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The Outline of the Draft Guideline Document on Conditional and Term-limited Approval and Subsequent Post-marketing Surveillance for Regenerative Medical Products

再生医療等製品の条件及び期限付き承認とその後の製造販売後調査に関するガイドライン案の概要

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再生医療等製品の条件及び期限付き承認

Conditional and term-limited approval of regenerative medical products

薬機法 第二十三条の二十六（条件及び期限付承認）

前条第一項の承認の申請者が製造販売をしようとする物が、次の各号のいずれにも該当する再生医療等製品である場合には、厚生労働大臣は、同条第二項第三号イ及びロの規定にかかわらず、薬事・食品衛生審議会の意見を聴いて、その適正な使用の確保のために必要な条件及び七年を超えない範囲内の期限を付してその品目に係る同条第一項の承認を与えることができる。

- 一 申請に係る再生医療等製品が均質でないこと。
- 二 申請に係る**効能、効果又は性能を有すると推定されるものであること。**
- 三 申請に係る効能、効果又は性能に比して著しく有害な作用を有することにより再生医療等製品として使用価値がないと推定されるものでないこと。

Article 23-26 of the Pharmaceuticals and Medical Devices Act (Conditional and Term-limited Approval)

Notwithstanding the provisions of paragraph (2)(iii)(a) and (b) of the preceding Article, when an applicant for approval under paragraph (1) of the preceding Article intends to manufacture and distribute a regenerative medical product that falls under any of the following items, the Minister of Health, Labour and Welfare may, after hearing opinions from the Pharmaceutical Affairs and Food Sanitation Council, grant approval under paragraph (1) of the same Article for the product, subject to conditions necessary to ensure its proper use and a term limit not exceeding seven years.

- (i) The regenerative medical product pertaining to the application is **not homogeneous**.
- (ii) The product is **presumed to have the efficacy, effectiveness or performance** pertaining to the application.
- (iii) The product is not presumed to have no value for use as a regenerative medical product because it has a significantly harmful effect compared to the efficacy, effectiveness or performance pertaining to the application.



「… 条件及び期限付き承認について、承認の予見可能性が確保されることが期待されている。」

“... It is expected that the foreseeability of approval will be ensured concerning conditional and term-limited approvals.”





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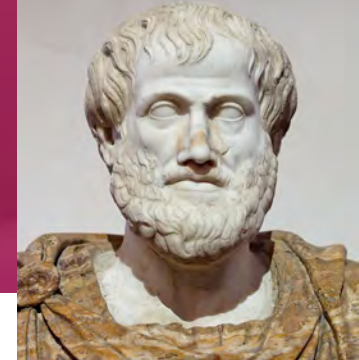
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再生医療等製品の条件・期限付き製造販売承認における課題

The challenge in the conditional and term-limited approval of regenerative medical products



Q: 「効能、効果又は性能を有すると推定される」ために必要な「治験による有効性エビデンスレベル」はどの程度と捉えるべきか？

A: 全ての再生医療等製品に適用できるような一般論は今のところない。



『申請に係る効能、効果又は性能を有すると認められず、推定もされないとき』

と

『申請に係る効能、効果又は性能を有すると認められないが、推定はされる』とき』

との区別が法的にも科学的にも不明確。

Q: What should be considered the “level of efficacy evidence from clinical trials” required for a product to be “presumed to have efficacy, effectiveness or performance”?

A: There is currently no general answer that can be applied to all regenerative medicine products.



The distinction between
"when the efficacy, effectiveness, or performance pertaining to the application is
neither recognized NOR presumed"

and

"when the efficacy, effectiveness, or performance pertaining to the application is
not recognized BUT presumed"

is unclear from both legal and scientific perspectives.



