

THE ITALIAN 648/96 LIST: APPROVALS, REJECTIONS AND METHOD IN AIFA'S EVALUATION PROCESS BETWEEN JANUARY 2013 AND OCTOBER 2015

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Introduction

The Italian Law 648/96 allows, on the costs of the National Health Service, the use of three types of medical products: innovative drugs for which the sale is authorized abroad, but not in Italy; drugs which have not yet received an authorization, but have undergone clinical trials; and drugs to be used for a therapeutic indication different from the one which had been authorized (off-label). The original art. 1, sub. 4, Law 648/1996 allowed the prescription (paid by the producer) of these drugs, provided that phase II or III clinical trials with favourable evaluation in terms of efficacy and safety were published, but only if any other therapeutic alternative is available. It was a derogation to Legislative Decree 219/06, art. 6, sub 1: "no medicinal product can be put on the market without either an AIFA authorization (Autorizzazionedall'ImmissioneinCommercio) (AIC), which may be national, by mutual recognition or by decentralized procedures or an EU authorization granted in accordance with the EMEA Regulation".

By the amendment published on May 2014 (law 79/2014, art 4bis), the Technical Committee of AIFA can include a given medication in the official list even if there is a therapeutic choice. This is an important change: by this new law, AIFA can grant an authorization for a new indication, based only on scientific evidences, granting to Italian patents the access to innovative drugs.

According 648/96 Law, health operators or patients associations can request early access to medications by submitting a written request to AIFA, listing the evidence of efficacy available in the scientific literature. The request is discussed by the Technical and Scientific Committee (CTS) of AIFA and approved for clinical use if deemed appropriate. Thus, the medication becomes available to patients with inclusion and exclusion criteria set by AIFA. In addition, the medication is subjected to a program of surveillance and should be reported in a list which is periodically updated.

Objectives

This study aimed to assess AIFA's approach, by reviewing approvals, rejections and methods followed by AIFA for its decisions and to analyze their temporal evolution.

Methods

In order to ensure transparency in the decision process, AIFA makes electronic files available through an online system of transparency. The most important information are published online, after each CTS meeting.

By connecting to the dedicated page, we systematically performed a review of each single document (Verbali CTS - "Esiti Ufficio Ricerca e Sperimentazioni Cliniche"), and collected all the available information.

Reports of CTS meetings from January 2013 to October 2015 were reviewed, checking number and characteristics of drugs under evaluation, and analyzing each single decision taken by CTS.

In order to complete the analysis, we also checked all the Determine and Gazzette Ufficiali published in the timeframe considered and related to 648. As an example, in 2013 and 2014 some specific 648 lists have been published, containing all the 648-approved products for Neurology (4), Transplantation (5), Antivirals (7) or Cardiology (8). All these information are public and available on a dedicated section of the official AIFA site (information <http://www.agenziafarmaco.gov.it/it/content/normativa-di-riferimento-sperimentazione-clinic>).

To complete our analysis, we checked the actual regulatory status of each product reviewed by AIFA, through the Patient Access Monitor Portal, a new informative system, which collects all the public information about drugs. It collects their approval history, from the first European approval, along all the modifications (i.e. indications, prices, dosages, variations) and the relevant National steps, until the actual availability for the patients at local level. This new platform allows to have an integrated access to all the information available on official and institutional sources (such as EMA, AIFA, Gazzetta Ufficiale, etc.), ensuring a complete overview.

Table 1: list of all the active substances inserted in 648 lists (Jan 2013-Oct 2015)

