey are a simplification of complex technical assistance programmes and activities led by the Coalition partners. While an in-depth assessment of individual partner programmes was beyond the scope of this report, additional research may be required once as the Coalition begins to develop coordinated programmes tailored for specific countries.

Survey respondents

Fig 3.



MAIN FINDINGS

01

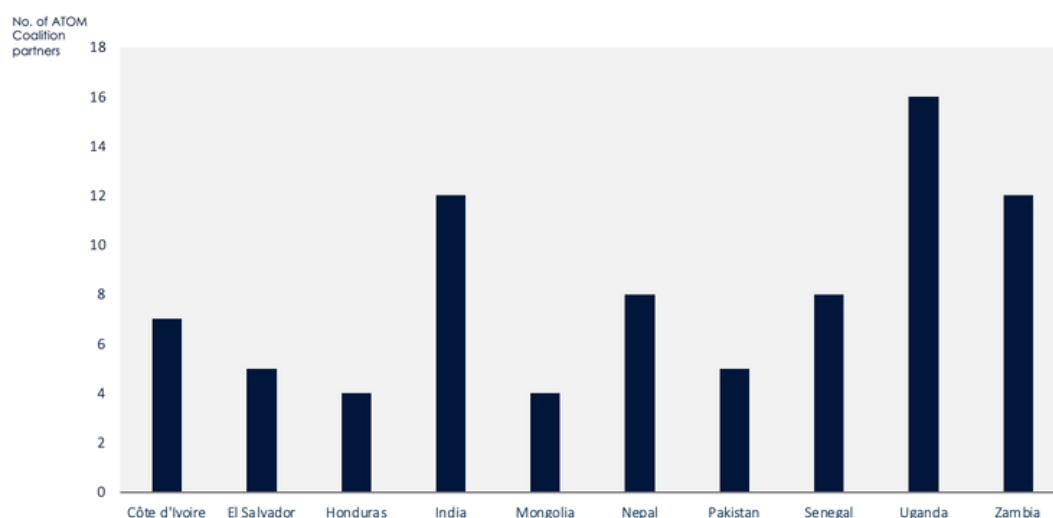
Country presence and expansion of scope of capacity building programmes in ATOM Coalition countries

ATOM Coalition partners have strong presence across all 10 countries, with significant capacity building support in India, Uganda and Zambia, (Figure 4). Partners also reported ongoing activities related to access to oncology medicines in countries outside of the 10 ATOM Coalition capacity building countries.

Most partners reported that they do not have dedicated staff in the 10 ATOM Coalition capacity building countries and implement their programmes in partnership with global or local implementation partners. ATOM Coalition partners appear to prefer expanding the scope of their current activities in countries in which they already operate. However, nearly 60% of the respondents expressed openness to expand their activities to other countries within the ATOM Coalition group of capacity building countries. This willingness was reiterated by partners who were interviewed.

Number of ATOM Coalition partners implementing capacity building activities in the Coalition priority countries.

Fig 4.



