TREAT-TO-TARGET IN OSTEOPOROSIS. SPANISH EXPERT CONSENSUS

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INTRODUCTION

In recent years some authors have proposed that a treat-to-target (T2T) strategy could be useful in osteoporosis[1-3]. T2T treatment would individualize the initial choice of treatment based on the probability of achieving the goal of a patient, and it has been used in other chronic diseases as rheumatoid arthritis[4] or diabetes mellitus[5].

To establish a T2T strategy is necessary to identify a specific disease-related biomarker and establish the levels associated with optimal protection of the deleterious effects of the disease. However, in the treatment of osteoporosis there are no established consensus goals for BMD, BTM or fracture risk.

OBJETIVE

To reach a Spanish expert consensus on the Treat-to-Target (T2T) strategy in osteoporosis.

MATERIAL AND METHODS

Study Scientific Committee

- A Scientific Committee composed by 6 experts in the field of osteoporosis (3 endocrinologists, 2 rheumatologists and 1 medical internist) led the project.

Study design

- The panel of experts were nominated by the Scientific Committee with the collaboration of the Spanish Rheumatology Society and the Spanish Society of Bone and Mineral Metabolism Research, based on their experience.
- Two-round Delphi were completed.
- The content of the 1st round questionnaire was developed through a systematic review of the literature followed by a discussion group with scientific committee. As a results, a total of 24 items were included in the 1st round questionnaire and distributed in four blocks: 1) applicability of the T2T strategy in osteoporosis; 2) therapeutic objectives to be established; 3) patients´ follow-up; and 4) treatments to be prescribed in the T2T strategy. The 2nd round questionnaire included all items on which there was no previous consensus.
- All statements assessed the experts' wish (W) and prognosis (P) for each item to occur in 5-year time, in a 7-point Likert scale (1=entirely disagree; 7=entirely agree).

Consensus definition

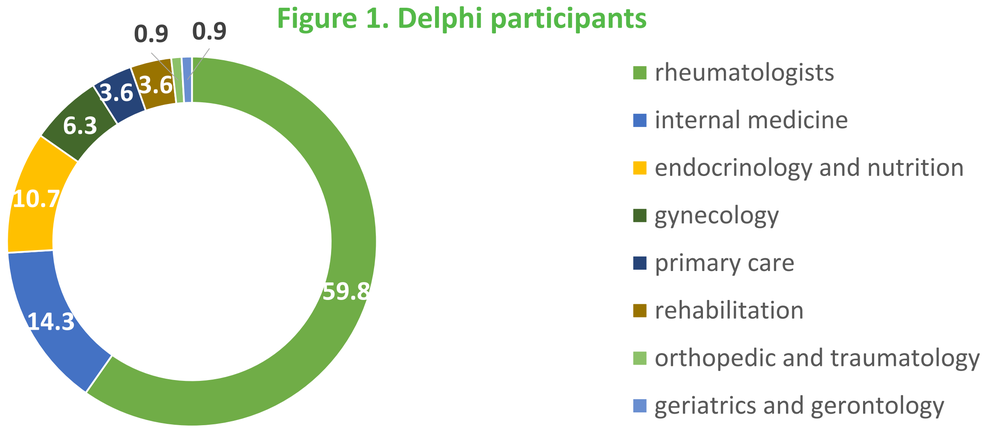
- Consensus was established if at least 75% of the participants reached agreement (5-7) or disagreement (1-3).
- When more than 75% of the participants responded entirely agree / mostly agree (6-7) or entirely disagree / mostly disagree (1-2), it was considered that the agreement or disagreement consensus was strong.
- Descriptive statistics were applied to determine consensus and quantify its degree. Percentage of panelists with the same response to the same statement was calculated for the 1st and the 2nd rounds.

RESULTS

Delphi Panel

- A total of 166 candidates were invited to participate in the Delphi study: 112 experts completed the 1st round (67.5%) and a total of 106 (94.6%) completed the 2nd round.
- The majority of experts (60%) were rheumatologists with a mean of 21.3 years (SD:8.5) of clinical experience.
- Panelists also included: specialist in internal medicine (14.3%), endocrinology and nutrition (10.7%), gynecology (6.3%), primary care (3.6%), rehabilitation (3.6%), orthopedic and traumatology surgery (0.9%), geriatrics and gerontology (0.9%) (**Figure 1**).

Figure 1. Delphi participants



Main results

- Consensus was achieved on 70% of the items raised, 44% of them in the first round Delphi.

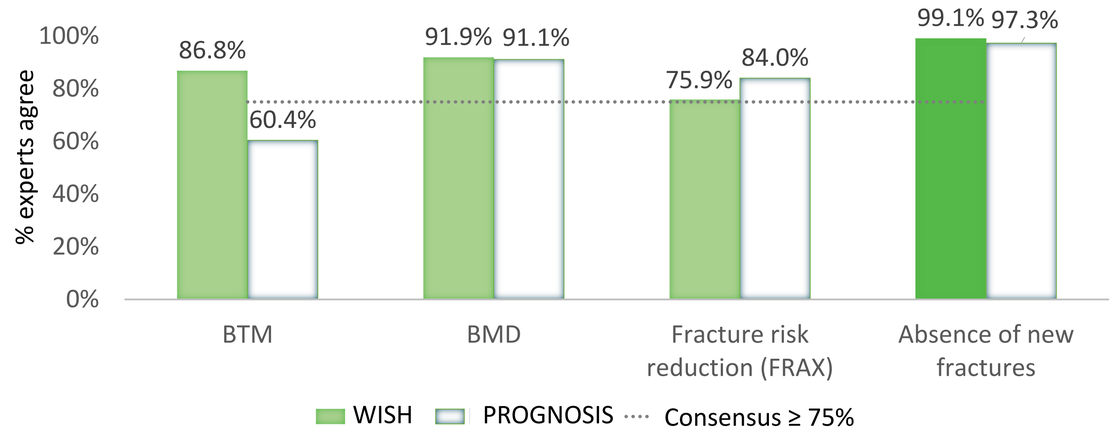
Applicability of the T2T strategy in osteoporosis

