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# Canadian Regulatory Approach to Biomarkers

## An evolving perspective

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Canada

# Points to Consider

- Current Regulatory Paradigm
- Changing Regulatory Paradigms
  - From the Science Perspective
  - From the Regulatory Perspective
- Use of Biomarkers: A case by case approach



# Current Regulatory Paradigm

Point in Time Approach/Process

Does not reflect:

- Iterative nature of therapeutics development
- Can not adjust readily to changes in science
- Does not reflect adequately the dynamics of drug development
- Does not reflect appropriately the life-cycle of a product

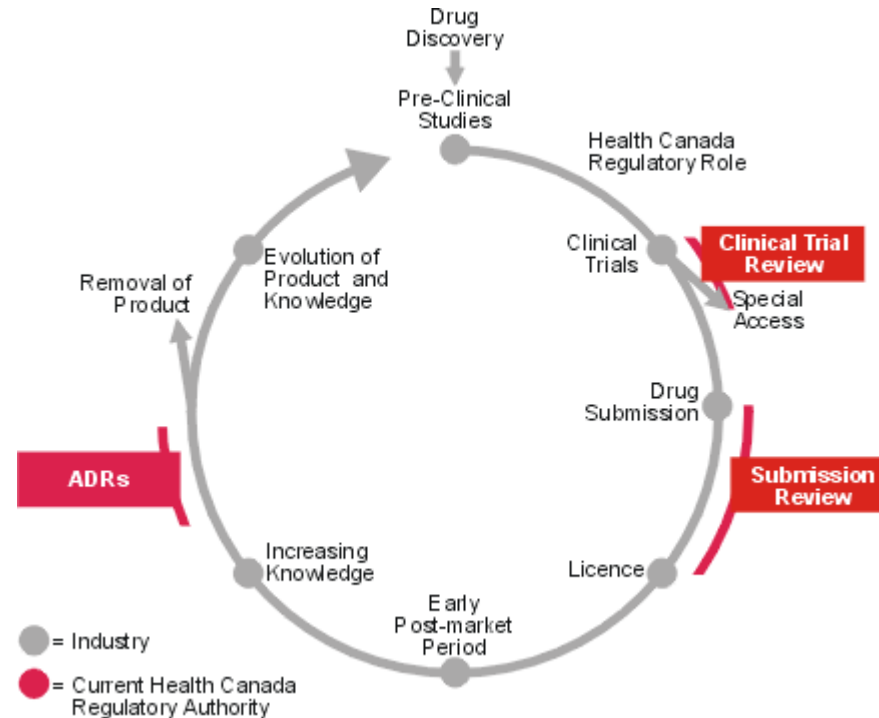


# Changing Regulatory Paradigms: Scientific Perspective

- Advances in Science necessitate development of new regulatory frameworks
- While these are developing, case by case considerations allow for learning to occur
- Current Regulations have some flexibility to adjust to new science
- More flexibility needed to adjust faster in an orderly manner
- Evidence –Based approach needs strengthening



# Current Point-in-Time Process



# Changing Regulatory Paradigms: Regulatory Perspective

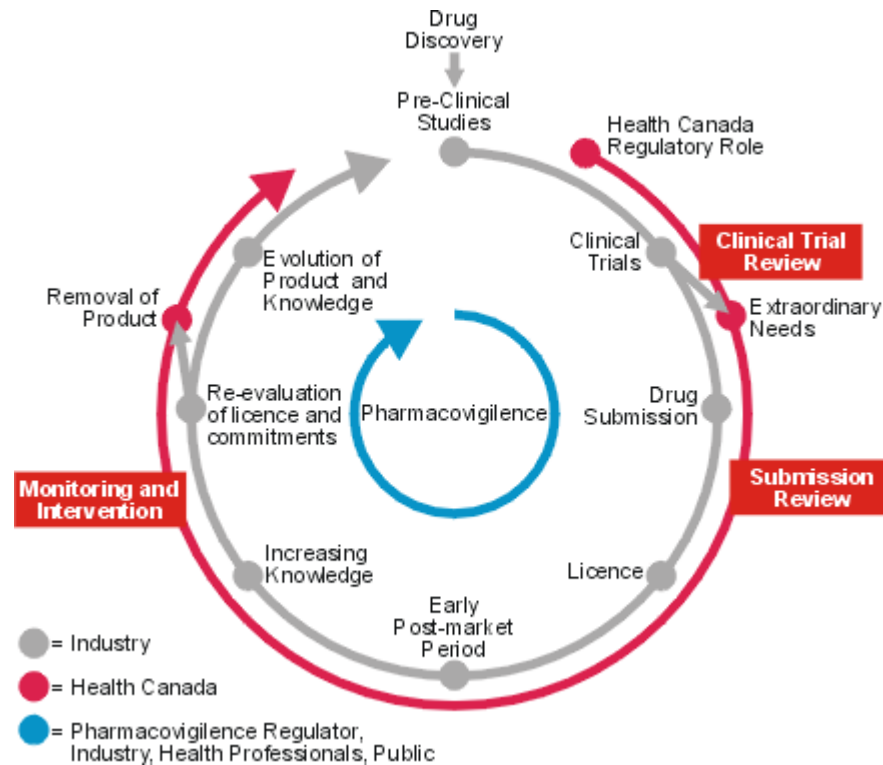
Three elements have been identified as central to this new regulatory paradigm:

- Life-cycle, evidence-based approach [needs strengthening]
- Good planning [planning needs improvement and regulatory support]
- Accountability [of all parties must be made evident and needs to be strengthened]

The new regulatory concept is designed to reflect the continuous and iterative nature of the development process for therapeutics



# Changing Regulatory Paradigm (cont'd)



# Changing Regulatory Paradigm (cont'd)

Because over time there is a progression on knowledge about a drug the following should be considered:

- The new framework emphasizes the identification of opportunities for intervention throughout the life-cycle of a drug

*Evidence-based decision-making* will be central to this

- Other evidence may be incorporated into decision-making in the context of the environment and the availability of other therapies in Canada
- The actual basis of decision-making will be clarified with principles and methods that are available and accepted.



# Changing Regulatory Paradigm (cont'd)

## *Good Planning:*

- Well-structure strategic approach to the generation and exchange of information throughout the regulatory life-cycle

***Accountability:*** as ongoing requirements to justify decision concerning drugs that are made by both Health Canada and Industry.



# Biomarkers, a case study approach

- There are no guidelines, at this time in Health Canada to demonstrate that a consistent approach is being used for providing guidance and for decision-making
- Case by case approach, however, does not mean ad hoc decisions;
- Experience from one instance is applied to the next instance
- Consistent association between biomarker and the process it represents
- Biomarkers represent processes and correlation of the biomarker needs validation
- Context of the use considered.



# Biomarkers, a case study approach

- New technologies may clarify or add incremental or new uncertainties
- Considerations depend on the use the sponsor wishes to make of the biomarker: is it used as a surrogate? If so, does it require validation?
- Reflection on long-term benefits of therapy?



# Regulatory fit: Conclusions:

- Until guidance is developed the usual process applies with pre-submission consultations, iterative approaches as product is developed and confidence in the utility of the biomarker increases.
- Validation and utility for decision-making should be reflected in product labels, be relevant to benefit/risk assessment, to regulatory risk-assessments and the post-market follow-up for the therapeutic that it is applied to