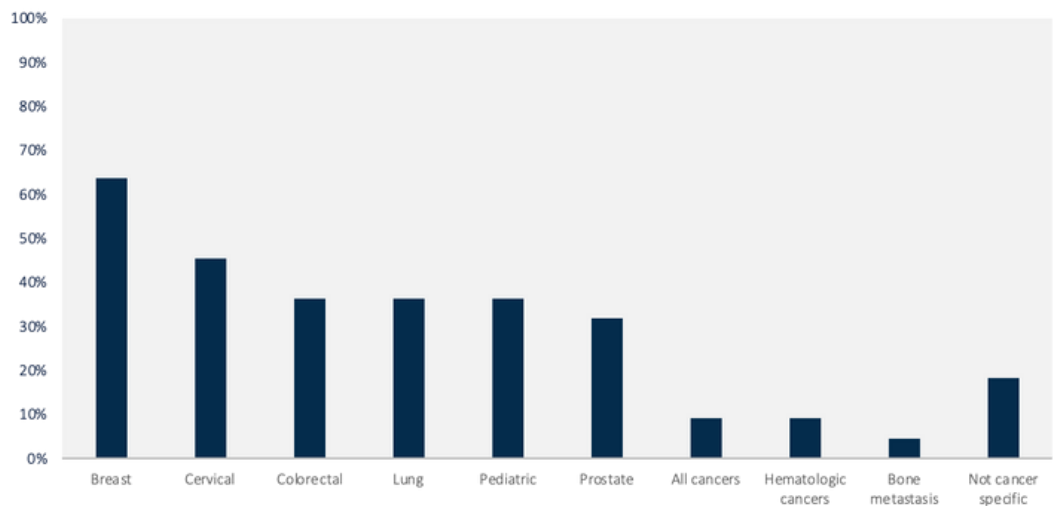
02

Breast cancer as a potential platform for coordination

Findings from the survey and research show that Coalition partners have an active interest in breast cancer, and that breast cancer communities of practice already exist in all ATOM Coalition capacity building countries. More than 60% of capacity building programmes currently implemented by partners address breast cancer (Figure 5). Many partners reported having existing relationships with these communities and the wider medical oncology community. Additionally, key international breast cancer initiatives such as the WHO Global Breast Cancer Initiative provide additional entry points for collaboration.

Cancer-focus of ATOM Coalition partners' capacity building programmes.

Fig 5.



03

Capacity development of healthcare professionals

The results of the capacity building mapping survey indicate that ATOM Coalition partners are primarily focused on improving the quality of cancer care through providing support to build the capacity of medical specialists. Most of these capacity building programmes are established between the Coalition partner and medical associations or providers, with no direct collaboration with policymakers.

04

Opportunities to increase the impact of donation programmes

Opportunities were also identified to enhance the impact of ongoing donation programmes, especially those involving essential medicines. One such opportunity is to engage more systematically with health authorities and the public sector through the Coalition and to use current donation programmes as catalysts to develop more sustainable strategies for medicine demand and supply. For example, through supporting the endorsement of clinical guidelines, adoption of standards of care and inclusion of essential medicines in insurance benefits packages.

05

Perceived gaps that could be addressed by the ATOM Coalition

ATOM Coalition partners identified unique opportunities and products within each of the capacity building pillars that the Coalition could either address or develop as part of its efforts. The expertise among current ATOM Coalition partners is both comprehensive and complementary, allowing for input and contributions to be made as needed and in response to identified country-specific priorities.

Perceived gaps that could be addressed by the ATOM Coalition

1

REGISTRATION, FORECASTING, PROCUREMENT AND FUNDING

- In-country regulatory support (e.g. trade regulation)
- Development of broad regulatory pathways
- Development of oncology product lists
- Training on the use and building forecasting tools and models to procure essential oncology meds
- Pooled procurement

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

2

- Development of oncology product lists
- Support in understanding of available routes to access unlicensed oncology medicines
- Customs clearance operations (e.g. certificates of analysis for imported medicines, standards and best practices for donation programs)
- Refrigeration and cold-chain planning and capacity
- Support local manufacturing capacity

3

APPROPRIATE USE OF MEDICINES

- Quality improvement of healthcare services to maximise impact of essential oncology medicines
- Upstream training of HCPs to support patient entry into the care system through early detection and referrals
- Access to diagnostic equipment (immunohistochemistry, tumor markers)
- Specialist trainings (in-person, virtual, fellowships, cooperation networks) in:
 - handling of biopsy sampling, overall maintenance & proper functioning of pathology labs
 - safe preparation of cytotoxic therapies
 - safe and appropriate use of newer (or innovative) therapies & follow-up care, including those made available via ATOM Coalition-facilitated VLs
 - precision medicine
- Patient navigation and follow up programmes

CROSS-CUTTING ISSUES

4

- Improve data collection systems through digital technologies
- Country-specific situational analysis of diagnosis/medicines pathways to identify main pain points
- Sustained engagement with public health authorities
- Engagement of more partners and enhanced collaboration to strengthen diagnostics and surveillance landscape
- Build evidence on access to oncology medicines in LLMICs through implementation science