| Active substance | 648 Indication | Reference |
|--|--|------------------------|
| anagrelide | Essential thrombocythemia in young patients (as first line treatment) | G.U. 04/03/14 n. 52 |
| anakinra | paediatric TRAPS (TNFR-Associated Periodic Syndrome) not responders after first line | G.U. 15/01/2015 n. 11 |
| arsenic | Acute Promyelocytic Leukemia (first line) in combination with all-trans retinoic acid (ATRA) | G.U. 10/07/2014 n. 158 |
| atazanavir | Duchenne muscular dystrophy caused by a nonsense mutation (nEMD) in patients >5y | G.U. 17/12/14 n. 292 |
| atazanavir (boosted) | In combination with nucleoside analogues in HIV-1-infected patients with virological suppression, not eligible to booster dose of ritonavir | G.U. 30/05/2014 n. 125 |
| basiliximab | Prevention of graft-versus-host disease after haploidentical bone marrow transplantation | G.U. 30/05/2014 n. 125 |
| benidamine | First line treatment of INH and MCL; relapsed-refractory MCL; relapsed HD not eligible to HDCT; conditional treatment for ASCT | G.U. 29/01/2014 n. 23 |
| benidamine | As monotherapy or in association with bortezomib and steroid for relapsed MM | G.U. 29/08/2014 n. 200 |
| beniciclumab | Age-related macular degeneration (AMD) | G.U. 16/02/2015 n. 38 |
| bicalutamide | Refractory and/or metastatic salivary gland cancer | G.U. 7/10/14 n. 233 |
| bleomycin | Treatment of keloids and hypertrophic scars | G.U. 15/9/2014 n. 214 |
| bosentan | Chronic thromboembolic pulmonary hypertension in patients not eligible to pulmonary endarterectomy or relapsed | G.U. 28/02/13 n. 50 |
| cycloamine | Removal of corneal deposits of cystine crystals in nephropathic cystinosis | G.U. 03/06/2015 n. 125 |
| cladribin | Treatment of Langerhans cells histiocytosis | G.U. 18/09/2013 n. 193 |
| dabrafenib | Adult patients with metastatic inoperable melanoma in association with trametinib | G.U. 24/04/2015 n. 98 |
| dexamethasone | patients with diabetic macular edema, refractory or intolerant to ranibizumab therapy | G.U. 25/07/14 n. 171 |
| desmethylomegestrol | Treatment of patients candidates to awake surgery neurosurgery | G.U. 23/07/15 n. 169 |
| desmethylomegestrol | Analgesic in Non Operating Room Anesthesia (NORA) in selected paediatric patients | CTS October 2015 |
| ecluzimab | Pre-emptive use (for recidives) in patients with hemolytic uremic syndrome | G.U. 05/02/2015 n. 29 |
| elosulfate alla | Enzyme replacement therapy in mucopolysaccharidosis IVA | G.U. 27/06/14 n. 147 |
| epoetin alla | Myelodysplastic syndromes | G.U. 30/04/2014 n. 83 |
| epoetin alla | Treatment of patients with advanced endocrinal neoplasia | G.U. 25/07/14 n. 171 |
| anthemophilic factor rec. porcine sequence | Treatment of bleeding episodes in adults with acquired hemophilia A | G.U. 14/08/2015 n. 188 |
| flecainide | Arrhythmias prevention in paediatric patients with CPVT | G.U. 1/4/2014 n. 76 |
| fluorescein sodium | Fluorescent tracer for neuro-oncology | G.U. 22/07/15 n. 168 |
| hydrocortisone | Adrenal insufficiency in adult patients | G.U. 5/12/13 n. 28 |
| idrochinidina | Arrhythmias prevention in patients with Brugada syndrome (BrS) | G.U. 1/4/2014 n. 76 |
| idrochinidina | Arrhythmias prevention in patients with Short QT syndrome (SQTS) | G.U. 1/4/2014 n. 76 |
| iloprost | Connective Tissue Disease-Associated Pulmonary Hypertension not responsive to oral treatments | G.U. 25/07/14 n. 171 |
| imatinib | Plexiform neurofibromas in neurofibromatosis Type 1pts | G.U. 15/11/14 n. 266 |
| imatinib | Advanced chordoma | G.U. 26.02.2015 n. 47 |
| Immunoglobulina umana sottocutanea | Subcutaneous treatment of chronic inflammatory demyelinating polyneuropathy (CIDP) | G.U. 17/11/14 n. 267 |
| letocanazole | Cushing's syndrome | G.U. 15/05/14 n. 111 |
| methylphenidate and atomoxetine | treatment of attention deficit hyperactivity disorder (ADHD) in adults already in treatment and in adults | G.U. 15/05/15 n. 107 |
| methylphenidate and atomoxetine | treatment of attention deficit hyperactivity disorder (ADHD) in adults already in treatment | G.U. 22/07/15 n. 168 |
| metoprolol | Cushing's syndrome | G.U. 28/01/14 n. 22 |
| metoprolol | Arrhythmias prevention in patients with Long QT syndrome (LQTS) | G.U. 1/4/2014 n. 76 |
| midazolam | Treatment of adolescent and adult patients with severe epilepsy in età adulta with prolonged convulsions | G.U. 18/06/2014 n. 139 |
| midazolam | Treatment of adult patients with epilepsy and prolonged convulsion and febrile seizures | G.U. 21/11/14 n. 271 |
| misoprostolo | Medical treatment for first trimester spontaneous miscarriage | G.U. 11/11/14 n. 144 |
| misoprostolo | Cervical ripening before surgical abortion within 22th week | G.U. 16/11/13 n. 269 |
| misoprostolo | Induction of labor after 34th week of a pregnancy | G.U. 10/11/14 n. 261 |
| misoprostolo | Cervical ripening for obstetric and gynecologic indications | CTS October 2015 |
| misoprostolo | Arrhythmias prevention in Catecholaminergic polymorphic ventricular tachycardia (CPVT) pts | G.U. 15/11/14 n. 266 |
| nirovolum | Second line treatment of Non-small cell lung cancer. Squamous cell carcinoma | G.U. 22/10/15 n. 246 |
| Oral morphine | Neonatal abstinence syndrome | G.U. 29/05/2014 n. 123 |
| PEG-asparaginase | First-line treatment of acute lymphoblastic leukemia and/or second line treatment in patients not eligible with Asparaginasi nativa da E. Coli | G.U. 9/04/2014 n. 83 |
| Recombinant porcine Factor VIII | Acquired haemophilia A | G.U. 14/08/2015 n. 188 |
| regorafenib | Third line treatment of metastatic GIST not eligible to surgery and non responder to imatinib/danitib | G.U. 14/12/14 n. 291 |
| rituximab | Treatment of HCV-related cryoglobulinemia | G.U. 6/05/14 n. 103 |
| Sulfafate | Treatment of paediatric ARDS (Acute Respiratory Distress Syndrome) patients | G.U. 29/05/2014 n. 123 |
| teriparatide | Severe hypoparathyroidism | G.U. 18/11/13 n. 141 |
| tetrasbuzina | Patients with fourteine syndrome and ictal disorders | G.U. 18/04/14 n. 91 |
| tossina botulinica di tipo A | Spasticity | G.U. 17/10/14 n. 242 |
| vinblastine | Treatment of relapsed or refractory low grade glioma (associated or not with NF-1) | CTS September 2015 |