Technical Guidance for Conducting the Quality/Non-clinical Safety Tests and Clinical Studies of Regenerative Medical Products (Human Cell-Processed Products) [MHLW/PSEHB/MDED Administrative Notice No. 0614043 (2016)]

4.6.2. 条件及び期限付承認制度と開発のライフサイクル

「…すなわち、**条件及び期限付承認での上市は、その後**にひかえている通常の承認審査、再審査へとつづく臨床開発の**ライフサイクルの途上と捉えることが適当**という意味である。したがって、**条件及び期限付承認を経る臨床開発では、上市後の通常の承認審査に向けて、製造販売後承認条件評価における有効性及び安全性の評価方法について、実施可能性のある計画を製造販売承認申請前に検討しておくことが重要**である。…」



4.6.2. The Conditional and Term-limited Approval System and the Development Lifecycle

“... Marketing under conditional and term-limited approval should be considered as a step in the lifecycle of a clinical development, which is followed by a regular approval review and a re-examination process. Therefore, **in clinical development under conditional and term-limited approval, it is important to consider a feasible plan for the efficacy and safety evaluation in the post-marketing studies on conditions for the approval before submitting a marketing authorization application, in preparation for the normal approval review after launch. ...**”





- ▶ 現時点での開発動向から、日本ではヒト間葉系幹細胞／間葉系間質細胞 (hMSC) を原料としたヒト細胞加工製品の製造販売承認申請が、近い将来に複数なされると期待されている。
- ▶ hMSC加工製品をモデルとして、製造販売承認審査において条件及び期限付き承認を考慮する際の、

- ① 製品開発における条件・期限付き承認の位置づけ
- ② 製品の特性とそれによる申請データの特徴
- ③ これらに基づいた視点から考えられる、条件及び期限付き承認後に有効性の科学的評価を行うために必要な製造販売後調査計画の留意点

を議論

- ▶ Based on current development trends, several applications for marketing authorization of cell-processed products derived from human mesenchymal stem/stromal cells (hMSCs) are anticipated in Japan shortly.
- ▶ Using hMSC processed products as a model, and assuming conditional and term-limited approval in the marketing authorization review, we discussed:

- ① the position of conditional and term-limited approval in the product development,
- ② characteristics of the products and resulting application data, and
- ③ points to consider in post-marketing surveillance planning necessary for the scientific evaluation of efficacy after conditional and term-limited approval.



『ヒト由来の間葉系幹細胞若しくは間葉系間質細胞を原料とするヒト細胞加工製品の条件及び期限付製造販売承認並びにその後の有効性評価計画に関する評価指標』(案)

Evaluation Guidelines for Conditional and Term-limited
Manufacturing/Marketing Authorization and Subsequent Efficacy
Evaluation Plan of Cell-Processed Products Derived from Human
Mesenchymal Stem/Stromal Cells
(Draft)



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審査担当者
製造販売承認申請者

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Reviewers & Applicants
of Marketing Authorization



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6. 条件付製造販売承認条件及び留意すべき事項

- ヒトMSC加工製品やこれを用いた再生医療等に共通する特性を踏まえ、現時点で留意すべきと考えられる事項を示したもの。
- これらを網羅的に示したものであるとはかぎらない
- 申請内容等に対して拘束力を有するものではない。



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5. Points to be considered at present, based on the characteristics common to human MSC-processed products and cell therapies using such products.
6. Points to be considered at present, based on the characteristics common to human MSC-processed products and cell therapies using such products.

- This document is a list of items that should be considered at present, based on the characteristics common to human MSC-processed products and cell therapies using such products.
- It is not necessarily an exhaustive list.
- It has no binding effect on the application contents, etc.

