Dose Reconstruction Process Overview

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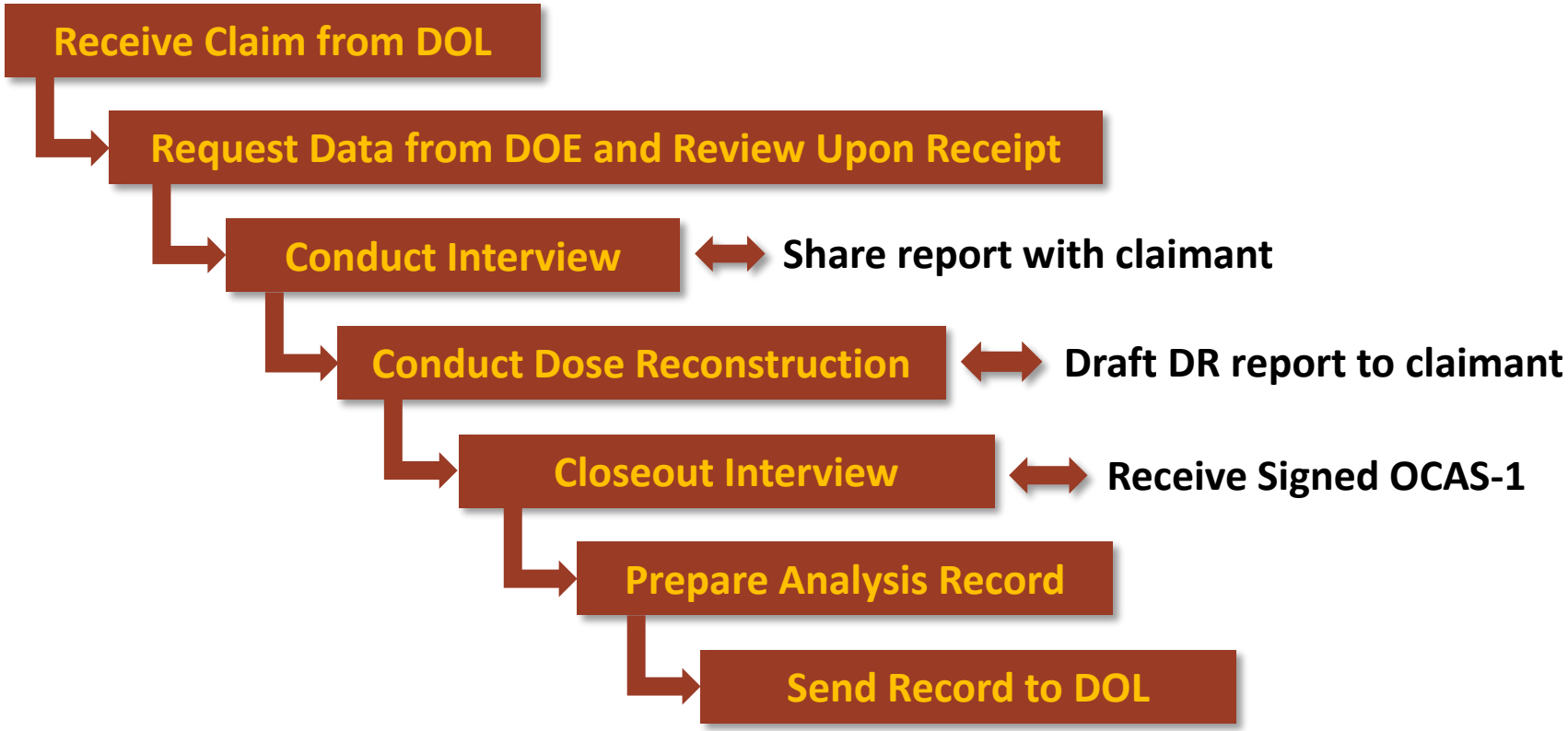
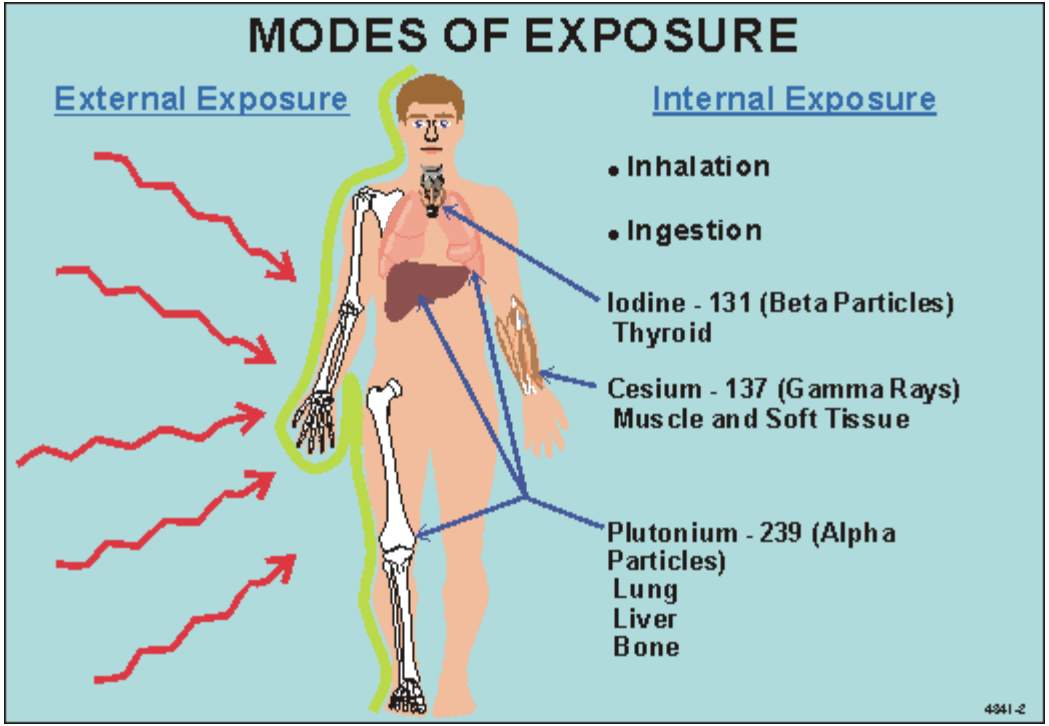
NM and AZ Outreach Meetings