Table 2: list of active substances included and then excluded from 648 lists

| Active substance | 648 Indication | Reference | Reason for exclusion |
|-------------------------------|--|--|--|
| deferiprone | Reduction of cerebral iron accumulation in neurodegeneration | inclusion G.U. 01/04/14 n. 76 exclusion G.U. 30/07/14 n. 175 | It was initially included just for 12 months (no approval extension) |
| defibrotide | Treatment of severe hepatic veno-occlusive disease after SCT | inclusion G.U. 4/03/2014 n. 52 exclusion G.U. 28/05/2015 n. 122 | Suspended as a precaution (lack of safety data, when used in association) |
| ingolimod | Treatment of patients with Multiple Sclerosis, with activity disease in treatment with interferon-beta and not responder to acetate glatiramer | inclusion G.U. 17/10/2014 n. 242 exclusion G.U. 20/05/2015 n. 115 | Full registration achieved (G.U. 27/04/2015 n. 96) |
| ophthalmic cyclosporine 0.05% | Tear production increasing in people with severe keratoconjunctivitis sicca | inclusion G.U. 1/04/2014 n. 76 exclusion G.U. 2/05/2014 n. 100 | Another drug gained positive opinion from CHMP (showing better efficacy/safety data) |
| ponatinib | Treatment of Ph+ Myeloid Chronic Leukemia and Ph+ ALL in patients resistant to dasatinib/nilotinib or with a T315I mutation | inclusion G.U. 21/09/2013 n. 222 exclusion G.U. 05/02/2015 n. 29 | Full registration achieved (G.U. 10/12/2014 n. 286) |
| telaprevir | In association with peginterferone-alfa and ribavirin, for HCV genotype 1 relapsed after liver transplantation, in adult patients with CHC | inclusion G.U. 21/09/2013 n. 222 exclusion G.U. 23/06/2015 n. 143 | Full registration achieved (G.U. 24/02/2015 n. 44 and G.U. 04/05/2015 n. 101) |

In the period under analysis, 6 drugs have been included and then excluded from 648 lists, three of them because, in the meantime, they gained a full registration. One drug has been excluded because another one achieved a positive CHMP opinion, showing both better efficacy and safety data, and two drugs were withdrawn for safety reasons.

Results

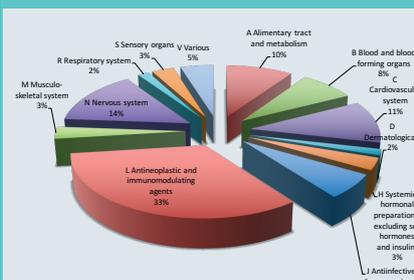
Out of 113 applications evaluated (some products gained different approvals for different indications), 55 received a positive evaluation, 37 a negative evaluation, 2 are waiting for EMA's decision, and 5 have been referred to the Law 326/2003 (Fondo AIFA 5%) and to the Law 94/98 (Legge Di Bella). Other 14 requests are still waiting for an in depth examination, have been delayed because of lack of time or have been addressed directly to other competent offices, when 648 law was not applicable.