06

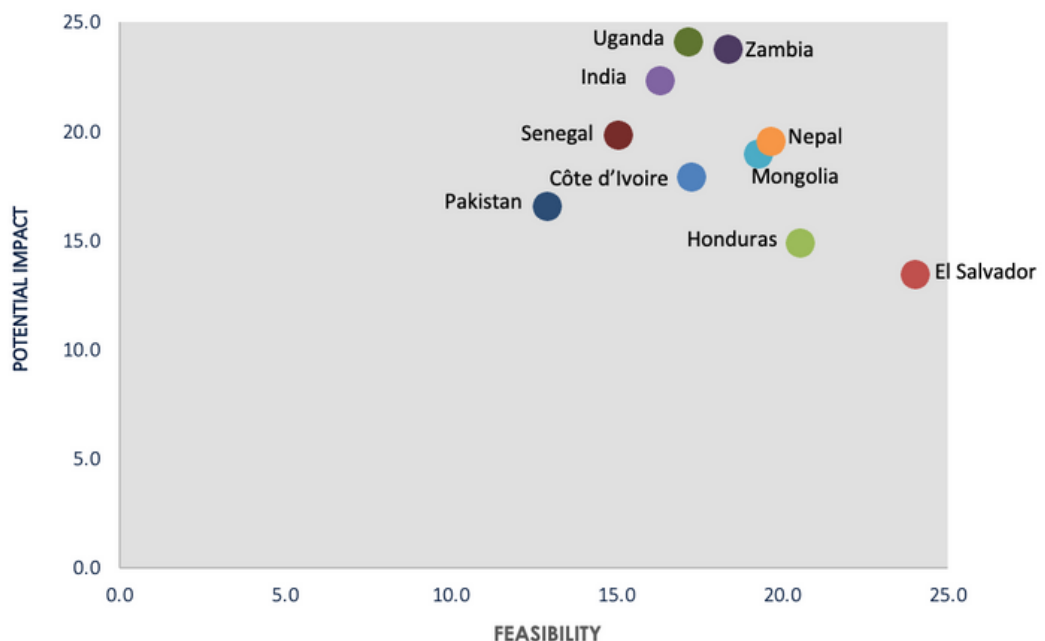
Potential impact and feasibility of ATOM Coalition capacity building activities

Qualitative data from the survey combined with quantitative data on health systems were aggregated to determine an initial score for each country assessing potential impact and feasibility of future ATOM Coalition capacity building activities. Assessing potential impact and feasibility will allow the Coalition to gain valuable insights and inform decision-making efforts on resource prioritisation towards countries with both high potential impact and feasibility.

Countries at the upper end of the y-axis are those where an ATOM Coalition-coordinated programme would likely produce higher impact due to the current cancer burden, socio-economic context, and ongoing public health programmes and capacity building efforts by Coalition partners. Countries farthest from the origin on the x-axis are likely to be those where the implementation of a comprehensive capacity building programme will be more feasible due to factors such as population size, local leadership, health system readiness, higher level of health investment, and foundational regulatory capacity.

Potential impact and feasibility in countries

Fig 6.



It is important to recognise that the graph above is a simplified representation of the complex and varied reality within and among different countries. Differences in potential impact and feasibility scores are theoretical and may not necessarily reflect the current context. However, this analysis is intended to support the decision-making process and resource allocation of the ATOM Coalition in launching its first phase of capacity building efforts. As such, this analysis **does not** rank the regulatory or healthcare systems of countries. Factors such as country interest, political leadership, and commitment of local partners to participate in ATOM Coalition-related activities cannot be assessed within this framework and can only be assessed once country engagement is initiated.

CONCLUSION AND KEY RECOMMENDATIONS

The ATOM Coalition consists of a wide group of stakeholders and perspectives united by a common ambition: to reduce the suffering and deaths caused by cancer in LLMICs through improved access to and use of essential cancer medicines. Aligning the interests and expectations of such a diverse group of stakeholders will require strong coordination efforts by the secretariat and active championing of the initiative by individual ATOM Coalition partners. The participation and high interest demonstrated by partners throughout the various stages described in this report represent a promising sign that partners are aligned and committed, which will enable the Coalition to fulfil its mission.