- There was a consensus (W:96.4%; P:82.1%) on establishing a T2T strategy in osteoporosis in order to have a well-defined objective, improve patients´ monitoring and the implementation an established therapeutic algorithm; and these objectives will be reached within the next 5 years.

Therapeutic objectives to be established in T2T strategy in osteoporosis

- Experts agreed that the main therapeutic objectives were the absence of new fractures (W:99.1%; P:97.3%) and a significant gain in BMD (W:91.9%; P:91.1%) (**Figure 2**). A strong consensus was reached on the use of absence of new fractures as a therapeutic objective (wish: 93.8%; prognosis: 82.1%).

Figure 2. Therapeutic objectives to be established in T2T strategy



- Experts also agreed in considering "treatment failure" when a significant BMD gain is not achieved in 2 (W:81.3%; P:82.1%) or 3 years (W:77.7%; P:75.9%) (**Figure 3**) or when a new fracture occur during the first 2 (W:92.0%; P:92.0%) or 3 years (W:90.2%; P:88.4%) of treatment (**Figure 4**).

Figure 3. Treatment failure definition when BMD gain is used

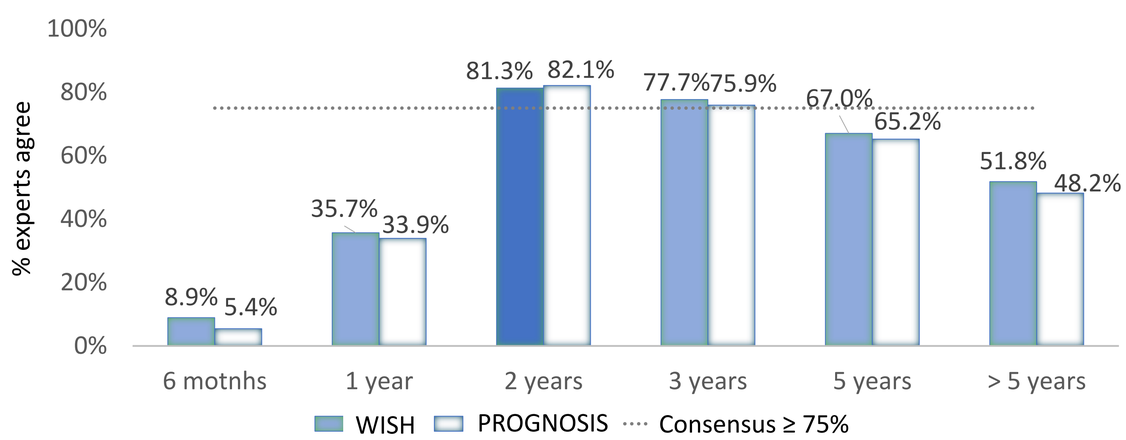
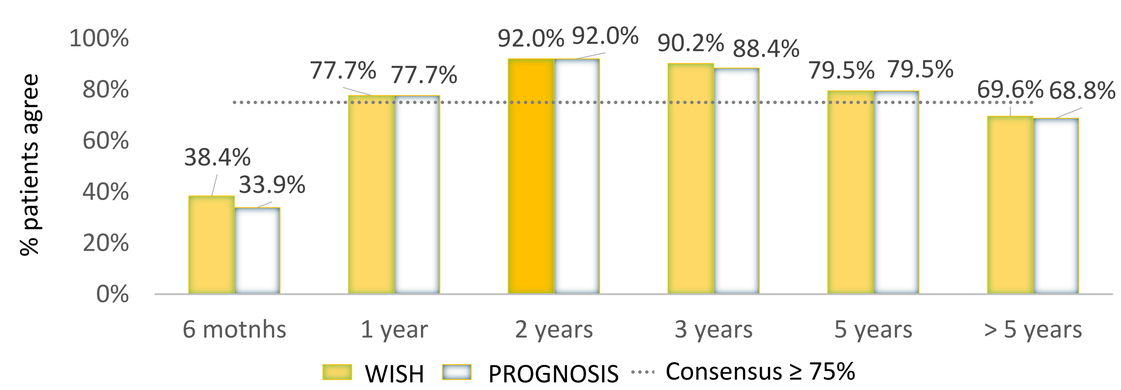


Figure 4. Treatment failure definition when absence of new fracture is used



Patient follow-up

- In regards to the monitoring of treated patients, consensus was reached that all locations proposed [lumbar spine (W:96.4%; P:96.4%), femoral neck (W:99.1%; P:98.2%), and total hip (W:92.0%; P:92.0%)], were suitable for measuring BMD changes.
- A strong consensus was established related to the usefulness of femoral neck area (W: 99.1%; P: 98.2%).

Conclusion

A T2T strategy in osteoporosis can be implemented in Spain, as therapeutic objectives, patient follow-up scheme and treatment failure criteria have been defined by an expert consensus.

References

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