In the timeframe under analysis, further 25 drugs have been approved and insert in cumulative disease specific lists (i.e. cardiology, transplantation, neurology).

Of the 55 approved products/indications, 3 have obtained a full registration for the "648 authorized indication" (see Table 2), and other 14 recently obtained an EU Marketing Authorization.

Analysis indicated that the drivers for the inclusion in the 648 List were the presence of strong clinical data, the lack of therapeutics alternatives on the Italian market, the rare disease condition and a specific paediatric indication.

Figure 1: approved drugs distribution for ATC-1 code



The main represented ATC-1 for products under AIFA's evaluation (Figure 2) were: L (antineoplastic and immunomodulating agents) 33%, N (nervous system) 14%, C (cardiovascular system) 11% and A (alimentary tract and metabolism) 10%.

Conclusions

In the observed period (January 2013-October 2015), thanks to 648 law, several safe and efficacious therapeutic options have been made available to Italian patients.

This analysis shows the important role of the Italian Law 648/96, a precious tool for patients to be treated with a drug, with strong clinical and safety data, waiting for the whole Italian regulatory process to be completed. Law 648/2006, together with Fondo AIFA 5% and Law 94/98, demonstrates the strong AIFA's commitments to allow early access to orphan drugs for Italian patients

References

- Law 648/96
- Legislative Decree 219/06
- Law 79/2014, art 4bis
- <http://www.agenziafarmaco.gov.it/it/commissioni>
- <http://www.agenziafarmaco.gov.it/it/content/normativa-di-riferimento-sperimentazione-clinic>
- Patient Access Monitor Portal
- Ministerial Decree 8 May 2003
- Law 94/1998 and Law 326/2003 (Fondo AIFA 5%)
- http://www.whocc.no/atc_ddd_index/

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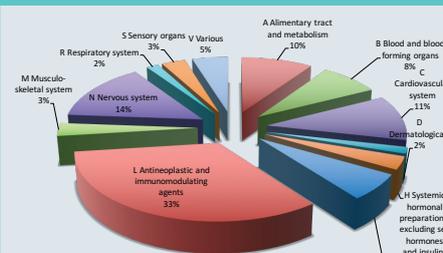
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| bosentan | Chronic thromboembolic pulmonary hypertension in patients not eligible to pulmonary endarterectomy or relapsed | G.U. 26/02/13 n. 90 |
| cysteamine | Removal of corneal deposits of cystine crystals in nephropathic cystinosis | G.U. 03/06/2015 n. 125 |
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| elocafaz alfa | Enzyme replacement therapy in mucopolysaccharidosis IVA | G.U. 27/06/14 n. 147 |
| eposetin alfa | Myelodysplastic syndromes | G.U. 30/04/2014 n. 88 |
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| antihemophilic factor rec. porcine sequence | Treatment of bleeding episodes in adults with acquired hemophilia A | G.U. 14/08/2015 n. 188 |
| fecicel | Arthritis prevention in paediatric patients with CPVT | G.U. 14/02/14 n. 75 |
| fluorescein sodium | Fluorescent tracer for neuro-oncology | G.U. 22/07/15 n. 168 |
| hydrocortisone | Adrenal insufficiency in adult patients | G.U. 12/12/13 n. 285 |
| idociclinidina | Arhythmias prevention in patients with Brugada syndrome (B-S) | G.U. 11/12/2014 n. 76 |
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Analysis indicated that the drivers for the inclusion in the 648 List were the presence of strong clinical data, the lack of therapeutics alternatives on the Italian market, the rare disease condition and a specific paediatric indication.

Conclusions

In the observed period (January 2013-October 2015), thanks to 648 law, several safe and efficacious therapeutic options have been made available to Italian patients.

This analysis shows the important role of the Italian Law 648/96, a precious tool for patients to be treated with a drug, with strong clinical and safety data, waiting for the whole Italian regulatory process to be completed. Law 648/2006, together with Fondo AIFA 5% and Law 94/98, demonstrates the strong AIFA's commitments to allow early access to orphan drugs for Italian patients.

References

- Law 648/96
- Legislative Decree 219/06
- Law 79/2014, art 4bis
- <http://www.agenziafarmaco.gov.it/commissioni>
- <http://www.agenziafarmaco.gov.it/content/normativa-di-riferimento-sperimentazione-clinic>
- Patient Access Monitor Portal
- Ministerial Decree 8 May 2003
- Law 94/1998 and Law 326/2003 (Fondo AIFA 5%)
- http://www.whocc.no/atc_ddd_index/