01 **Launch of the ATOM capacity building proof-of-concept in three countries**

When selecting the initial group of countries to implement the first phase of coordinated capacity building activities, it is important to consider both geographical distribution and scalability potential to ensure a strong proof-of-concept. This approach is likely to enable the Coalition to expand into more contexts, attract more strategic partners, and gather valuable information from different regulatory and health systems.

In a second phase, other countries can be added once operational assumptions have been validated and lessons learned from the first group of countries have been established.

02 **Initial focus on capacity building to improve access to breast cancer medicines and maximise impact of the VL mechanism**

Research findings support an initial focus on improving access to oncology medicines, specifically for treating breast cancer. Breast cancer has been identified as a priority area for the ATOM Coalition's capacity building efforts due to its high burden of disease, the potential impact of essential medicines on survival rates, and the potential to take an integrated health approach through early detection and timely access to timely treatment.

The WHO Essential Medicines List (EML) also includes 11 molecules for the treatment of early breast cancer, one molecule (trastuzumab) for the treatment of early stage/metastatic HER2 positive breast cancer, and nine molecules for the treatment of metastatic breast cancer, further underscoring the importance of focusing on this disease in the ATOM Coalition's capacity building efforts. Indeed, breast cancer has the potential to bring together more partners in the ATOM Coalition to deliver a joint cancer-specific capacity building programme.

In addition, some Coalition partners have demonstrated interest and willingness to support the implementation of capacity building activities focused on the safe and appropriate use of the nilotinib generic in the countries that can benefit from the voluntary licence agreement between Coalition partners Novartis and MPP.

03

Develop a country engagement plan to launch capacity building activities in the three countries

The following are recommended steps for the ATOM Coalition to launch its capacity building activities in the initial group of capacity building countries in 2023:

1. Secure formal relationships with local health authorities and relevant institutions. This can be achieved by ensuring a nominated focal person(s) from the Ministry of Health, ideally the head of the National Cancer Control Programme (or equivalent), and by establishing a multidisciplinary technical working group on access to oncology medicines. While the stakeholder profile of technical working group members will vary across different countries, it should ensure the inclusion of local professionals able to mobilise action and who represent the roles and perspectives of patient advocates, health care providers, regulators, and payers. Ideally convened by the focal point, the working group will be responsible for conducting, discussing, and validating the needs assessment findings in collaboration with the ATOM Coalition Secretariat.

2. Create an agile and informal country coordination group in the countries. This group should consist of nominated focal person(s) from the Ministry of Health, key UICC members and advocates, local pathologists and oncologists, and ATOM Coalition partners with ongoing capacity building programmes. Coordinated by the ATOM Coalition Secretariat, this group will be responsible for supporting the planning and development of the country-specific ATOM Coalition capacity building action plan and advising on local stakeholder engagement.

3. Carry out a thorough needs assessment with the participation of ATOM Coalition partners and experts, alongside the multidisciplinary technical working group. The needs assessment will identify distant and proximal bottlenecks in local pathways across the pillars of the ATOM Coalition capacity building plan: (1) registration, (2) supply chain management; (3) pathology and diagnostic infrastructure; and, (4) appropriate use with patients. The needs assessment should include an ATOM Coalition toolkit developed by the Coalition that assesses the complete pathway of a medicine in a given country, from pre-registration/market authorisation to its delivery to the patient in need.

4. Map bottlenecks against existing capacity building opportunities and/or support the development of locally-led solutions through collaboration with the ATOM Coalition with the participation of Coalition experts and partners and the multidisciplinary technical working group once the needs assessment is concluded and the main bottlenecks are identified and prioritised.