Dose Reconstruction Process



Frequently Used Terms

- **External Dose: Dose received from radiation originating outside the body.**
- **Internal Dose: Dose received from radiation originating inside the body.**



Frequently Used Terms - continued

- **Overestimate**
- **Best Estimate**
- **Underestimate**
- **Partial Estimate**

Factors impacting Dose Reconstructions

- **Time**
- **Claimant favorability**
- **Reasonable**
- **Special Exposure Cohort**

Basics of Dose Reconstruction

- Use all available worker and workplace information to reconstruct dose
- Evaluate all doses of record for data quality shortcomings
- Evaluate potential for undetected dose
- Use recommendations established by national and international organizations

Basics of Dose Reconstruction - continued

- Prefer to use individual monitoring data if available and of sufficient quality
- Use standard methods to evaluate “missed dose”
- Rely on use of area dosimeters, radiation surveys, and air sampling if individual data is not available
- If no monitoring data, then use available data on source term, etc.

Basics of Dose Reconstruction - continued

When individual dose monitoring results are not available doses can be estimated using:

- **Co-exposure Models**
- **Surrogate Data**
- **Source-term modeling**

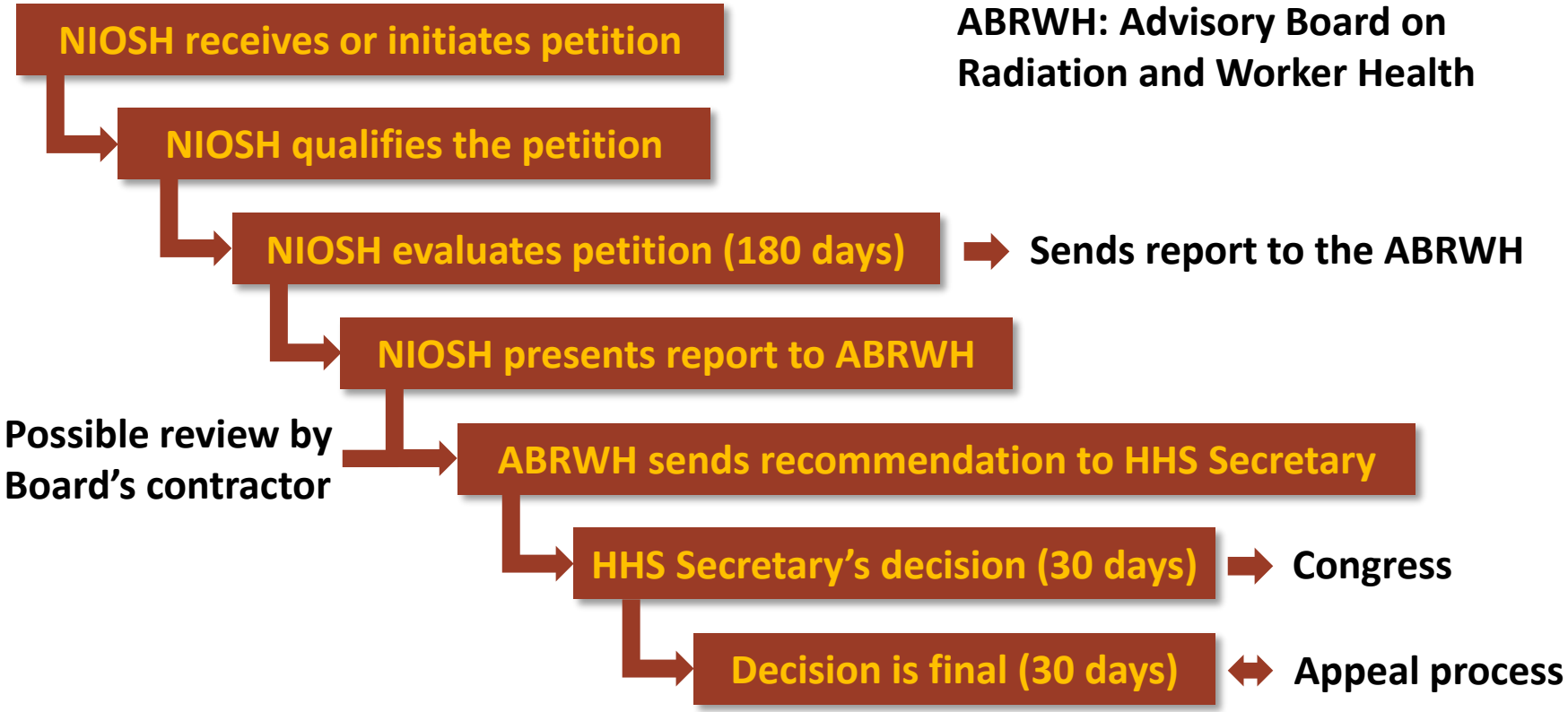
Claimant Favorable Approach

When a choice must be made between different approaches and there is no information about which approach is most technically accurate, NIOSH chooses the approach resulting in the highest probability of causation.

Some examples include:

- Conservative Dose Conversion Factors
- Addition of potential missed dose
- Solubility class of radionuclide for internal dosimetry
- Aged Pu with Am buildup
- Upper 99th percentile of credibility limit to determine Probability of Causation.

Special Exposure Cohort Petitioning Process



ABRWH: Advisory Board on Radiation and Worker Health

Advice, Assistance and Questions

The NIOSH SEC Petition Counselor and the NIOSH EEOICPA Ombudsman provide advice and assistance to petitioners and prospective petitioners.

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