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『再生医療推進法』（平成25年）

The Act for the Promotion of Regenerative Medicine (2013)



第11条「**国は、再生医療製品の特性を踏まえ、再生医療製品の早期の**医薬品、医療機器等の品質、有効性及び安全性の確保等に関する法律の規定による**製造販売の承認を図り**、かつ、安全性を確保**するため**、再生医療製品の審査に当たる人材の確保、再生医療製品の審査の透明化、再生医療製品の審査に関する体制の整備等のための**必要な措置を講ずる**ものとする。」

⇒ヒトMSC加工製品の製造販売承認審査において条件及び期限付承認を検討する際も、

- ヒトMSC加工製品自体の「特性」と、
- ヒトMSC加工製品を用いた再生医療等の「特性」を踏まえる必要がある。

Article 11 “**Considering the characteristics of regenerative medical products, in order to grant manufacturing/marketing authorization of regenerative medical products**, which is under the provisions of the PMD Act, **at an early stage** and to ensure their safety, **the Government shall take necessary measures** for securing human resources to review applications for regenerative medical products, making their review process transparent, establishing their review system etc.”

⇒ When considering conditional and term-limited approval of hMSC-processed products, **it is also necessary to take into account**

- “the characteristics” of the hMSC-processed products themselves and
- “the characteristics” of regenerative/cellular therapy using hMSC-processed products.

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5. ヒトMSC加工製品の製造販売承認審査において留意すべき事項

5. PTCs in the review of manufacturing/marketing authorization for an hMSC-processed product

5.1 ヒトMSC加工製品の特性

- 5.1.1. ヒトMSCの不均質性
- 5.1.2. ヒトMSCの作用機序の多様性
- 5.1.3. 自己由来ヒトMSC加工製品の品質のドナー間での差

5.2 ヒト細胞加工製品を用いた再生医療等の特性

- 5.2.1. 対象疾患の重篤性等
- 5.2.2. 外科的手術とともに使用される再生医療等製品

5.3 ヒトMSC加工製品の条件及び期限付製造販売承認を検討する際の留意事項

5.1 Characteristics of hMSC-Processed Products

- 5.1.1 Heterogeneity of hMSCs
- 5.1.2. Diversity of mechanisms of action of hMSCs
- 5.1.3. Variability in the quality of autologous hMSC-processed products among donors

5.2 Characteristics of Regenerative/Cellular Therapies Using Human Cell-Processed Products

- 5.2.1. Target disease severity, etc.
- 5.2.2. Regenerative medical products used in conjunction with surgical procedures

5.3 Points to consider for selecting the conditional and term-limited approval of an hMSC-processed product



5. ヒトMSC加工製品の製造販売承認審査において留意すべき事項

5. PTCs in the review of manufacturing/marketing authorization for an hMSC-processed product

蓄積される臨床データに基づく：

- ① ヒトMSC加工製品の主成分となるヒト細胞集団の**不均質性**の理解
 - ② **主たる作用機序**の理解及び臨床有効性と関連する**重要品質特性**の理解
 - ③ 原料細胞ドナーの差による最終製品の**品質のばらつき**に関する理解
- ・・・を推奨

5.3 ヒトMSC加工製品の条件及び期限付製造販売承認を検討する際の留意事項

Recommends:

- ① Understanding the **heterogeneity** of the human cell population that is the primary component of hMSC-processed products
 - ② Understanding **the primary mechanism of action** and **critical quality attributes** associated with clinical efficacy
 - ③ Understanding **the variability in final product quality** due to differences in raw cell donors
- ... based on the accumulated clinical data

5.3 Points to consider for selecting the conditional and term-limited approval of an hMSC-processed product

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Evaluation Guidelines for Conditional and Term-limited Manufacturing/Marketing Authorization and Subsequent Efficacy Evaluation Plan of Cell-Processed Products Derived from Human Mesenchymal Stem/Stromal Cells (Draft)



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6. PTCs for evaluating a study plan on conditions for conditional and term-limited approval

▶ 製造販売後承認条件評価で考慮すべき点

1. 症例数
2. 評価実施施設数
3. 評価パラメーターの客観性
4. 症例の無作為化
5. 評価の盲検化
6. 対照群の設定と方向（前向き vs. 後向き）
7. 使用成績調査等の選択の妥当性