ANNEX I

ATOM Coalition Capacity Building Survey Questionnaire

1. Do you currently implement capacity building activities in the following countries (ATOM Short-listed CB Countries[1])?
2. What are the focus and modalities/type of your capacity building activities?
3. Do your capacity building activities focus on any of the following cancer types[2]?
4. Do any of your capacity building activities in the countries listed above focus on appropriate use and treatment focused on specific oncology medicines?
5. Would you be willing to share any educational resources (tools, manuals, online courses) to support CB activities across all ATOM CB countries?
6. Please share any material that further describe (audience, duration, curriculum, etc) key activities above, including impact assessment/reports on these activities.
7. Do you have staff working on these activities on-site in these countries?
8. Please list key local and international public sector, private sector and non-governmental organisations that you currently collaborate with on capacity building in each of the ten ATOM short-listed Countries, including current ATOM Coalition Partners.
9. How would you like the ATOM Coalition to support you in implementing your current capacity building activities[3]?
10. Given your expertise in access to medicines, are there any specific gaps along the medicines/diagnostics pathway or health systems strengthening that you feel the ATOM Coalition could address through the development of new capacity building activities?
11. Do you recommend any other capacity building programme led by another organisation that would be important for the ATOM Coalition to consider?
12. Are there any specific research materials (i.e., surveys, data, publications), that you think would be valuable to review to scope the ATOM Coalition capacity building offer?
13. Are there any additional comments related to your capacity building expertise or activities that you wish to share?
14. Do you agree to be contacted for a key informant interview?

[1] Côte d'Ivoire; El Salvador; Honduras; India; Mongolia; Nepal; Pakistan; Senegal; Uganda; Zambia.

[2] Breast; cervical; colorectal; lung; pediatric; prostate; other or not cancer specific

[3] Support expansion of activities in ATOM short-listed countries where you currently operate; Support expansion of activities in ATOM short-listed countries where you do not currently operate; Expand collaboration among network of other ATOM partners operating in-country; Expand the number of partners participating/supporting specific activities; Other.

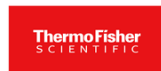
ANNEX II

List of indicators used in the analytical framework

PILLAR	INDICATOR	SCORE	SOURCE	RELATIVE WEIGHT
REGULATORY & POLICY INFRASTRUCTURE	Regulatory self-benchmarking	FEASIBILITY	Khadem Broojerdi et al, Worldwide assessment of low- and middle-income countries' regulatory preparedness to approve medical products during public health emergencies, <i>Frontiers in Medicine</i> 2021; 8:722872	LOW
	Regulatory formal benchmarking	FEASIBILITY		LOW
	National Medicines Regulatory Authority	FEASIBILITY	Institutional websites Asian Development Bank, Supporting the regulation of medicines in Mongolia, 2022.	HIGH
	WHO-listed authorities (WLAs)	FEASIBILITY	World Health Organization, List of transitional WLAs, 2022.	MEDIUM
	National Essential Medicines List (NEML)	FEASIBILITY	Institutional websites	HIGH
	Year of last NEML update	FEASIBILITY		HIGH
	NEML and WHO EML similarity (%)	FEASIBILITY	Persaud, N. et al, Comparison of essential medicines lists in 137 countries, <i>Bull World Health Organ</i> 2019; 97:394-404C	HIGH
	Estimated no. cancer meds in NEML	FEASIBILITY	UICC internal database (January 2023).	LOW
	National Cancer Control Plan	FEASIBILITY		HIGH
	Participation in WHO's collaborative registration process	FEASIBILITY	World Health Organization, Accelerated Registration of Prequalified FPP (accessed in January 2023).	CRITICAL
	MoH formally engaged through ATOM partners	FEASIBILITY	ATOM partner survey and key informant interviews (January 2023).	HIGH
HEALTH SYSTEM CAPACITY	Population-based cancer registry	FEASIBILITY	World Health Organization, Global Health Observatory Database (accessed in December 2022)	CRITICAL
	Evidence-based national guidelines for cancer management	FEASIBILITY		MEDIUM
	National breast cancer screening programme	IMPACT		HIGH
	National cervical cancer screening programme	IMPACT		HIGH
	Most widely used for screening cervical cancer	FEASIBILITY		HIGH
	Histology capacity	FEASIBILITY	UICC internal database / ASCP assessment (January 2023).	HIGH
	No. public cancer centres per 10,000 cancer patients	FEASIBILITY	UICC internal database (January 2023).	LOW
	Radiotherapy current capacity (as % of needs covered)	FEASIBILITY	IAEA, DIRAC; IARC, Global Cancer Observatory (accessed in November 2022)	HIGH
	Medical doctor per 10,000 people	FEASIBILITY	World Health Organization, Global Health Observatory Database (accessed in December 2022)	LOW
	Specialist medical practitioners per 10,000 people	FEASIBILITY		HIGH
	Medical and Pathology Lab scientists per 10,000 people	FEASIBILITY		HIGH
Pharmacists per 10,000 people	FEASIBILITY	LOW		
CANCER BURDEN	Incidence rate ASR (world)	IMPACT	IARC, Global Cancer Observatory (accessed in November 2022)	CRITICAL
	Mortality rate ASR (world)	IMPACT		CRITICAL
	Mortality to incidence ratio	IMPACT		CRITICAL
	Estimated cancer incidence increase from 2020 to 2030 (%)	IMPACT		CRITICAL