▶ Points to consider for post-marketing studies on conditions for the approval

1. Number of cases
2. Number of sites where evaluation is performed
3. Objectivity of evaluation parameters
4. Randomization of the cases
5. Blinding of the evaluation
6. Setting and orientation of control group (prospective vs. retrospective)
7. Appropriateness of selecting use-results surveys for efficacy/safety evaluation

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7. 使用成績調査等の選択の妥当性

- A) 対象疾患の**重篤度**、対象疾患**患者数**、
患者の**QOL**、**代替治療法**の有無
- B) 製造販売後の**有効性の機序**と**有効性関連重要品質特性**の検証の体制
- C) 製造販売後の**安全性**の評価・検証の体制
- D) 製造販売後調査による**有効性エビデンス収集の実現可能性**

7. Appropriateness of selecting use-results surveys for efficacy/safety evaluation

- A) **Severity** of the target disease, **number of patients** with the target disease, **quality of life** of patients, availability of **alternative treatment methods**
- B) System for **validating the mechanism of action** and **efficacy-related critical quality attributes** after marketing
- C) System for evaluation/verification of **the safety**
- D) **Feasibility of collecting efficacy evidence** through post-marketing surveillance



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- B) System for **validating the mechanism of action** and **efficacy-related critical quality attributes** after marketing
- C) System for evaluation/verification of **the safety**
- D) **Feasibility of collecting efficacy evidence** through post-marketing surveillance



7. 使用成績調査等の選択の妥当性

- A) 対象疾患の**重篤度**、対象疾患**患者数**、
患者の**QOL**、**代替治療法**の有無
- B) 製造販売後の**有効性の機序**と**有効性関連重要品質特性**の検証の体制
- C) 製造販売後の**安全性**の評価・検証の体制
- D) 製造販売後調査による**有効性エビデンス収集の実現可能性**

= 『科学的評価に適う有効性エビデンスの収集が達成できないかもしれない』というリスクに関する対策

7. Appropriateness of selecting use-results surveys for efficacy/safety evaluation

- A) **Severity** of the target disease, **number of patients** with the target disease, **quality of life** of patients, availability of **alternative treatment methods**
- B) System for **validating the mechanism of action** and **efficacy-related critical quality attributes** after marketing
- C) System for evaluation/verification of **the safety**
- D) **Feasibility of collecting efficacy evidence** through post-marketing surveillance

= Measures to address the risk that the collection of evidence appropriate for scientific evaluation of the efficacy may not be achieved.

『ヒト由来の間葉系幹細胞若しくは間葉系間質細胞を原料とするヒト細胞加工製品の条件及び期限付製造販売承認並びにその後の有効性評価計画に関する評価指標(案)』

Evaluation Guidelines for Conditional and Term-limited Manufacturing/Marketing Authorization and Subsequent Efficacy Evaluation Plan of Cell-Processed Products Derived from Human Mesenchymal Stem/Stromal Cells (Draft)



6. 条件及び期限付製造販売承認後の承認条件評価計画の評価において留意すべき事項

6. PTCs for evaluating a study plan on conditions for conditional and term-limited approval

▶ 製造販売後承認条件評価で考慮すべき点

1. 症例数
2. 評価実施施設数
3. 評価パラメーターの客観性
4. 症例の無作為化
5. 評価の盲検化
6. 対照群の設定と方向（前向き vs. 後向き）
7. 使用成績調査等の選択の妥当性

有効性の推定に必要な症例数などについては、臨床試験デザインごとに具体例を示す補足文書（事務連絡）を厚労省が作成中

▶ Points to consider for post-marketing studies on conditions for the approval

1. Number of cases
2. Number of sites where evaluation is performed
3. Objectivity of evaluation parameters
4. Randomization of the cases
5. Blinding of the evaluation
6. Setting and orientation of control group (prospective vs. retrospective)
7. Appropriateness of selecting use-results surveys for efficacy/safety evaluation

MHLW is currently preparing a supplemental document (administrative notice) that provides specific examples for each clinical trial design regarding the number of cases required to presume efficacy.

Ask



DIA