	Estimated cancer mortality increase from 2020 to 2030 (%)	IMPACT		CRITICAL
DEMOGRAPHICS	Population, total [- in millions]	FEASIBILITY		CRITICAL
ECONOMICS AND FINANCE	GNI per capita, Atlas method (current US\$)	IMPACT	World Bank, DataBank (accessed in November 2022).	CRITICAL
	Current health expenditure (% of GDP)	FEASIBILITY		CRITICAL
	Current health expenditure per capita	FEASIBILITY		HIGH
	Government health expenditure per capita (%)	FEASIBILITY		CRITICAL
	Private health expenditure per capita (%)	IMPACT		HIGH
	External health expenditure per capita (%)	FEASIBILITY		HIGH
	Out-of-pocket expenditure (%)	IMPACT		HIGH
	UHC service coverage index	FEASIBILITY		MEDIUM
	EASE OF DOING BUSINESS	Trading across borders (5-year period change; 2016-2020)		FEASIBILITY
Enforcing contracts (5-year period change; 2016-2020)		FEASIBILITY	MEDIUM	
Infrascope PPP overall score (2020)		FEASIBILITY	The Economist, The Infrascope archives 2009-2019 (accessed in November 2022).	MEDIUM
PARTNERSHIPS	No. active UICC members	FEASIBILITY	UICC internal database (January 2023).	MEDIUM
	Key opinion leaders with "championing" potential	FEASIBILITY	ATOM partner survey and key informant interviews (January 2023).	CRITICAL
	Ongoing ECHO programmes	FEASIBILITY	UICC internal database (January 2023).	MEDIUM
	No. ATOM members implementing capacity building	IMPACT		CRITICAL
	No. ATOM members with on-site staff	FEASIBILITY		MEDIUM
	Ongoing CB with lab equipment and supplies manufacturer	IMPACT		MEDIUM
	Ongoing CB with logistics and supply management partner	IMPACT		CRITICAL
	Ongoing CB with Medical device manufacturer	IMPACT		MEDIUM
	Ongoing CB with Pharmaceutical manufacturer	IMPACT		CRITICAL
	Ongoing CB with Pharmaceutical manufacturer (generic drugs)	IMPACT		CRITICAL
	Ongoing CB with Quality standard setting partner	IMPACT		CRITICAL
	Ongoing CB with Training and capacity development partner	IMPACT		CRITICAL
	Breadth of ongoing partnerships (%)	IMPACT	ATOM survey (January 2023)	HIGH
	Active access programme listed in Access Observatory database	IMPACT	Access Observatory database (accessed in November 2022).	MEDIUM
	Access to PAHO's strategic fund	IMPACT	Pan American Health Organization, Overview of the Strategic Fund, 2020.	HIGH

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THE ATOM COALITION



ATOM
Access to Oncology Medicines



"To reduce suffering and deaths caused by cancer in low- and lower-middle income countries through improved access to and use of essential cancer medicines"

The Access to Oncology Medicines (ATOM) Coalition

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